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INFORMATION FOR AUTHORS

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Guide to Authors

MH Samorita Medical College Journal provides rapid publication (bienial publication) of articles in all areas of the subject. The Journal welcomes the submission of manuscripts that meet the general criteria of significance and scientific excellence.

The manuscripts should be submitted addressing Editor-in-Chief.

The Journal of MH Samorita Medical College only accepts manuscripts submitted as triplicate hard copy with a soft copy.

Papers must be submitted with the understanding that they have not been published elsewhere (except in the form of an abstract or as part of a published lecture, review, or thesis) and are not currently under consideration by another journal (**International or National)** or any other publisher.

The submitting (Corresponding) author is responsible for ensuring that the submitting article has been signed by all the co-authors. It is also the authors' responsibility to ensure that the articles emanating from a particular institution are submitted with the approval of the necessary institutional requirement. Only an acknowledgment from the editorial board officially establishes the date of receipt. Further correspondence and proofs are sent to the corresponding author(s) before publication unless otherwise indicated. It is a condition for submission of a paper that the authors permit editing of the paper for readability. All enquiries concerning the publication of papers should be addressed to Editor-in-Chief (MH Samorita Med Col J)

The cover letter

Cover letter is expected to be submitted along with manuscript. Use the cover letter to explain why the paper should be published in the Journal of MH Samorita Medical College. The cover letter should include the corresponding author's full address, telephone/ fax numbers and e-mail address.

Ethical aspects

- Ethical aspect of the study is considered very carefully at the time of assessment of the manuscript.
- Any manuscript that includes table, illustration or photograph that have been published earlier should accompany a letter of permission for re-publication from the author(s) of the publication and editor/ publisher of the Journal where it was published earlier.
- Permission of the patients and/or their families to reproduce photographs of the patients where identity is not disguised should be sent with the manuscript. Otherwise the identity would be blackened out.

Conditions for submission of manuscript

- All manuscripts are subject to peer-review.
- Manuscripts are received with the explicit understanding that they are not under simultaneous consideration by any other publication.
- Submission of a manuscript for publication implies the transfer of the copyright from the author to the publisher upon acceptance. Accepted manuscripts become the permanent property of the MH Samorita Medical College Journal (MHSMCJ) and may not be reproduced by any means in whole or in part without the written consent of the publisher.
- It is the author's responsibility to obtain permission to reproduce illustrations, tables etc. from other publications.

Article Types

Four types of manuscripts may be submitted.

Editorials: It should preferably cover a single topic of common interest.

Original Articles: These should describe new and carefully confirmed findings, and experimental procedures should be given in sufficient detail for others to verify the work and its volume should **not exceed 5000 words** or equivalent space including title, summary/abstract, main body, references, table(s) and figure(s).

Review Articles: Submissions of reviews covering topics of current interest are welcome and encouraged. Reviews should be concise and no longer than 4 to 6 printed pages (about 12 to 18 manuscript pages) and should **not exceed 5000 words**. It should be focused and must be up to date.

Case Reports: This should cover uncommon and/or interesting cases and should **not exceed 1000** words or equivalent space.

Review Process

All manuscripts are initially screened by editor and sent to selective reviewers. Reviewers are requested to return comments to editor within 3 weeks. On the basis of reviewers' comments the editorial board decides whether the articles are accepted or send for re-review the manuscripts. The MH Samorita Med Coll J editorial board tries to publish the manuscript as early as possible fulfilling all the rigorous standard journal needs.

I. Preparing a Manuscript for Submission to MH Samorita Med Coll J

Editors and reviewers spend many hours reading and working on manuscripts, and therefore appreciate receiving manuscripts that are easy to read and edit. The following information provides guidance in preparing manuscripts for the journal.

I A. Preparation of manuscript

Criteria: Information provided in the manuscript are important and likely to be of interest to an international readership.

Preparation

1. Manuscript should be written in English and typed on one side of A4 (290 x 210cm) size white paper.
2. Margin should be 5 cm for the header and 2.5 cm for the remainder.
3. Style should be that of modified Vancouver.
4. Each of the following section should begin on separate page :

- Title page
- Abstract
- Main body/Text: Introduction, Materials and Methods, Results, Discussion and conclusion (For an original article/ Systematic review)
- Acknowledgement
- References
- Tables and legends

Pages should be numbered consecutively at the upper right hand corner of each page beginning with the title page.

I A. 1. General Principles

- The text of observational and experimental articles is usually (but not necessarily) divided into the following sections: Introduction, Materials and Methods, Results, and Discussion(so-called "IMRAD" structure is a direct reflection of the process of scientific discovery.
- Long articles may need subheadings within some sections (especially Results and Discussion) to clarify their content. Other types of articles, such as case reports, reviews, and editorials, probably need to be formatted differently.
- Authors need to work closely with editors in developing or using the publication formats and should submit supplementary electronic material for peer review.
- Double-spacing all portions of the manuscript— including the title page, abstract, text, acknowledg- ments, references, individual tables, and legends— and generous margins make it possible for editors and reviewers to edit the text line by line and add comments and queries directly on the paper copy.
- If manuscripts are submitted electronically, the files should be double-spaced to facilitate printing for reviewing and editing.
- Authors should number on right upper all of the pages of the manuscript consecutively, beginning with the title page, to facilitate the editorial process.

I A. 2. Title Page

The title page should have the following information:

- The title should be brief, relevant and self explanatory. It should reflect the content of the article and should include all information that will make electronic retrieval of the article easy. Subtitles should not be used unless they are essential.
- Title should not be phrased as questions.
- The names of the authors should appear below the title that should include full names of all authors **(no initial).**

Example: Md MA Hamid **(correct form);** Hamid MA **(incorrect).**

The affiliations and full addresses of all authors should be mentioned in the title page.

- Contact information for corresponding authors: The name, mailing address, telephone and fax numbers, and e-mail address of the author responsible for correspondence about the manuscript.
- The name and address of the author to whom requests for reprints should be addressed or a Statement that reprints are not available from the authors.
- Source(s) of support in the form of grants, equipment, drugs, or all of these.

I A. 3. Abstract

Original Article: Structured abstracts are essential for original research. Structured abstract includes introduction, objective(s), materials and methods, results and conclusion. Should be limited to 250 words. The abstract should provide the introduction of the study and blinded state and should mention the study's purpose, basic procedures including selection of study subjects or laboratory animals, main findings (giving specific effect sizes and their statistical significance, if possible) and the principal conclusion. Because abstracts are the only substantive portion of the article indexed in many electronic databases, and the only portion that many readers read, it should accurately reflect the content of the article; so, authors need to be careful about that.

Review Article: is expected to contain background, objective(s), main information and conclusion in brief form. Without any subheading the content should be described in a single paragraph.

Case Study: needs to have background, case summary and conclusion. The content should be described in a single paragraph.

Do not put references in the abstract.

I A. 4. Main body

I A. 4 a) Original article

The body of the text should be divided into the following sections: i) Introduction, ii) Materials and methods, iii) Results, iii) Discussion and iv) Conclusion.

i) Introduction

Should not exceed **500 words**. This section includes background of the problem (that is, the nature of the problem and its significance). It should be very specific, identify the specific knowledge in the aspect, reasoning and what the study aim to answer. Only pertinent primary references should be provided and no data or conclusions should be included from the work to be reported. **Justificatio**n of the study and its **objective(s)** should be mentioned at the end of this section. All information given in this section must have references that to be listed in the reference section.

ii) Materials and methods

The Methods section should be written in such way that another researcher can replicate the study. The type of study (study design), study period, sampling technique, sample size, study population, data collection technique and tool as well as data handling, processing and data analysis should be briefly mentioned in this section.

ii a) Selection and Description of Participants

Describe selection of the observational or experimental participants (patients or laboratory animals, including controls) clearly, including eligibility (inclusion) and exclusion criteria and a description of the source population. Because the relevance of such variables as age and sex to the object of research is not always clear, authors should explain their use when they are included in a study report—for example, authors should explain why only participants of certain ages were included or why women were excluded etc. The guiding principle should be clarity about how and why a study was done in a particular way. When authors use such variables as race or ethnicity, they should define how they measured these variables and justify their relevance.

ii b) Technical Information

- Describe methods, apparatus (give the manufacturer's name and address in parentheses), and procedures in sufficient detail to allow others to reproduce the results.
- Cite references to established methods, including statistical methods. Provide references and brief descriptions for methods that have been published but are not well-known.

- Describe new or substantially modified methods, give the reasons for using them, and evaluate their limitations.
- Identify precisely all drugs and chemicals used, including generic name(s), dose(s), and route(s) of administration.
- For a systematic review article include a section describing the methods used for locating, selecting, extracting, and synthesizing data. These methods should also be summarized in the abstract.

ii c) Statistics

- Describe statistical methods with enough detail to enable a know- ledgeable reader with access to the original data to verify the reported results. When possible, quantify findings and present them with appropriate indicators of measurement error or uncertainty (such as confidence intervals).
- Cite references for the design of the study and statistical methods (standard for the work) when possible.
- Define statistical terms, abbreviations, and most symbols.
- Specify the computer software used.

iii) Results

Results should be described in past tense.

- Present results in logical sequence in the text, tables, figures and illustrations, giving the main or most important findings first. Maintain the sequence of results with the specific objectives selected earlier.
- Do not repeat all the data in the tables or illustrations in the text; emphasize or summarize only the most important observations.
- When data are summarized in the result section, give numeric results not only as derivatives (for example, percentages) but also as the absolute numbers from which the derivatives were calculated, and specify the statistical methods used to analyze them.
- Restrict tables and figures to those needed to explain the argument (relevant to objectives) and to assess supporting data. Use graphs as an alternative to tables with many entries; do not duplicate data in figures (graphs/ charts) and tables. **Example:** Age range of the studied respondents should be appeared **either in table or in figure**.
- Avoid nontechnical uses of technical terms in statistics, such as "random" (which implies a randomizing device), "normal," "significant," "correlations," and "sample."

iv) Discussion

The discussion must be described in **past tense.** This section should reflect the author's comments on the results.

- Emphasize the new and important aspects of the study and the conclusions that follow them in the context of the totality of the best available evidence.
- Do not repeat in detail data or other information given in the Introduction or the Results section.
- For experimental studies, it is useful to begin the discussion by briefly summarizing the main findings, then explore possible mechanisms or explanations for those findings.
- Compare and contrast the results with other relevant studies and potential argument for discrepancy and consistency should be given here.
- State the limitations of the study, and explore the implications of the findings for future research and for clinical practice.
- Link the conclusions with the goals of the study but avoid unqualified statements, not adequately supported by the data.
- In particular, avoid making statements on economic benefits and costs unless the manuscript includes the appropriate economic data and analyses.

v) Conclusion

It should be described in **present tense**. Conclusion should be the main message and the authors' impression from the results of the study. The article should be concluded briefly (**not more than 100 words**). Recommendation(s) can also be included in this section which should not exceed 30 words.

I A. 4 b) Review article

For a systematic review or meta-analysis the body of text should be divided into the following sections (Like an original article): i) Introduction, ii). Materials and methods, iii) Findings/Results, iii a) Main information about the topic, iv) Discussion and v) Conclusion. For a general review article section No. ii (Materials and methods) and iii (Findings/Results) iv) (Discussion) are not relevant. So, for a general review article section No. i). Introduction, iii a). Main Information about the Topic and v). Conclusion are required.

i) **Introduction**: should not exceed **500 words**. This section will include background of the topic. At the end of the review, why the author want to publish the topic on the article ie., the objective should be mentioned.

ii) **Material and methods**: How the review was done, what sorts of articles were searched, how they were searched, the total number of articles reviewed should be mentioned here. This section is not required for a general review article.

iii) **Results/findings**: The findings on the topic after reviewing the articles should be compiled, analysed and described here like an original research article. This section is not required for a general review article.

iii a) **Main Information about the Topic**: The main information about the topic should be described and discussed elaborately with the help of published literatures in this section but the subtitles should be relevant to the topic(Title) for a general review article. This section may not be required for a systematic review or meta-analysis.

iv) **Conclusion:** The article should be concluded briefly (**not more than 100 words**).

I A. 4 c) Case Report

The body of the text should be divided into the following sections: i) Introduction, ii) Case Report (Description of the case), iii) Discussion and iv) Conclusion.

i) **Introduction**: A brief description should be given on the topic of the case with the help of published literatures.

ii) **Case Report**

- The findings (history, clinical examination and investigations) should be described here.
- Management (if any) can also be given.

iii) Discussion

- The discussion should be started by briefly summarizing the main findings of the case reported, then possible explanations for those findings should be explored.
- The findings of the case should be compared with other relevant studies and potential argument for discrepancy and consistency should be given here.

iv) Conclusion

- The article should be concluded briefly (**not more than 100 words**).
- The main findings of the reported case should be emphasized which the readers can consider as a clue to suspect a diagnosis for a rare case in future.

I A. 5. Acknowledgement

Acknowledge advisor(s) and/or any one who helped the researcher(s)

- Technically
- Intellectually
- Financially

I A. 6. References

I A. 6 a) General Considerations related to References

- Although references to review articles can be an efficient way to guide readers to a body of literature, review articles do not always reflect original work accurately. Readers should therefore be provided with direct references to original research sources whenever possible.
- Abstracts should not be used as references. References to papers accepted but not yet published should be designated as "in press" or "forthcoming"; authors should obtain written permission to cite such papers as well as verification that they have been accepted for publication.
- Information from manuscripts submitted but not accepted should be cited in the text as "unpublished observations" with written permission from the source.
- Citing a "personal communication" should be avoided unless it provides essential information not available from a public source, in which case the name of the person and date of

communication should be cited in parentheses in the text. For scientific articles, obtain written permission and confirmation of accuracy from the source of a personal communication. Some but not all journals check the accuracy of all reference citations; thus, citation errors sometimes appear in the published version of articles. To minimize such errors, references should be verified using either an electronic bibliographic source, such as PubMed or print copies from original sources.

- Authors are responsible for checking that none of the references cite retracted articles except in the context of referring to the retraction. For articles published in journals indexed in MEDLINE, the ICMJE considers PubMed the authoritative source for information about retractions.

I A. 6 b) Reference Style and Format

➢ **Reference Style**

Author should follow **Vancouver style**.

- R**eference list** should appear at the end of the article and should be numbered consecutively in the order as they are cited in the text, which is done by **superscript** (single press of 'ctrl shift +') in numerical form **(citation number).**
- When **multiple references** are cited at a given place in the text, use a **hyphen** to join the first and last numbers that are **inclusive**. Use **commas** (without spaces) to separate **non-inclusive** numbers in a multiple citation.

  Example: 2,3,4,5,7,10,12 are abbreviated to **(2-5,7,10,12**).
- **Do not** use a hyphen if there is no citation numbers in between 2 numbers that support your statement.

  Example: 1-2 (**in correct form).** 1,2**(correct form)**
- As a general rule, citation numbers in the text should be placed **outside full stops and commas**, inside colons and semicolons (applicable for any part of the document).

  Example: Masud Alam,1 Selim Khan[2]

  Example: Over the past decades public health relevance of mental health condition 'in children and adolescents has been of growing concern'.[1-3,5,6]
- Identify references in text, tables, and legends by Arabic numerals in superscript.
- References cited only in tables or figure legends should be numbered in accordance with the sequence established by the first identification in the text of the particular table or figure.

➢ **Reference Format**

1. Citing a Book

The essential details required are (in order):

1.1 Name/s of author/s, editor/s, compiler/s or the institution responsible.

- Where there are **6 or less authors** you must list **all authors**.
- Where there are **7 or more author**s, only the **first 6 are listed** and **add "et al"** (after a **comma**).
- Put a comma and 1 space between each name. The last author must have a full-stop after their initial(s).

  Format: surname (**1 space**) initial/s (**no spaces or punctuation between initials**) (**full-stop OR if further names comma, 1 space**)

  Example: Smith AK, Jones BC, Bloggs TC, Ashe PT, Fauci AS, Wilson JD, et al.
- **When author/s is/are editor/s :**Follow the same methods used with authors but use the word **"editor"** or **"editors"** in full after the name/s. The word editor or editors must be in small letter. (**Do NOT** confuse with "ed."used for edition.)

  Example: Millares M, editor. Applied drug information: strategies for information management. Vancouver (WA): Applied Therapeutics Inc; 1998.

Sponsored by institution, corporation or other organization (including PAMPHLET)

E**xample**: Australian Pharmaceutical Advisory Council. Integrated best practice model for medication management in residential aged care facilities. Canberra: Australian Government Publishing Service; 1997.

1.2. Title of publication and subtitle if any

- Italics or underlining should be avoided.
- Only the first word of the titles (and words that normally begin with a capital letter) should be started with capital letter (except proper noun).

Format: title (**full-stop, 1 space**)

Example: Harrison's principles of internal medicine.

Example: Physical pharmacy: physical chemical principles in the pharmaceutical sciences.

Example: Pharmacy in Australia: the national experience.

1.3. Edition (other than the first)

Number of edition **other than first one** should be mentioned as **2nd, 3rd,10th ed.**

Example: Blenkinsopp A, Paxton P. Symptoms in the pharmacy: a guide to the management of common illness. 3rd ed. Oxford: Blackwell Science; 1998.

1.4. Place of publication (if there is more than one place listed, use the first one)

- The place name should be written in full.
- If the place **name is not well known**, add a comma, 1 space and the state or the country for clarification. For places in the USA, add after the place names the 2 letter postal code for the state. This must be in upper case. eg. Hartford (CN): (where CN=Connecticut).

Format: place of publication (**colon, 1 space**)

Example: Hartford (CN):

Example: Texas (NSW):

Example: Kyoto (Japan):

1.5. Publisher

The publisher's name should be spelled out in full.

Format: publisher (**semi-colon, 1 space**)

Example: Australian Government Publishing Service;

Example: Raven Press;

Example: Williams & Wilkins;

1.6. Year of publication

Format: year (full-stop, add 1 space if page numbers follow).

Example: 1999.

Example: 2000. p. 12-5.

1.7. Page numbers (if applicable).

- Abbreviate the word "page" to "p.".

Note: do not repeat digits unnecessarily

Format: p (**full-stop, 1 space**) page numbers (**full-stop**).

Example: p. 122-9 (**correct**); p. 122-129 (**incorrect**).

Example: p. 1129-57 (**correct**); p. 1129-157 (**incorrect**).

Example of citing a book: Lodish H, Baltimore D, Berk A, Zipursky SL, Matsudaira P, Darnell J. Molecular cell biology. 3rd ed. New York: Scientific American; 1995.

(*Name/s. Title. Edition(other than first). Place of publication: Publisher; year of publication. p. Page no*)

2. Citing a Chapter in an Edited Book (to which a number of authors have contributed)

- Name/s of author of the chapter
- Title of chapter followed by, In:
- Editor
- Title of book
- Series title and number (if part of a series)
- Edition (if not the first edition)
- Place of publication (if there is more than one place listed, use the first named)
- Publisher
- Year of publication
- Page numbers

(*Title of Chapter. In: Editor(s). Title of book and number. Edition (other than first). Place of publication: Publisher; year of publication. p. Page no*)

Example of citing a chapter in an edited book:

Porter RJ, Meldrum BS. Antiepileptic drugs. In: Katzung BG, editor. Basic and clinical pharmacology. 6th ed. Norwalk (CN): Appleton and Lange; 1995. p. 361-80.

3. Citing a Journal Article from a Print source

The essential details required are (in order):

- **Name/s of author/s of the article.**
  See step 1 of "Citing a book" for full details.
- **Title of article.**
  See step 2 of "Citing a book" for full details.

Example: Validation of an immunoassay for measurement of plasma total homocysteine.

- **Name of journal (abbreviated).**

- Abbreviate the name of the journal according to the style used in Medline.
- A list of abbreviations can be found at: http://w**ww.ncbi.nlm.nih.gov/entrez/query.fcgi?db=journals**

  Note: No punctuation marks are used in the abbreviated journal name.

Format: journal title abbreviation (1 space)

Example: Bang J Psychiatry

- **Year of publication (month or day should be omitted).**

Format: year (**semi-colon, one space**)

Example: 1996; 12(5): 127-33.

- **Volume number (and issue/part)**

  Format: volume number (**colon, one space**)

Example: 1996; 12(5): 127-33. Or
1996; 18: 1237-8.

- **Page numbers**

Note: Do not repeat digits unnecessarily

Format: page numbers (full-stop)

Example: 5310-5.

Example of citing a journal: Russell FD, Coppell AL, Davenport AP. In vitro enzymatic processing of radiolabelled big ET-1 in human kidney as a food ingredient. Biochem Pharmacol 1998; 55(5): 697-701.

Name(s). Title. Name of the Journal Year of publication; Volume Number (Session/Issue Number): Page Number.

- **No author given in article**

  Example: Coffee drinking and cancer of the pancreas [editorial]. BMJ 1981; 283: 628.

- **Journals with parts and/or supplements**

Examples

- **Volume with supplement**

  Environ Health Perspect 1994; 102Suppl 1: 275-82.

- **Issue with supplement**

  SeminOncol 1996: 23(1 Suppl 2): 89-97.

- **Volume with part**

  Ann ClinBiochem 1995; 32(Pt 3): 303-6.

4. Citing a Journal Article from Internet and Other Electronic Sources

This includes software and internet sources such as web sites, electronic journals and databases.

The **basic form** of the citations **follow the principles listed for print sources** (see above).

In the case of sources that may be subject to alteration it is important to acknowledge the **Date The Information Was Cited.** This is particularly true for web sites that may disappear or permit changes to be made and for CD-ROMS that are updated during the year.

4.1. Citing a Journal Article from the Internet

Note: Follow the same procedure for citing print journals as for electronic journals regarding date, volume pages and journal title

Format: Author/s (full-stop after last author, 1 space) **Title of article** (full-stop, 1 space)

Abbreviated title of electronic journal (1 space) **[serial online]** (1 space) **Publication year** (1space) **month(s)** - if available (1 space) **[cited year month (abbreviated) day]** - in square brackets (semi colon, 1 space) **Volume number** (no space) **Issue number** if applicable in round brackets (colon) **Page numbers or number of screens** in square brackets (full-stop, 1 space) **Available from** (colon, 1 space) URL:**URL address underlined**

Examples:

- Morse SS. Factors in the emergence of infectious disease. Emerg Infect Dis [serial online] 1995 Jan-Mar [cited 1999 Dec 25]; 1(1):[24 screens]. Available from:URL: http://www/cdc/gov/ncidoc /EID/eid.htm
- Garfinkel PE, Lin E, Goering P. Should amenorrhoea be necessary for the diagnosis of anorexia nervosa? Br J Psych [serial online] 1996 [cited 1999 Aug 17]; 168(4):500-6. Available from: URL:http://biomed. niss.ac.uk

4.2. Citing a Journal Article from WWW site

(If the author is not documented, the title becomes the first element of the reference.)

Format: Author (full-stop after last author, 1 space) **Title** (full-stop, 1 space) **[Online]** (full stop, 1 space) **Publication Year** (1 space) **[cited year month (abbreviated) day]** (semi colon) **Number of screens in square brackets or pages** (full-stop, 1 space) **Available from** (colon, 1 space)

URL: (no space) **URL address underlined**

Note: The number of screens is not necessary. Put a semi colon and 1 space after the cited date if no pages or screen numbers are listed.

When the date is approximated, indicate that by following the date with a question mark and inserting the statement in square brackets. Eg. [2001?]

Examples: National Organization for Rare Diseases [Online]. 1999 Aug 16 [cited 1999 Aug 21]; Available from: URL:http://www.rare diseases.org/

Royal College of General Practitioners.The primary health care team.[Online]. 1998 [cited 1999 Aug 22];[10 screens]. Available from:URL: http:// ww. rcgp.org.uk/informat/publicat/rcf0021.htmZand J. The natural pharmacy: herbal medicine for depression [Online]. [1999?] [cited 2001 Aug 23];[15 screens]. Available from:

URL:http://www.healthy.net/asp/templates/Article.asp?PageType=Article&Id=920

Important Points For Reference List

- For **online material**, please cite the **URL**, together with the **date you accessed** the website
- **Online journal** articles can be cited using the Digital Object Identifier **(DOI)** number

Samples of Reference List

A list of references contains details of those works cited in the text.

The references are listed in the same numerical order as they appear in the body of the text

1. Getzen TE. Health economics: fundamentals and flow of funds. New York (NY): John Wiley & Sons; 1997.
2. Millares M, editor. Applied drug information: strategies for information management. Vancouver, WA: Applied Therapeutics, Inc.; 1998.
3. Australian Government Publishing Service. Style manual for authors, editors and printers. 5th ed. Canberra: Australian Government Publishing Service; 1994.
4. Australian Pharmaceutical Advisory Council. Integrated best practice model for medication management in residential aged care facilities. Canberra: Australian Government Publishing Service; 1997.
5. Bennett GL, Horuk R. Iodination of chemokines for use in receptor binding analysis. In: Horuk R, editor. Chemokine receptors. New York (NY): Academic Press; 1997. p. 134-48. (Methods in enzymology; vol 288).
6. Coffee drinking and cancer of the pancreas [editorial]. BMJ 1981;283:628.
7. Morse SS. Factors in the emergence of infectious disease. Emerg Infect Dis [serial online] 1995 Jan-Mar [cited 1996 Jue 5]; 1(1):[24 screens]. Available from: URL:http:// www. cdc.gov/ ncidoc/EID/eid.htm

I A. 7. Conflict of interest

All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations.

It is important to be consistent when you are referencing.

I A. 8. Tables and Illustrations (Figures)

I A. 8 a) Tables

- In tables, capture information concisely and display it efficiently.
- Use tables /fig that are relevant to the study.
- Try to limit the number of tables/figures.
- Type or print each table with double-spacing on a separate sheet of paper. Number tables consecutively in the order of their first citation in the text and supply a brief title for each.
- Do not use internal horizontal or vertical lines. Give each column a short or an abbreviated heading. Authors should place explanatory matter in footnotes, not in the heading. Explain all nonstandard abbreviations in footnotes, and use the following symbols, in sequence:

  *, †, ‡, §, _, ¶, **, ††, ‡‡, §§, _ _, ¶¶, etc.
- Identify statistical measures of variations, such as standard deviation and standard error of the mean.
- Be sure that each table is cited in the text. If you use data from another published or unpublished source, obtain permission and acknowledge that source fully.

I A. 8 b) Illustrations (Figures)

Figures should be either professionally drawn and photographed, or submitted as photographic-quality digital prints. In addition to requiring a version of the figures suitable for printing, (for example, JPEG / GIF).

- Review the images of such files on a computer screen before submitting them to be sure that they meet their own quality standards. For x-ray films, scans, and other diagnostic images, as well as pictures of pathology specimens or photomicrographs, send sharp, glossy, black-and-white or color photographic prints, usually 127 _ 173 mm (5 _ 7 inches).
- Letters, numbers, and symbols on figures should therefore be clear and consistent throughout, and large enough to remain legible when the figure is reduced for publication.
- Photographs of potentially identifiable people must be accompanied by written permission to use the photograph.
- Figures should be numbered consecutively according to the order in which they have been cited in the text.

- If a figure has been published previously, acknowledge the original source and submit written permission from the copyright holder to reproduce the figure. Permission is required irrespective of authorship or publisher except for documents in the public domain.
- For illustrations in colour, MH Samorita Med Coll J accept coloured illustration when it seems essential. This Journal publish illustrations in colour only if the author pays the additional cost. Authors should consult the editorial board of the journal about requirements for figures submitted in electronic formats.

I A. 8 c) Legends for Illustrations (Figures)

- Type or print the legends for illustrations using double spacing, starting on a separate page, with Arabic numerals corresponding to the illustrations.
- When symbols, arrows, numbers, or letters are used to identify parts of the illustrations, identify and explain each one clearly in the legend. Explain the internal scale and identify the method of staining in photomicrographs.

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If you have submitted mentioning document (1, 2, 3) above, when you first submit your article but if

there is change in the authorship or related then you have to re-submit it.

- **General outline for article presentation and format**
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- Running title provided (not more than 40 characters)
- Headings in title case (not ALL CAPITALS, not underlined)
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- References according to the journal's instructions – abide by the rules of Vancouver Style.
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- Uniformity in the language
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- Structured abstract (Including introduction, methods, results and conclusion) provided for an original article and (Introduction, case report and conclusion) for case reports.
- Key words provided – arrange them in alphabetical order (three – five)
- **Introduction**
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- Pertinent information only
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- **Result**
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- Avoid data redundancy
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- Acknowledge any person or institution who have helped for the study
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- Tables
- Figures

Editorial

Substance Abuse - A Concern

Prevalence of substance abuse in the adult population of Bangladesh is 0.6%.[1] A study was carried out in the Rajshahi region on drug addicts and found that majority were of younger age group and unemployed. Heroin was found to be top most among the addict population.[2]

The 2009 national survey on drug use and health in the USA found that 8.7% of the population aged 12 years or over used an illicit substance in the past month. Use was highest in unemployed people in the 16-25 years of age range. The most commonly used illicit drug was cannabis. The psychiatric morbidity survey reported that in England 9.2% of adults had taken an illicit drug in the past year and most commonly used drug was cannabis (7.5%).[3]

In Bangladesh, commonly abused substances are tobacco, cannabis, heroin, yaba, alcohol and sedative. The substance related disorders are divided into two groups 1) substance use disorders, which include substance dependence and substance abuse. 2) substance induced disorders which include substance intoxication, substance withdrawals, substance induced delirium and dementia, substance induced amnesic disorder, substance induced psychotic and mood disorder, substance induced anxiety disorder, substance induced sexual dysfunction and sleep disorder.

The common causes of substance abuse are availability of drugs, peer pressure, self curiosity, vulnerable personality, psychiatric illness, an adverse social environment and pharmacological factors.

Substance misuse has many undesirable effects. The individual substance abuse can lead people to neglect their health in addition to the direct physical consequences of the substance itself. Drug abuse consequences are vein thrombosis, infection of injection site, damage to arteries, bacterial endocarditis, hepatitis B & C infection, cirrhosis of the liver, carcinoma of liver, HIV infection, accidental overdose, cancer of the larynx, COPD, Stroke, carcinoma of the lung, carcinoma of the osesophagus and stomach, gastritis, pancreatitis ,infertility, miscarriage, intra uterine foetal death and many others.

Social consequences of substance abuse include divorce, separation, poverty, unemployment, anti social activities, dismissal from service, low educational achievement, adverse effect on children and health care expenditure.

It is important to identify substance abusers and take necessary steps for their treatment and rehabilitations. It should be through multi-disciplinary approaches involving family, community, NGOs and government.

(MH Samorita Med Coll J 2018; 1(1): 1)

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References

1. Firoz AHM, Karim ME, Alom MF, Rahman AHMM, Zaman MM. Prevalence, medical care, Awareness and Attitude Towards Illnesss in Bangladesh. Bang Journ Psychiatry, 2006; 20(1): 9-36.
2. Sarker AH, Rahim AKMAD, Rahman AHMN, Firoz AHM. Information about substance dependent population is Rashahi region of Bangladesh. Bang Journ Psychiatry, 2003; 17(1): 31-39.
3. Harrison P, Cowen P, Burns T, Fazel M, Shorter Oxford Text Book of psychiatry. Oxford university press, 7th edition, 2018.

Study of Serum Calcium, Phosphate and Parathyroid Hormone Level in Normal Pregnant Women

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Abstract

Background: *Pregnancy is the physiological process in which significant placental transfer of calcium and phosphate necessary for mineralization of the fetal skeleton. Secretion of different hormones during pregnancy is responsible for maternal adaptation to the increasing demand of the growing fetus.*

Objective: *The present study was done to see the changes in the serum calcium, phosphate and parathyroid hormone level in normal pregnant women.*

Materials and Methods: *This cross sectional study was carried out in the Department of Physiology, Dhaka Medical College, Dhaka, from July-2009 to June-2010. For this purpose total 140 subjects were selected age ranging from 20-40 years. Among them 100 normal pregnant women were enrolled as study group (group B) and 40 healthy non pregnant women were enrolled as control (group A). Serum calcium was measured by photometric method (CPC), serum phosphate was measured by colorimetric method and parathormone level (PTH) was measured by chemiluminescent immunoassay. Data were collected in a prescribed data collection sheet after taking consent. For comparison between two groups statistical analysis was done by unpaired Student's 't' test by SPSS program.*

Results: *Serum calcium level was found significantly higher in 1st (P< 0.0001) and 2nd trimester (P<0.020) but lower in 3rd trimester than those of control (P< 0.05). There was a significantly progressive decrease in serum calcium from 1st trimester to 3rd trimester (P<0.001). Serum phosphate levels in three trimesters did not show statistically significant difference compared to the control. Serum PTH levels were lower in 2nd and 3rd trimester than that of control but higher in 1st trimester. The difference between PTH level in 2nd trimester and control was statistically significant (P<0.003).*

Conclusion: *Serum calcium and serum phosphate levels decreased in 3rd trimester which may be due to increased demand of the growing foetus and exposing the mother at risk of complication related to low serum calcium but Physiological hyperparathyroidism does not occur.*

Key words: *calcium, phosphate, PTH, pregnancy.*

(MH Samorita Med Coll J 2018; 1(1): 3-6)

Introduction

Pregnancy is a physiological process.[1] Serum total calcium and inorganic phosphate were noted to be decreased during pregnancy observed by many authors. The significant reduction in serum total calcium and inorganic phosphate was found in mother due to mineral transfer from mother to the developing foetus and less dietary intake.[2] A tendency to maternal hypocalcemia during pregnancy is also due to increased plasma volume and increased GFR.[3] Calcium and inorganic phosphate are essential for bone formation in the fetus. Low calcium concentration is responsible for impaired foetal growth and premature labour. Lower bone calcium and phosphate is associated with increase risk of maternal bones fracture.[4] Women may suffer from tetanic attack in pregnancy due to deficiency of ionized calcium.[5] The calcium supplement in pregnant women may lower the risk

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of pregnancy related complication such as pre-eclampsia.[6] Parathyroid hormone activity is important to maintain the serum calcium and phosphate balance by increasing calcium and phosphate transport from the bones, decreasing calcium excretion and increasing phosphate excretion by kidneys and increasing intestinal absorption of calcium and phosphate. Pregnant women have serum parathyroid hormone levels significantly higher than those in non pregnant women and level tends to increase with advancing duration of gestation.[7-9] Other investigators were unable to document a rise in serum PTH in pregnancy and a few reported that PTH levels may be lower than those in non pregnant women.[10]

Akhter et al. and some others measured serum calcium level in pregnant women & observed only serum calcium in 3rd trimester.[11,12] No data on Serum PTH and calcium and phosphate level in pregnant women is available in Bangladesh. Therefore, the present study was carried out to determine serum calcium, phosphate and PTH level in normal pregnant women in different trimester and which in turn will help to prevent pregnancy related complications and support the concept of physiological hyperparathyroidism.

Materials and Methods

This cross sectional study was carried out in the Department of Physiology, Dhaka Medical College, Dhaka, from July-2009 to June-2010. In this study a total 140 female subjects were selected aged 20-40 years. 100 normal pregnant women at different trimester were included in the study group (group B). On the basis of trimester they were further subdivided into group B_1 (consisting of 12 in 1st trimester), B_2 (consisting of 30 in 2nd trimester) and B_3 (consisting of 58 in 3rd trimester). Forty age matched healthy non pregnant women were enrolled as control group (Group A). Control group was selected from personal contact while the study group from Obstetric and Gynaeacology Out patient Department of Dhaka Medical College Hospital, Dhaka. Women with history of diabetes mellitus, renal, liver, thyroid, parathyroid disease and those who were taking calcium and vit-D preparation were excluded. After selection, informed written consent was taken from all the study population. Protocol of this study was approved by the ethical review committee of Dhaka Medical College. Serum calcium level of all subjects were determined by CPC method and serum phosphate levels were determined by Colorimetric method and PTH was measured by chemiluminescent immunoassay. Data were expressed as mean ±SD. Unpaired Student's ' t' test was done as the test of significance. The statistical analysis was done by using SPSS programmed Version 10.

Results

Age (mean±SD,yrs) and BMI (Kg/m^2) were shown in Table 1. The two variables in the study groups did not show any significant statistical difference.

Table 1. Age and BMI in Different Study Groups (N-140)

Group	Age (years) Mean±SD	BMI (Kg/m^2) Mean±SD
Group A (n=40)	26.18 ± 5.2	25.1 ± 5.2
Group BI (n=12)	26.75 ± 4.3	24.2 ± 3.5
Group B2 (n=30)	25.67 ± 4.0	25.4 ± 5.3
Group B3 (n=58)	25.28 ± 3.8	23.3 ± 3.4

Mean serum calcium levels in 1st and 2nd trimester were significantly higher but in 3rd trimester were significantly lower than that of control group. Mean serum calcium levels in 1st trimester were higher than that of 2nd trimester but it was not significant. Mean serum calcium levels in 1st trimester were higher than that of 3rd trimester and in 2nd trimester were higher than that of 3rd trimester which was statistically significant (Table 2).

The results are expressed as Mean±SD.

Table 2. Serum Calcium Level (mg/dl) in Different Study Groups (n-140)

Groups	N	Mean±SD
A	40	8.77±0.56
B_1	12	9.68±0.99
B_2	30	9.21±1.00
B_3	58	8.14±1.53

Statistical analysis

Groups	t	df	p value
A vs B_1	4.113	50	0.0001^{***}
A vs B_2	2.390	68	0.020^{*}
A vs B_3	2.468	96	0.015^{*}
B_1 vs B_2	1.380	40	0.175^{ns}
B_1 vs B_3	1.172	68	0.001^{***}
B_2 vs B_3	3.472	86	0.001^{***}

n = Number of subjects
df = Degree of freedom
ns = Not significant
*** = Highly significant
* = Significant

Mean serum phosphate levels were lower in 1st, 2nd and 3rd trimester than that of control group. Mean serum phosphate levels were higher in 2nd trimester than that of 1st and 3rd trimester but results were similar in 1st and 3rd trimester. Mean serum phosphate levels between different study groups did not show statistically any significant differences. (Table 3).

Table 3. Serum Phosphate Level (mg/dl) in Different Study Groups (N-140)

Groups	n	Mean±SD
A	40	3.51±0.92
B_1	12	3.38±0.78
B_2	30	3.41±0.80
B_3	58	3.38±0.84

Statistical analysis

Groups	t	df	p value
A vs B_1	0.460	50	0.647^{ns}
A vs B_2	0.460	68	0.647^{ns}
A vs B_3	0.706	96	0.482^{ns}
B_1 vs B_2	0.142	40	0.888^{ns}
B_1 vs B_3	0.029	68	0.977^{ns}
B_2 vs B_3	0.164	86	0.870^{ns}

n = Number of subjects
df = Degree of freedom
ns = Not significant
*** = Highly significant
* = Significant

Mean parathyroid hormone (PTH) levels were lower in 2nd and 3rd trimester than that of control group. Differences between control group and 2nd trimester were statistically significant (P<0.01) but differences between control group and 3rd trimester were statistically non significant. Mean PTH level was lower in 2nd than that of 1st trimester but that was higher in 3rd than that of 2nd trimester and both the differences were statistically significant (P=<0.05). That means serum PTH level decreased during 2nd trimester and gradually increased in 3rd trimester of pregnancy. The differences of mean PTH level between 1st and 3rd trimester did not show any significant differences (Table 4).

Table 4. Serum Parathyroid Hormone Level (pg/ml) in Different Study Groups (N-140)

Groups	n	Mean±SD
A	40	27.59±15.70
B_1	12	28.69±14.67
B_2	30	16.85±12.32
B_3	58	24.73±16.77

Statistical analysis

Groups	t	df	p value
A vs B_1	0.216	50	0.830^{ns}
A vs B_2	3.097	68	0.003^{**}
A vs B_3	0.851	96	0.397^{ns}
B_1 vs B_2	2.665	40	0.011^{*}
B_1 vs B_3	0.759	68	0.451^{ns}
B_2 vs B_3	2.274	86	0.025^{*}

n = Number of subjects
df = Degree of freedom
ns = Not significant
*** = Highly significant
* = Significant

Discussion

Serum calcium and phosphate level in maternal blood found to vary in different trimesters.[13] In the present study higher level of mean serum calcium was observed in 1st and 2nd trimester of the study subjects. But at 3rd trimester it was significantly reduced in comparison to 1st and 2nd trimester as well as control group. Mean serum phosphate level was found to be almost similar during pregnancy in different trimesters. PTH level was higher in 1st and 3rd trimester than that of 2nd trimester of pregnancy.

The lower level of serum calcium in 3rd trimester is consistent with other studies.[11-13,17,18] It is agreed that increased need of the growing foetus, increased plasma volume and less dietary intake may be responsible for lower level of calcium and phosphate in 3rd trimester of pregnancy. Moreover, pregnancy is also associated with increase in urinary calcium loss due to increased GFR.[3,8,9]

Wilson DT, et al[19] found a decreased serum total calcium level and slight increase in PTH in normal pregnant women which is consistent with the present study.

Whithead et al found the PTH level in pregnant women were higher at 1st and 3rd trimester than that of 2nd trimester.[14] They suggested that increase intestinal absorption of calcium started early in

pregnancy due to 1,25(OH)2D. Some others reported that rise in PTH in 2nd trimester of pregnancy due to autonomous parathyroid function or secondary to changes in maternal serum ionized calcium.[7-9,15] Higher level of PTH were also observed by others.[7-9,15]

Black et al[10] observed that PTH decreases throughout pregnancy when total calcium level is decreased which is consistent with the present study. They opined that this may be due to increased D3 or decreased phosphate on PTH release or an alteration of the sensitivity of the calcium sensing parathyroid gland receptor.

The rise in PTH level is correlated with the lower calcium level in pregnant women due to increased plasma volume, increased GFR and foetal transfer of calcium from mother.

Cushard WG, and others found that serum PTH decreases in 2nd trimester but progressively increases in 3rd trimester of pregnancy[7] which is consistent with the present study.

Conclusion

From the result of the present study it can be concluded that serum calcium level falls throughout all trimesters of a normal pregnancy without any significant change in phosphate level. But serum parathormone (PTH) level decreases in 2nd trimester and increases in 3rd trimester. Further large scale study is required to authenticate the result of this study.

References

1. Dautta DC. The text book of Obstetrics. 6th ed. Calcutta: New Central Book Agency. 2004.
2. Chidiebere I, Ikechuk WU, Usorochinyere AU, Uzoma I, Gilbert ON, Hughs AT, Does pregnancy actually affect the serum calcium and inorganic phosphate level? Shiraz E- Med [Internet] 2005 6(1&2): Available from : http/ emedicalJ.com www:portal:tools/page 31836.
3. William's Obstetrics. 21st ed. New York: MC Graw Hill. 2003.
4. Kovacs CS. Calcium and bone metabolism in pregnancy and lactation. J Clin Endocrinol Metab. 2001; 86(6): 2344-8.
5. Saad Rana's Obstetrics and Perinatal care. 1st ed. Islamabad: SAF Publication;1998.
6. Duvekot EJ, Christianne JM, Bloemenkamp KWM and Oei SG. Pregnant women with a low milk intake have an increased risk of developing preeclampsia. Euro J Obstet Gynecol Reprod Biol. 2002;105:11-14.
7. Cushard WG. Creditor MA. Canterury JM. Reiss E. Physiologic hyperparathyroidism in pregnancy. J Clin Endocrinol Metab. 1972; 34 (5): 767-71.
8. Pitkin RM. Calcium metabolism in pregnancy and perinatal period. A review. Am J Obstet Gynecol. 1985; 151(1): 99-109.
9. Naylor KE, Iqbal P, Fledelins C, Fraser RB and Eastell R. The effect of pregnancy on bone density and bone turnover. J Bone Miner Res. 2000; 15(1): 129-137.
10. Black AJ, Topping J, Durham B,Farquharson RG and Fraser WD. A detailed assessment of alteration in bone turnover, calcium homeostasis and bone density in normal pregnancy. J Bone Miner Res.2000; 15(3):557-563.
11. Akhter K, Rahman MS, Ahmed S, Ahmed A, Alam SM. Serum calcium in normal pregnant women. Mymensingh Med J. 2003; 12(1): 55-57.
12 Reitz RE, Daane TA, Woods JR, Weinstein RL. Calcium, Magnesium, Phosphorus and Parathyroid hormone interrelationships in pregnancy and newborn infants. J Obstet Gynecol.1977; 50(6):701.
13 Ardawi MSM. Nasrat HAN and Aqueel HSB. Calcium regulating hormone and parathyroid hormone related peptide in normal human pregnancy and postpartum. A longitudinal study. Euro J Endocrinol. 1997; 137: 402-409.
14. Whiethead M , Lane G, Young O . Campbell S. Interrelations of calcium regulatingHormones during normal pregnancy. Br. Med J. 1981; 283: 10-12.
15. Oberst WF, Plass ED. The variations in serum calcium, protein and inorganic phosphorus in early and late pregnancy, during parturition and the puerperium and in non pregnant women. J Clin Invest. 1932; 11: 123-127.
16. Pitkin RM, Gebhardt MP. Serum calcium concentrations in human pregnancy. Am JObstet Gynecol. 1977; 127(7): 775-778.
17. Bezzerra FF, Laboissiere FP, King JC and Donangelo CM. Pregnancy and lactation affect markers of calcium and bone metabolism differently in adolescent and adult women with low calcium intakes. AM Soc Nutr Sci. 2002; 132: 2183-2187.
18. Mull JW, Bill AH. Variation in serum calcium and phosphorus during pregnancy. Am J Obstet Gynecol. 1934; 27: 510-517.
19. Wilson DT, Martin T, Christensen R. Yee AHO. Reynold C. Hyperparathyroidism in pregnancy. Case report and review of literature. Br. J Nutri. 1984; 79: 249-55.
20. Guyton AC and Hall. Text book of Medical Physiology. 11th ed. Philadelphia, Saunders company. 2006.
21. Pitkin RM, Reynolds WA, William GA, Hargis GK. Calcium metabolism in normalPregnancy, a longitudinal study. Am J Obstet Gynecol. 1979; 133(7): 781-790.
22. Daniel A and Koos BJ. Maternal physiology during pregnancy.In: Decherney, Naathan, Good win, Laufer (editors).Current diagnosis and treatment of Obstetric and Gynacology. USA: Mc Graw Hill. 2007; 149-157.

Clinical Spectrum and Co-morbidities of Childhood Nephrotic Syndrome in a Tertiary Level Hospital in Bangladesh

Afroza S[1], Rakshit SC[2], Mahmud SU [3], Hasan SMH [4]

Abstract

Introduction: *Nephrotic syndrome is a common renal disorder in children. Characteristic features of nephrotic syndrome are generalized oedema, massive proteinuria, hypoalbuminemia, and hypercholesterolemia. Presentations might vary depending on the type and severity of the diaease.*

Objective*: The objective of the present study was to observe various presentations, laboratory status and hospital outcome of children suffering from nephrotic syndrome.*

Methods*: This cross sectional descriptive study was carried out at the department of Paediatrics of a tertiary level hospital from Jan to Dec' 2015. All the patients (48) admitted with the criteria of nephrotic syndrome were enrolled into this study. Socio-demographic, clinical presentations hematologic, serologic and urinalysis, response to treatment and duration of hospital stay were analyzed.*

Results*: Among the 48 studied children 34(71%) were male with male to female ratio of 2.4:1. Majority of the studied children were between 1-8 years of age comprising 75% and rest were above 8 years. Most of the studied children presented with the symptoms of swelling of the body (98%), scanty micturition (73%) and cough with difficult breathing (31.3%). Common signs were ascites (83.3%), generalised oedema (81.3%) and tender abdomen (35.4%). Bedside urine albumin was >+++ in 83.3% studied children. Majority of them had 1st attack comprising 60.4%. Out of 48 studied children 38(79.2%) had associated co-morbities. Among those pneumonia and UTI were common (39.5% and 36.8% respectively). Leukocytosis was noted in 44% where 66.7% was polymorph. X-Ray chest revealed pleural effusion in 31.3% and patchy opacities in lung parenchyma in 25% cases. Almost all the children (98 %) were improved and discharged with advice from hospital in a state of remission. Duration of hospital stay was 10-20 days in 71% cases.*

Conclusion*: From the findings of this study it can be concluded that nephrotic syndrome is more common among the boys with common age range of 1-8 years. Commonest presentations are swelling of the body, generalized oedema and scanty micturition. Outcome of childhood nephrotic syndrome is excellent with reasonable duration of hospital stay.*

Key words: *Childhood Nephrotic Syndrome, Co-morbidities, Pneumonia, UTI.*

(MH Samorita Med Coll J 2018; 1(1): 7-11)

Introduction

Nephrotic syndrome (NS) is a common renal disorder in children. Nephrotic syndrome or nephrosis, is defined by the presence of oedema, nephrotic-range proteinuria, hyperlipidemia, and hypoalbuminemia.[1] Nephrotic syndrome, a manifestation of glomerular disease, is characterized by nephrotic range proteinuria and the triad of clinical findings associated with large urinary losses of protein: hypoalbuminemia, oedema, and hyperlipidemia.[2] Nephrotic-range proteinuria in children is defined as protein excretion of more than 40 mg/m^2/h or a first morning protein : creatinine ratio of >2-3 :1.[1,2] In children, the most common cause is due to minimal change disease. The cause of minimal change disease is not known, but it can be related to infections, tumors, allergic reactions, and overuse of over-the-counter medications like ibuprofen and acetaminophen. Other conditions can damage the glomeruli, including other kidney conditions, immune system problems, infections, or diseases like cancer and diabetes. In certain cases, an allergic reaction to food or the use of certain legal

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and illegal drugs, or obesity can lead to nephrotic syndrome. Most children outgrow minimal change disease by the time they are in their teens.[3]

The annual incidence of nephrotic syndrome (NS) is 2-3 cases per 100,000 children per year in most western countries and higher in underdeveloped countries resulting predominantly from malaria.[2] Its incidence is 2-7/100000 in children with South Asian origin and its prevalence is 12-16/100000 children.[4] Most children with nephrotic syndrome have a form of primary or idiopathic nephrotic syndrome and the most common glomerular lesion is minimal change disease. The idiopathic nephrotic syndrome most commonly appears between the ages of 2-6 years of age, more common in boys and it is steroid sensitive in majority of cases (95%).[2]

Presentations might vary depending on the type and severity of the diaease. The clinical presentation of nephrotic syndrome vary widely from mild edema to severe cases presenting with complications important being life threatening infections and thromboembolic episodes. Nephrotic syndrome with significant glomerular lesion can have hypertension, renal insufficiency, and gross haematuria. Overall incidence of minimal change nephrotic syndrome (MCNS) has been generally stable over past 3 decades. However, incidence of FSGS seems to be increasing.[5]

Though the incidence of nephrotic syndrome is not very low but due to increased availability of medical services and scattered distribution of patients pediatricians are getting to see less number of cases compared to the past.[5]

There is lack of data on clinical profile of nephrotic syndrome in Bangladesh in the recent past. So, this study has been carried out in order to assess clinical presentation, associated complications, investigative profile and therapeutic response in children with nephrotic syndrome.

Materials and Methods

This cross sectional descriptive study was carried out at the department of Paediatrics of a tertiary level hospital from January to December' 2015. All the patients (48) admitted with the criteria of nephrotic syndrome were enrolled into this study. Verbal or written consent was taken from caregivers. A detailed history and clinical examination were performed and all the necessary investigations were done at college or hospital pathology and radiology department of ShSMC.

Data on the cases were recorded on a predesigned questionnaire with respect to history, socio-demographic characters, examination, investigations like hematologic, serologic and urinalysis, response to treatment with prednisolone and duration of hospital stay. Data were analyzed using SPSS version 19. Statistical analysis was done by standard descriptive statistics including Chi-square test and calculating the p value.

Results

Majority of the studied children were between 1-8 years of age comprising 75% and rest were above 8 years (Table 1). Among the 48 studied children 34(71%) were male with male to female ratio of 2.43:1(Table 2). Majority of the studied children presented with the symptoms of swelling of the body (98%), scanty micturition (73%) and cough with difficult breathing (31.3%). Common signs were ascites (83.3%), generalised oedema (81.3%) and tender abdomen (35.4%). Bedside urine albumin was >+++ in 83.3% studied children (Table 3). Majority of them had 1st attack comprising 60.4%.(Table 4). Out of 48 studied children 38(79.2%) had associated co-morbities (Table 5). Among those pneumonia and UTI were common (39.5% and 36.8% respectively) (Table 6). Leukocytosis was noted in 44% where 66.7% was polymorph. X-Ray chest revealed pleural effusion in 31.3% and patchy opacities in lung parenchyma in 25% cases (Table 7). All the children responded to prednisolone. Among them 98% were improved and discharged with advice from hospital in a state of remission(Table 8). Duration of hospital stay was 10-20 days in 71% cases (Table 9).

Table 1. Distribution of Studied Children by Age (N=48)

Age in years	Number of Patient	Percent
<1	0	-
1-8	36	75
>8	12	25
Total	48	100

Table 2. Distribution of Studied Children by Sex (N=48)

Sex	Number of Patient	Percent
Male	34	70
Female	14	30
Total	48	100

M:F=2.3:1

Table 3. Distribution of Studied Children by Symptoms and Signs (N=48)

Sl. No.	Symptoms/Signs	Frequency	Percent
1	Swelling of the body	47	98
2	Scanty micturition	46	96
3	High coloured urine	35	73
4	Cough & difficult breathing	15	31.3
5	Raised temperature e^ 100°F	10	20.8
6	Generalised oedema	39	81.3
7	Ascites	40	83.3
7	Tender abdomen	17	35.4
8	Bed side urine albumin e^ +++	40	83.3

Table 4. Distribution of Studied Children by Clinical Types (N=48)

Sl. No.	Clinical Types	Frequency	Percent
1	Initial attack	29	60.4
2	1st relapse	7	14.6
3	2nd relapse	1	2.1
4	3rd relapse	6	12.5
5	4th relapse & more	2	4.2
6	Steroid dependant	3	6.25
	Total	48	100

Table 5. Distribution of Studied Children by Presence of Co-morbidities (N=48)

Co-morbidities	Frequency	Percent
Present	38	79.2
Absent	10	20.8
Total	48	100

Table 6. Distribution of Studied Children by Types of Co-morbidities (N=38)

Sl. No.	Co-Morbidity Types	Frequency	Percent
1	Pneumonia	15	39.5
2	UTI	14	36.8
3	Peritonitis	6	15.8
4	Others	3	7.9
	Total	38	100

Table 7. Distribution of Studied Children by Relevant Investigations (N=48)

Sl. No.	Investigation		Frequency	Percent
1	Hb	8-10 gm/dl	7	14.6
		10-12 gm/dl	22	45.8
2	ESR	≥30mm in 1st hour	18	37.5
3	TC	≥11,000/mm^3	21	43.75
4	Polym-orphs	50-75%	32	66.7
		≥75%	08	16.7
5	Urine R/M/E	Pus cell 5-10/HPF	12	25
		>10/HPF	5	10.4
6	X-ray Chest	Pleural effusion	15	31.3
		Patchy Opacities	12	25
		Homogeneous opacities	3	6.25

Drug used and its Response

Prednisolone was used for all the studied children and 100% responded to the therapy.

Table 8. Hospital Outcome of the Studied Children (N=48)

Outcome	Frequency	Percent
Improved & discharged with advice	47	97.9
Improved but discharged on risk bond	1	2.1
Total	48	100

Table 9. Distribution of studied Children by Their duration of Hospital Stay (N=48)

Duration	Frequency	Percent
<10 days	10	20.83
10-20 days	34	70.83
20-30 days	4	8.33
Total	48	100

Discussion

Nephrotic syndrome is a common chronic disorder in children, characterized by alterations of permeability at the glomerular capillary wall, resulting in its inability to restrict the urinary loss of protein.[4] The condition is primary (idiopathic) in 95 per cent cases. More than 80 per cent patients with nephrotic syndrome show minimal change disease (MCD).[4] The usual age at the onset of symptoms in patients with MCD is between 2-6 yr; 30 per cent of the adolescents also show MCD.[5] FSGS may occur throughout childhood, though the median age is usually below 8 years.[6] Age at initial presentation has an important impact on the disease distribution frequency. Most of MCNS patients (70%) are younger than 5 years; 20–30% of adolescent nephrotic patients have MCNS[7]. FSGS develops in children at a median age of 6 years.[8] In this study majority of children (75%) were 1-8 years of age. The male:female ratio was 2.3:1 in the present study which is consistent with another study.[9] Male to female ratio is 3:2 in children in that study. The main symptom of nephrotic syndrome in children is swelling of the body which is 98% in the present study and is consistent with other study results[10], where all patients presented with puffiness of face and swelling of limbs. Ascites was present in 83% of cases in the present study which was 63% in another study.[10]

Majority of children (60.4%) in the present study had initial attack. Pneumonia and UTI were the common co-morbidities among the studied children comprising 39.5% and 36.8% respectively. Serious infection, especially cellulitis and spontaneous bacterial peritonitis, can complicate nephrotic syndrome. The rate of peritonitis is 2-6% in some studies.[4,11,12] Other common infections are cellulitis, pneumonias and upper respiratory tract viral infections[13] which is nearly consistent with the present study. Roughly 95% of patients with MCNS and 20% with FSGS achieve remission after an 8-week course of prednisone (60 mg/m^2 body surface area daily for 4 weeks followed by 40 mg/m^2 on alternate days for 4 weeks) .[7] The standard 8-wk regimen was switched to a longer 12-wk course on the basis of the landmark APN study (prednisolone 60mg/m^2 daily for 6 weeks, followed by 40 mg/m^2 on alternate days for another 6 weeks)[14] and in the present study majority (97.9%) of studied children responded completely before discharge from hospital with 12 weeks regimen.

The prognosis for nephrotic syndrome under treatment is generally good although this depends on the underlying cause, the age of the patient and their response to treatment. It is usually good in children, because minimal change disease responds very well to steroids[15] which is very true for the present study. Much has been learned about the management of childhood nephrotic syndrome, but still it remains challenging. Multicentre clinical trials are needed to improve current treatments and prevent acute and long-term complications.

Conclusion

From the findings of this study it can be concluded that nephrotic syndrome is more common among the boys with age range of 1-8 years. Commonest presentations are swelling of the body, scanty micturition and generalized oedema. With prednisolone treatment outcome of childhood nephrotic syndrome is excellent.

References

1. Jerome C Lane, MD; Chief Editor: Craig B Langman, MD. Pediatric Nephrotic Syndrome (https://emedicine.medscape.com/article/982920-overview. Updated: Oct 02, 2017; Accessed on 3.4.2018)

2. Pais P, Eliis DA. Nephrotic syndrome, In: Kleigman RM, Stanton BF, Geme JW, Schor NF, Behrman RE editors. Nelson Textbook of Pediatrics, 19th Edition. Saunders Elsevier, New Delhi 2012; p 1801-06

3. National Kidney Foundation, Childhood Nephrotic Syndrome. NKF, 2017; Inc., 30 East 33rd Street, New York, NY 10016, 1-800-622-9010 (https://www.kidney.org/atoz/content/childns; Accessed on 03/03/2017).

4. Bagga A, Mantan M. Nephrotic syndrome in Children. Indian J Med Res 2005; 122: 13-28

5. Madani A, Fahimi D, Taghaodi R, Mahjoob F, Hajizadeh N, Navabi B. An estimation of steroid responsiveness of idiopathic nephrotic syndrome in Iranian Children. Iran J Pediatric 2010; 20: 199-205

6. Bagga A, Srivastava RN. Nephrotic syndrome. In: Srivastava RN, Bagga A, editors. Pediatric Nephrology. 4th ed. New Delhi: Jaypee; 2005; p. 159-200.

7. Baqi N, Singh A, Balachandra S. The paucity of minimal change disease in adolescents with primary nephrotic syndrome. Pediatr Nephrol 1998; 12: 105–07.

8. Nephrotic Syndrome in Children: Prediction of histopathology from clinical and laboratory characteristics at time of diagnosis—a report of the International Study of Kidney Disease in Children. Kidney Int. 1978; 13: 159–65.

9. Dr William Wong, Dr Chanel Prestidge. Nephrotic Syndrome in Childhood., Dr Raewyn b Gavin, Editor. Paediatric Nephrology; 2013.

10. Sahana K.S. Clinical Profile of Nephrotic Syndrome in Children Journal of Evolution of Medical and Dental Sciences 2014; 3(4): 863-870

11. Feinstein EI, Chesney RW, Zelikovic I. Peritonitis in childhood renal disease. *Am J Nephrol* 1988; 8: 147–65.

12. Eddy AA, Symons JM. Nephrotic Syndrome. Lancet 2003, 362(9384): 629-39

13. Morani KN, Khan KM, Ramzan A. Infection in children with nephrotic syndrome. *J Coll Physicians Surg Pak* 2003;*13* : 337-9.

14. Ehrich JH, Brodehl J. Long versus standard prednisone therapy for initial treatment of idiopathic nephrotic syndrome in children: Arbeitsgemeinschaft fur Padiatrische Nephrologie. *Eur J Pediatr* 1993; 152: 357–61.

15. Nephrotic Syndrome https://en.wikipedia.org/ wiki/ Nephrotic_syndrome# Signs_and_ symptoms (Accessed on: 03/03/2017).

Awareness and Knowledge about Sexually Transmitted Diseases among Adult People in a Selected Area of Bangladesh

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Abstract

Introduction: *Knowledge and awareness concerning sexually transmitted diseases (STDs) has become the burning issue in these days. Although STDs pose serious risks to health security, there is very little literature quantifying the knowledge and awareness of these diseases.*

Objective: *main object of this study was to determine knowledge and awareness about STDs among the people in a selected area of Bangladesh.*

Materials and Methods: *In this descriptive type of cross sectional study an attempt was made to know the knowledge and awareness among 200 adult people from Keraniganj upazila of Dhaka district.. Pretested questionnaire was used for data collection. The data were then tabulated manually according to key variable and analyzed in computer.*

Results: *Majority participant (63%) were female. Most of the individual were in 15-25 age group (34%), followed by 26-35 age group (28.5%) and 36-45 age group (23%). The majority of the respondents (82.5%) stated that they had knowledge about STDs, and rest (17.5%) of them did not have any knowledge at all. Majority (67.5%) acquired the knowledge from media, followed by friends (21%) and doctors(14%). The risk group of STDs mainly identified as sex worker (49.5%) followed by professional blood donor (24.5%), drug addict (35%), bus and truck driver(14.5%). Regarding prevention 26.5% people thought that it could be prevented by using condom, 34% by avoiding illegal sexual contact, 32% by religious binding, 27% by raising social awareness, 20.5% by safe blood donation and 1% by other methods.*

Conclusion: *There is a lack of updated information about STD and its prevention among the people of reproduction age in our country. It is considered that the findings of this study will serve as an useful basis for further research and planning.*

(MH Samorita Med Coll J 2018; 1(1): 12-15)

Introduction

Sexually transmitted diseases (STDs) in Bangladesh is currently a topic of great concern. Knowledge and awareness concerning sexually transmitted diseases (STDs) has become the burning issue of these days. Although STDs pose serious risks to health security, there is very little literature quantifying the knowledge and awareness of these diseases. The women of Bangladesh are very vulnerable to STDs, including HIV/AIDS, and their knowledge about different diseases is extremely poor. Sexually transmitted diseases increase the likelihood of HIV transmission as well as other reproductive health consequences, such as chronic lower abdominal pain, infertility or life threatening pregnancies . The World Health Organization (WHO) estimates that at least one third of the 333 million new cases each year of curable sexually transmitted infections (STIs) occur among people under 25 years of age[1] . It was estimated that, at the end of 2001, approximately 40 million people worldwide were living with HIV/AIDS, of which 6.4 million people belonged to the Asian region[1]. Young people bear a special burden

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in the HIV/AIDS pandemic, and adolescent women are particularly vulnerable to sexually transmitted diseases and HIV/AIDS. Adolescent, girls are more vulnerable to STDs than their male counterparts, including HIV/AIDS, especially through heterosexual intercourse with others. This increased vulnerability is attributable to issues beyond their control, such as sexual violence and exploitation, early sexual initiation and the inability to negotiate for safe sex[1]. Other contributing factors include strong discrimination, lack of education, lack of power, lack of access to contraception and reproductive health issues. Therefore, it is difficult for adolescent women to protect themselves from sexually transmitted diseases, HIV and unwanted pregnancies. In addition, young people are not informed about the sexually transmitted diseases, and their knowledge about the different diseases is very poor. Although there have been many studies that have examined the knowledge about STDs among various age groups and social groups, very few studies have investigated the level of knowledge of young women about STDs[1]. The knowledge of women concerning either the mode of transmission or prevention of STDs is very limited . An integrated approach including useful and fruitful media campaigns to educate people about the health consequences of STDs including HIV/AIDS is strongly suggested for creating knowledge and awareness, and for controlling the spread of STDs among the people in Bangladesh.[2] Men can help to abate the speedy rate of occurrences of these diseases by practicing safer sexual behavior.[3] The practices of social and cultural and religious norms can also lessen the intensity of these diseases. In many developing countries, particularly in African countries, spread of HIV/AIDS becomes a fatal disaster.[4].In Bangladesh the condition is still far better than any other developing countries[5]. Till date little information has been found available on sexually transmitted infections (STIs) among men and women in Bangladesh. Prevention is the only solution to get rid of HIV/AIDS and STDs. Raising awareness among men about the long run effects of these diseases is one of the prime objectives of reproductive health programs currently executing in the world. This study pays attention to get an idea of men's perception about these types of reproductive health problem .

Materials and Methods:

It was a descriptive type of Cross sectional study. The study was carried out at some selected villages of Keraniganj upazila , Dhaka from January to July 2016. Study population were adults aged between 15-70 years. Purposive sampling was done. On the spot 221 sample were collected and ultimately 200 sample were set for analysis, remaining 21 sample were discarded due to inconsistency among the collected information .The ultimate sample size was 200. The number was identified on the basis of assumption. Pretested questionnaire was used for data collection which included information regarding STD. After introductory conversation and obtaining consent from the respondents the relevant data were collected by face to face interview using close and open questionnaire. Data were recorded on the questionnaire. All filled up questionnaire were verified for its consistency. The data were then compiled and tabulated manually according to key variable in master sheet. Finally data were analyzed in manually.

Results

Results were presented on tables and figures by using computer. Minimum age of the individual was 15

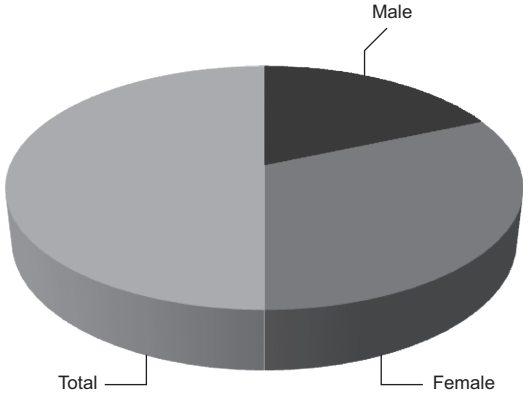

Fig. 1: *Distribution of the Respondents by Sex*

Table 1. Distribution of the Respondents by Age

Age (in years)	Number	Percentage (%)
(15-25)	68	34
(26-35)	57	28.5
(36-45)	46	23
(46-55)	20	10
>55	9	4.5
Total	200	100

Table 2. Distributions of the Respondents according to Their Educational Qualifications (N=200)

Educational qualifications	Number of respondents	Percentage
Illiterate	55	27.5
Primary	58	29
Secondary	63	31.5
Higher secondary	16	8
Honours	7	3.5
Others	1	0.5
Total	200	100

years and maximum age of the individual was 68 years and most of the individual were between 15-25 age group (34%) followed by 26-35 age group (28.5%) and 36-45 age group (23%) (Table 1). Out of 200 respondents 37% were male and 63% were female. A good number of respondents were illiterate (27.5%,), 29% passed their primary level and 31.5% passed their secondary level. Besides those 8% were in higher secondary level, 3.5% were honours level and 0.5% had other educational qualification(Table 2). In case of knowledge about STD, the majority of the respondents (82.5%) said that they had knowledge about STDs, and 17.5% of them did not have any knowledge at all (Table 3). Among the respondents most of them knew about AIDS (85.5%) followed by Hepatitis B(35.5%), Gonorrhoea (20%) and Syphilis (14.5%) (Table 4). They got the knowledge about STDS from doctor (14%,), health workers (12.5%), media (67.5%), friends (21%) and other source (2.5%) (Table 5). According to the respondents, the risk group of STDs were sex worker (49.5%) followed by professional blood donor (24.5%), drug addict (35%), bus and truck driver(14.5%)(Table 6). More than half of our respondents(52.5%) had knowledge about

Table 3. Distribution of the Respondents according to Their Knowledge about STDs (N=200)

Knowledge about STD	Number	Percentage (%)
Yes	165	82.5
No	35	17.5
Total	200	100

Table 4. Distribution of Respondents according to their Knowledge about Specific STD by Name (N=165)

Name of disease	Number	Percentage (%)
AIDS	141	85.5
Hepatitis B,C	58	35.5
Gonorrhoea	33	20
Syphilis	23	14.5

Table 5. Distribution of Respondents according to Source of their Knowledge about STDs (N=165)

Name of the source	Number of respondents	Percentage (%)
Media	111	67.5
Friend	34	21
Doctor	23	14
Health worker	21	12.5
Others	4	2.5

(Multiple response)

Table 6. Distribution of the Respondents according to their Knowledge about Risk group of STD: (N=165)

Risk group of STD	Number	Percentage (%)
Sex worker	82	49.5%
Drug addicted	56	33%
Professional blood donor	40	24.5%
Bus & truck driver	24	14.5%
Others	1	0.5%

(Multiple response)

Table 7. Distribution of the Respondents according to their knowledge about Prevention of STDs (N=165)

Knowledge about prevention of STD	Number	Percentage (%)
Yes	87	52.5%
No	78	47.5%

Table 8. Distribution of the Respondents according to their Knowledge about the way of Prevention of STDs (N=165)

Way of Prevention of STD	Number	Percentage (%)
By avoiding illegal sexual contact	56	34
By religious binding	53	32
By increasing social awareness	45	27
By using condom	44	26.7
By safe blood donation	34	20.6
Others	2	1.2

prevention of STDs while rest of them (47.5%) had no knowledge of STD prevention. (Table 7). Among the respondents 26.5% thought that STDs could be prevented by using condom(26.7%), 34% by avoiding illegal sexual contact, 32% by religious binding, 27% by raising social awareness, 20.6% by safe blood donation and only 1.2% by other methods (Table 8).

Discussion

The awareness level and knowledge of the correct ways to avoid HIV/AIDS and other STDs among the general public in Bangladesh are quite low[5]. With a sample of 200 population the current study showed that 82.5 % of the respondents had knowledge about STD and 17.5% of the respondents had no knowledge of STD. In a similar study, a total of 68.2% of the women respondents in a 2014 survey conducted in Dhaka said they did not know about STDs, while 31.8% of respondents knew about STDs from listening to the radio and 42.6% of the respondents know about STDs from watching television [6,] The current study shows most of the individual was 15-25 age group (34%) followed by 26-35 age group (28.5%), 36-45 age group (23%)and 68% of the respondents were aware of the spread of STD where 32% have no idea about it. Most of them(85.5%) knew about AIDS along with hepatitis B and C (35.5%) gonorrhea (20%) and syphilis(14.5%) and their major source of knowledge about STD were mass media(67.5%) In a similar study we found among the men aged 15–54, 18% had never heard of HIV/AIDS, 24% have heard about it. Out of 200 respondents according to their knowledge about risk group of STD most of them (49.5%) were identified as sex workers, 24.9% professional blood donor, 33% in drug addicted, 14.5% bus & truck driver and 0.5% in others. Majority of the respondents (52.5%) had knowledge about prevention of STDs and rest (47.5%) did not have any knowledge about STDs, where 26.5% people thought that STDs could be prevented by using condom, 34% people by avoiding illegal sexual contact, 32% people by religious binding, 27% people thought that STDs could be prevented by raising social awareness, 20.5% people thought that STDs could be prevented by safe blood donation and 1% people thought that STD could be prevented by other methods. In 2007, the MCH-FP Extension Project (Rural) of ICDDR, surveyed 8674 married women of reproductive age in 4 rural thanas to examine their awareness of STDs.[4] Only 12% of the original group had even a basic understanding about STDs and how to protect themselves from them. 25% of the women surveyed had ever heard of either syphilis or gonorrhoea. Of these women, less than half could mention specific mechanisms involved in the transmission of these diseases.7% reported that syphilis and gonorrhoea are transmitted through sexual intercourse.13% reported that the infections are transmitted from spouses to their partners.4% reported that STDs can be spread by having multiple sexual partners.[5] The results of logistic regression analysis indicate that awareness of STDs was higher amongst city dwellers than rural citizens. A socio-demographic factor could be the fact that Dhaka is the capital city and there is better access to information and education facilities than a rural thana.[6]

Conclusion

From the result of the present study it can be concluded that there is a lack of adequate updated information about STD and its prevention among the people of reproductive age. An integrated approach involving media campaigns is needed to educate people and create awareness about the STDs including HIV/AIDS specially spread and prevention of STDs among the people of Bangladesh.

References

1. Brunham RC, Embree JE. Sexually transmitted diseases: current and future dimensions of the problem in the third world. In: A Germain, KK Holmes, P Piot, JN Wasserheit, editors. Reproductive tract infections. Global impact and priorities for women's reproductive health. New York: Plenum Press, 1992:35–58.
2. Hawkes S, Morison L, Foster S, . Reproductive-tract infections in women in low-income, low-prevalence situations: assessment of syndromic management in Matlab, Bangladesh. Lancet 1999;354:1776–81.
3. Naved RT. RTI/STD and risky sexual behavior in a "conservative" society. Working paper. Save the Children (USA), Bangladesh Field Office, 1997.
4. Khan MA, Rahman M, Khanam PA. Awareness of sexually transmitted disease among women and service providers in rural Bangladesh. Int J STD AIDS 1997;8:688–96.
5. Caldwell B, Pieris I, Barkat-e-Kuda, Sexual regimes and sexual networking: the risk of an HIV/AIDS epidemic in Bangladesh. Soc Sci Med1999;48:1103–/16.
6. Hossain M, Mani KK, Siddik SM, Shahar HK, Islam R. Knowledge and awareness about STDs among women in Bangladesh. BMC Public Health 2014;14:775.

Relationship between Self Concepts and Students' Academic Achievements in Medical Colleges of Bangladesh

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Abstract

Introduction: *Self concept refers to the totality of a complex, organized and dynamic system to learned beliefs, attitudes and opinions that each person holds to be turn about his or her personal existence.*

Objective: *The purpose of this study is to identity the influence of self concept on academic achievement of undergraduate medical students.*

Materials and Methods: *This descriptive cross sectional study examined the influence of self-concept on academic achievement of undergraduate medical students. The study was carried out at one public and one private medical colleges in Dhaka during the year of 2010 to 2011. Preclinical students studying in second year of Dhaka Medical College and Holy Family Red Crescent Medical College were selected by purposive sampling. Total sample constituted 254 students out of which 47% were boys and 53% were girls whose age ranged from 17-23 years with a mean of 19.8 and a standard deviation of 0.93. The three dimensions of self concept: personal, family and social self-concept of medical students were assessed through 45-items questionnaire, which was answered on a five-point Likert scale. Data was collected by self administered structured questionnaire with Bengali version. Results of term I and term II examinations were taken as an index of academic achievement. Other than that, inferential statistic such as t-test was used to analyze the difference between the self-concept of students. The descriptive statistics such as frequency, percentages, mean and standard deviation were used to analyze the dominant dimension in student's self-concept. Pearson correlations were used to analyze the relationship between self-concept of students with their academic achievement.*

Results: *The findings revealed that majority of the students were high achievers (66.9% in term I and 66.1% in term II).The research finding showed that the dominant dimension of self concept was family self-concept (mean value was 53.73). Pearson correlations analysis showed that there was positive correlation between dimensions of self-concept with student's academic achievement.*

Conclusion: *Self concept does have effect on the students academic achievement. High level of self concept help students in achieving excellent results. Teachers and parents should utilize strategies which could enhance the development of favourable self-concept of medical students in order to improve their academic performance.*

Keywords: *Self-concept, academic achievement*

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Introduction

It would seem logical that a poor self-concept, which implies a lack of confidence, would be related to poor academic performance. Therefore, several studies have documented a significant relationship between academic achievement and self-concept. Academic success and positive self-concept have also been shown to be positively correlated at all grade levels and also in Black and Hispanic children; mentally retarded; physically handicapped and learning disabled children.[1] The problem of poor academic achievement has a long history in educational psychological research. In the 1920s, psychologist generally assumed that the IQ was the major predictor of academic achievement, but other factors such as family background, personality characteristics, attitudes and interests also contributed to academic success or failure.[2] Self concept is the way, an individual perceives himself/herself and his/her potential to evaluate the strength and weakness[3]. A student's confidence and the ability to express himself/herself and interact in the classroom are closely related to self-concept. Every individual is born unique and no one is quite the same as the other.[4] Academic performance is in general the yardstick used to measure the success of an individual. Excellent

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academic performance is the hope and pride of each and every student. Besides, it is also the hope of parents, teachers and educational institutions at large.[5] A good and strong education plays an important role in creating an honorable society and moulding the young generation to become useful citizens who could help in the economic, social, cultural and political development of the society.[6] Every individual is born unique and no one is same as others. This difference causes individuals to have different dimensions of personality and self concept of themselves.[6] The purpose of this study was to extend these ideas by seeking additional correlations of academic achievement, including personality, behaviours, the family environment and social circle among the students.

The general objective of this study was to identify the relationship between self concept dimensions with the students' academic achievement.

Materials and Methods

This was a descriptive cross sectional study that aimed to identify the relationship between self concepts with the academic achievement of undergraduate medical students. Two hundred and fifty four (254) preclinical second year MBBS students were enrolled in this study who had completed their assigned items, cards in the department of Anatomy, Physiology, Biochemistry and appeared in the formative assessments of term-I and term-II examinations, from Dhaka Medical College (DMC) and Holly Family Red Crescent Medical College (HFMRC). Duration of the study was one year from July 2010 to June 2011. Suitable self concept questionnaires, freely available through internet were selected and appropriately modified, keeping in view the cultural characteristics and educational background of the respondents. The data were obtained using set of questionnaire consisted of 45 statements, which was answered on a five-point Likert scale[6].

The study data was analyzed using the Statistical Package for Social Sciences (SPSS) version 11.5. Descriptive analysis was used, such as mean, percentage, frequency and standard deviation. The Pearson correlation was used to see the relationship between self-concept and academic performance.

Results

Among 254 respondents majority (84.6%) strongly agreed that they are loved by family. Most of them (69.3%) feel that they are treated fairly by family. About 79% respondent agreed strongly that they are trusted by the family. Among respondents 84.3% strongly agreed that they got warm love and appraisal from parents regarding their class performance. Among respondents 71.7% stated that they like to stay at home. A big portion (55.1 %) of the respondents felt that they are very much wanted at home (Table 1). Most of the respondents (76%) strongly agreed that they are cooperative with others. Majority of studied students agreed that (29.5% agreed, 41.7% agreed strongly) and they prefer to be on their own rather than with their friends. A large portion of studied students (59.4% disagreed strongly, 18.9% disagreed) felt that they do not quarrel with their classmates. Among

Table 1. Distribution of Respondents by Their Family Self Concept Items (n=254)

Family self	DS		D		U		A		SA	
	n	%	n	%	n	%	n	%	n	%
I am always Loved by my family	4	1.6	1	0.4	15	5.9	19	7.5	215	84.6
I am treated fairly by family members	5	2.0	6	2.4	18	7.1	49	19.3	176	69.3
I am being trusted by family	5	2.0	4	1.6	9	3.5	35	13.8	201	79.1
My family can rely on me	6	2.4	9	3.5	29	11.4	46	18.1	164	64.6
I always get appraisal from parents regarding class performance	6	2.4	2	0.8	9	3.5	23	9.1	214	84.3
Parents understand me	25	9.8	29	11.4	27	10.6	61	24.0	112	44.1
I treat my parents as well as I should	6	2.4	5	2.0	16	6.3	38	15.0	189	74.4
I am kind to family members	6	2.4	9	3.5	22	8.7	68	26.8	149	58.7
I Like to stay at home	7	2.8	5	2.0	17	6.7	43	16.9	182	71.7
I am wanted at home	11	4.3	5	2.0	39	15.4	59	23.2	140	55.1

(SD: Strongly Disagree; D: Disagree; U: Uncertain; A: Agree; SA: Strongly agree)

Table 2. Distribution of Respondents by their Social Self Concept Items (n=254)

Social self	DS		D		U		A		SA	
concept Items	n	%	n	%	n	%	n	%	n	%
I am cooperative with others	5	2.0	1	0.4	9	3.5	46	18.1	193	76
I prefer to be on my own	13	5.1	17	6.7	43	16.9	75	29.5	106	41.7
I am not friendly with others	98	38.6	43	16.9	33	13.0	45	17.7	35	13.8
I quarrels with classmates	151	59.4	48	18.9	19	7.5	26	10.2	10	3.9
I like to have more friends outside my own organization	13	5.1	20	7.9	40	15.7	67	26.4	114	44.9
Opposite-sex enjoy my company	26	10.2	25	9.8	91	35.8	59	23.2	53	20.9
I am popular among friendcircle	31	12.2	27	10.6	97	38.2	62	24.4	37	14.6
I am important to opposite –sex	58	22.8	24	9.4	103	40.6	36	14.2	33	13.0
I am reliable to friends	8	3.1	12	4.7	39	15.4	71	28	124	48.8
I like outgoing, sociable	26	10.2	25	9.8	37	14.6	100	39.4	66	26

(SD: Strongly Disagree; D: Disagree; U: Uncertain; A: Agree; SA: Strongly agree)

respondents 44.9% stated that they like to have more friends out of their own teaching organization (Table 2). Based on the study, the dominant self concept dimension among students was family. This dimension has the highest overall mean value that is 4.48 compared to overall mean for personal self concept dimension (3.48) and social self concept dimension (3.50) (Table 3).

Table 3. The Overall Mean of Dominant Factors of Self Concept Dimensions (N=254)

Self Concept Dimensions	Overall Mean
Self concept dimension – **Personal**	3.48
Self concept Dimension – **Family**	4.48
Self concept Dimension - **Social**	3.50

This may be due to the close relationship between students and their families which affects the establishment of a high. self concept among the studied students. Among the three dimensions of self concept that is personal, family and social, 252 students (99.2 percent) showed positive self concept (Table 4).

Table 4. Types of Self Concept among Studied Students (N=254)

Types of self concept	Frequency	Percentage
Positive	252	99.2
Negative	2	0.8
Total	254	100

There are three levels of students' academic achievement that is high, medium and low. Among studied students 161 (63.4%) were high achievers, while 66 students (26%) medium achievers and 27 students (10.6%) were low achievers (Table 5).

Table 5. The Level of Academic Achievements among Studied Students (N=254)

Academic	Term - I		Term – 2		Combined	
Achievements	No.	%	No.	%	No.	%
High achievers	170	66.9	168	66.1	161	63.4
Medium achievers	52	20.5	59	23.2	66	26.0
Low achievers	32	12.6	27	10.6	27	10.6
Total	254	100	254	100	254	100

Among 254 respondents, 160 (63 %) have a high self-concept about themselves and 89 (35 %) have a moderate self-concept (Table 6).

Table 6. The Self Concept Level of the Studied Students' (N=254)

Self-concept Level	Number	Percentage
High	160	63
Moderate	89	35
Low	5	2
Total	254	100

The Pearson correlation between personal self concept with the students' academic achievement in Term I

and Term II examination, found the coefficient of the Pearson correlation, r was 0.063 and p = 0.318 in Term I examination. In Term II examination, Pearson correlation, r was 0.143 and p = 0.023. So, there exists positive correlations between personal self concepts of respondents with their term examinations, that means who possess higher personal self concept their results in formative assessment were good also, though the findings were significant in term II examination (p<0.05) (Table 7). The Pearson correlation of family self concept with the students' academic achievement reveals the coefficient of the Pearson correlation, r was 0.145 and p=0.021 in Term I examination. In Term II examination, Pearson correlation, r was 0.113 and p =0.071. There is strong positive correlation of family self concept of respondents with their term examinations, that means who possess higher family self concept their results were good. The findings were significant in term I examination (p<0.05) (Table 8). The Pearson correlation between social self concept with the students' academic achievement found the coefficient of the Pearson correlation, r-0.128 and p =0.043 in Term I examination. In Term II examination, Pearson correlation, r was 0.073 and p =0.247. ,here is strong positive correlation of social self concept of respondents with the term examinations; that means who possess higher social self concept their results were good. The findings were significant in term I examination (p, <0.05) (Table 9).

Table 7. Pearson Correlation between Self Concept Dimension (personal) and the Studied Students' Academic Achievement in Term – I and Term – II Examinations (N=254)

Self Concept Dimensions	Academic Achievement Term – I		Academic Achievement Term – II	
	Pearson Coefficient correlation r	Sig (2 tailed) p	Pearson Coefficient correlation r	Sig (2 tailed) p
Personal	0.063	0.318	0.143	0.023

* Correlation is significant at the 0.05 level (2-tailed).

Table 8. Pearson Correlation between Self Concept Dimension (Family) and the Studied Students' Academic Achievement in Term – I and Term – II Examination (N=254)

Self Concept Dimension	Academic Achievement Term – I		Academic Achievement Term – II	
	Pearson Coefficient correlation r	Sig (2 tailed) p	Pearson Coefficient correlation r	Sig (2 tailed) p
Family	0.145(*)	0.021	0.113	0.071

* Correlation is significant at the 0.05 level (2-tailed).

Table 9. Pearson Correlation between Self Concept Dimension (Social) and the Studied Students' Academic Achievement in Term – I and Term – II Examination (N=254)

Self concept dimension	Academic Achievement Term – I		Academic Achievement Term – II	
	Pearson Coefficient correlation r	Sig (2 tailed) p	Pearson Coefficient correlation r	Sig (2 tailed) p
Social	0.128(*)	0.043	0.073	0.247

* Correlation is significant at the 0.05 level (2-tailed).

The Pearson correlation between self concept dimensions (personal, family, social) of respondents with their total academic achievements reveals the coefficient of the Pearson correlation, r-0.111 and p-0.078 for personal self, r-0.140 and p-0.025 for family self and r-0.109 and p-0.084 for social self and for overall self 0.174 and p-0.005. There is a strong positive correlation of mean score of overall self concept dimensions with total academic achievement; that means who possess higher or positive self concept their academic performance were good. But the findings were significant for family self and overall self (as $p<0.05$) (Table 10).

Table 10. Pearson Correlation between Self Concept Dimensions (Personal, Family, Social) and the Studied Students' Total Academic Achievement (N=254)

Self concept dimensions	Academic Achievement	
	Pearson Coefficient correlation	Sig (2 tailed)
	r	p
Personal	0.111	0.078
Family	0.140(*)	0.025
Social	0.109	0.084
Overall	0.174(**)	0.005

* Correlation is significant at the 0.05 level (2-tailed).

Discussion

Outcome of the study revealed that family self concept was the most dominant among the studied students, which is similar to a study by Marsiglia.[7] It has been observed that the students who feel that their presence are being accepted, needed, being loved and appreciated, would in turn have high respect to their families.

Analysis of the findings (Table IV) of the study showed that majority of students have positive self concept (99.2%). Study by Sharifah[8] supported this finding which also concluded that majority of students have positive self concept. This positive self concept might be due to the good relationship between them and the students around them. According to Azizi et al. [9] those who have positive self concept usually received good attention and care from their own parents, families, teachers, friends and the students around them. They always have the chance to gain more success than failure. This is because they feel appreciated and that they receive good support from others.

Findings of the study also showed that, majority of the students have excellent academic achievement. This may be because they received good attention and care, high appreciation from their peers, parents and the students around them; enabling them to improve their self concept and have positive impact on their learning process. These findings are contrary to the study by McClun, which concluded that only a minority of the students are excellent achievers and also a minority of them still performed less than satisfactory.[10]

Conclusion

From the research findings it may be concluded that self concept does have effect on the students' academic achievements.

Recommendations

Students should be exposed to motivational talks and seminars. They should also undergo leadership training where they could build self confidence, independence and build their self esteem, identity and the team spirit to interact with the people of the community.

References

1. Akinpelu O F. A study of the academic achievement and self-concept of male and female hearing- impaired students in Nigeria. The Nigerian Journal of guidance and counseling, 1998; 6(1&2): 163-174.
2. Behrens L E and Vernon P E. Personality correlates of over-achievement and under-achievement. British Journal of Educational Psychology, 1978; 48: 290 – 297.
3. Martinot D. and JeanMarc M. Use of self-concept in forming preferences by French students of different level of academic achievement. Journal of Psychology, 2000; 140 (1): 119-131.
4. Azizi Y and Jamaluddin R. The Relationship between Self-Concept and Communication Skills towards Academic Achievement among Secondary School Students in Johor Bahru. International Journal of Psychological Studies 2009; 1(2): 25-34.
5. Claes M, Lacourse E, Bouchard C and Perucchini P. Parental practices in late adolescence, a comparison of three countries: Canada, France and Italy. Journal of Adolescence 2003; 26: 387-399.

6. Cheryl S. Students with disabilities in mainstream classrooms. A resource for teachers. Educational Research, 2007; 43(3): 235-245.

7. Marsiglia C S, Jeffrey J, Walczyk W C, Buboltz D A and Griffith R. Impact of parenting styles and locus of control on Emerging adults' psychosocial success. Journal of Education and Human Development, 2002; 1 (1): 210-217.

8. Sharifah N, Zeinab M, Habibah E and Rosnaini M. The Effectiveness of the Intervention Program on the Attitude and Self-Concept of Students with Dyslexia. Journal of American Science, 1998; 6(12): 1181-1191.

9. Azizi Y, Boon Y, Ramli J, Yahaya N, Roslan R R and Rahman R A. The Relationship between Dimensions of Personality, Self Concept and Family Influence on Students in the FELDA Scheme in Johore Malaysia. European Journal of Social Science, 2005; 11 (2): 289 - 301.

10. McClun L A and Merrell K W. Relationship of perceived parenting styles, locus of control orientation and self-concept among junior high age students. Psychology in the Schools, 1998; 35*:* 381-392.

Hyperemesis Gravidarum: Current Concepts and Treatment

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Abstract

Hyperemesis gravidarum is a complex condition with multifactorial etiology that frequently develops during pregnancy. It affects various areas of women's health, including homeostasis, electrolytes, and kidney function, and may have adverse fetal consequences. Despite high prevalence, studies exploring underlying etiology and treatments are limited. In this practical review, focusing on articles published over the decade, current perspective and recent developments in hyperemesis gravidarum is being discussed.

Key Words: *Pregnancy, Nausea, Vomiting, Hyperemesis gravidarum.*

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Introduction

Around the world, nausea and vomiting are common for 50-90 percent of all pregnancies.[1] Often seen as a common issue during pregnancy, this nausea and vomiting during pregnancy (NVP) is of no pathological implication if it does not affect daily life of the pregnant woman.[2] There are several grades of NVP, ranging from infrequent morningsickness (17%) to excessive vomiting that persists for the entire day (80%).[3] The most severe grade of NVP often leads to hyperemesis gravidarum (HG).

The International Statistical Classification of Disease and Related Health Problems (10thRevision), defines HG as persistent and excessive vomiting picking at around nine weeks and ceases before the end of the 22ndweek of gestation.[4] Severe HG is linked with metabolic disorders like dehydration, carbohydrate depletion, or electrolyte imbalance.[4] The severity of NVP would get characterized as HG if there is an occurrence of more than three episodes of vomiting per day with ketonuria and more than three kg or 5% weight loss from the base weight. HG can, in individual cases be life threatening and treatment must be initiated immediately. This disorder has an estimated incidence of 0.5% - 2% of all live births around the world.[5] In major cases diagnosis is generally takes place clinically following the exclusion of other causes.[6,7]

Based on conservative estimation from the Hyperemesis Education and Research Foundation, indicates that HG can cost a minimum of $200 million annually in in-house hospitalizations in the United States.[8] If we consider other factors like outpatient department treatments, potential complications of severe HG, and loss of working hours through nausea, the actual cost of HG to the economy is significantly higher.[9] In another conservative projection in USA, the cost for pregnancy-related nausea and vomiting is about $2 billion USD.[10] For Bangladesh, such estimation is not available, because of the lack of a comprehensive routine health information system; however, global evidence shows that HG is associated with substantial economic burden in addition to severe physical and psychological suffering.[11]

Though HG seems like a normal issue, since it has potential economic implication and adverse fetal and maternal outcome, to examine current concepts and treatment models of HG, a review of MEDLINE (2006–January 2016), EMBASE (2006–January 2016), PUBMED (2006–January 2016) and the Cochrane

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Library took place. Articles related to "hyperemesis gravidarum" and/or "nausea and vomiting of pregnancy" and/or "treatments of hyperemesis gravidarum" and/or "treatments of nausea and vomiting of pregnancy" were considered for inclusion in the review.

Etiology and Risk Factors of HG: Although there are some biological, psychological, sociocultural as well as physiological factors are causal factors for developing HG, the etiology of HG in pregnancy is unknown.[12] However, HG is most likely a multifactorial disorder and has been associated with many risk factors.[13]Younger, primipara women are more likely to have HG than their counterparts.[14,15] Despite some theories, higher BMI, smoking, and socioeconomic status do not appear to differ significantly between women with HG.[16] However, carrying a fetus with XX gene has been associated with HG.[17,18] In a prospective study, maternal intergenerational effects have been observed, with increased odds of HG among women whose mothers also experienced HG during any of their pregnancy.[19] Study showed that women with HG were more likely to have higher levels of pregnancy-associated plasma protein A (PAPP-A) and free human chorionic gonadotropin (hCG) in the first trimester compared with controls. Maternal serum concentrations of hCG peak during the first trimester, when HG symptoms are often worst. However, there are conflicting reports[20] and consequently a causal association between HG and hCG has not been established. Meta-analysis examining H. pylori infection in women with HG reported a significant association.[21] However, due to speckled results a causal association between HG and H. pylori has not been established. Other factors implicated in the etiology of HG include estrogen.[22] stress, depression, and anxiety.[23]

Adverse Fetal Outcomes due to HG: Many studies have associated HG with an increased risk of low birth weight baby, preterm birth, and smaller infants.[24,25] However, despite much anticipation, recent systematic review shows that HG has no association with Apgar scores, congenital anomalies, or perinatal death.[26] There is scarcity of data examining the long-term effects of HG from childhood to adulthood, however, in a retrospective study, psychological and behavioral disorders were more frequently reported among adults exposed to HG in utero.[26] Nevertheless, individual analysis of anxiety, depression, and bipolarism revealed no increased odds of anxiety; though in contrast, increased odds of depression and bipolarism were observed.[27] In addition, an increased risk for psychological disorders in adulthood, as well as reduced insulin sensitivity in pre-pubertal children, however prospective studies are necessaryto better understand the underlying dynamics of these associations.[28]

Adverse Maternal Outcomes due to HG: If managed inadequately, HG can cause significant morbidities, including malnutrition and electrolyte imbalances, thrombosis, Wernicke's encephalopathy, central pontine myelinolysis, depressive illness etc.[29-30] Studies showed that women with HG are more likely to suffer from hematemesis, dizziness, and fainting.[31] and have an increased risk for abruptio placentae.[32] Besides, following pregnancy, these women are more likely to develop post-traumatic stress disorder (PTSD), motion sickness, muscle weakness and to have infants with abdominal colic, irritability, and growth restriction.[33] In its extreme forms, HG may cause maternal malnutrition and end organ damage manifesting as oliguria and abnormal liver function tests.[34]

Treatment Approaches: Treatment approaches for HG are usually based on the severity of symptoms and should be multimodal (advice, hydration, medication, hospitalization and psychosomatic counseling when necessary).[35] The severity of the condition can be assessed by numerous questionnaires. Two of the most widely used questionnaires are the Pregnancy-Unique Quantification of Emesis and Nausea (PUQE) scoring index, which assesses nausea and vomiting over 12 hours, and the PUQE-24, an extension of the original PUQE, which assesses symptoms over 24 hours.[36-37] In addition, there is the Hyperemesis Impact of Symptoms Questionnaire (HIS) that brings into focus on psychosocial factors as well.[38]

Initial Management: Mild forms of HG can generally be managed by following general nutritional advice such as intake of small amounts of fluids and food throughout the day rather than eating fewer but larger meals.[39] Besides that foods like nuts, dairy products, beans and dry and salty biscuits and light snacks are often helpful.[39] Furthermore, electrolyte-replacement drinks and oral nutritional supplements are advisable

for ensuring maintenance of electrolyte balance and an adequate intake of calories.[39] Protein-predominant meals have a positive effect as well and if the smell of hot food triggers nausea, cold food should be prepared instead.[40] Lifestyle advice and emotional support is also advised in the event of incipient nausea.

Medication: If dietary and lifestyle changes alone cannot bring remedy, low dose anti-emetics may be administered.[41] In such cases, around the world, ondansetron is one of the most commonly used and effective drug and has relatively few side effects.[42] Other options are the use of metoclopramide to improve gastrointestinal motility.[43] In addition administration of pyridoxine (vitamin B6) is also practiced.[44] Usually, Pyridoxine is given three times daily at a dose of 10-25 mg starting with a low dose that may reduce symptoms and has been proven to be more effective than placebo and the daily dose can be increased up to 200 mg without side effects.[45,46] However, a recent placebo-controlled trial demonstrated that a combination of oral pyridoxine and metoclopramide did not improve the vomiting frequency or the nausea score.[47]Some antiemetic agents and their doses are shown in the following table (Table 1).

While nearly all the above-mentioned medicaments may cause dizziness, drowsiness, constipation or dry mouth, more severe adverse effects can comprise of convulsions, decreased alertness, heartbeat alterations and hallucinations (doxylamine, metoclopramide, diphenhydramine, dimenhydrinate, promethazine). Headache, muscle pain or tremor and fever (prednisolone, procholrperazine, promethazine, dimenhydrinate, doxylamine, metoclopramide) may also occur.[48-50]

Alternative Interventions: Alternative treatment such as acupressure, on the inside of the wrist has shown some results; however, despite several trials, there is still minimal experimental evidence that acupressure is effective in relieving the symptoms of HG.[51] In addition, a crossover trial looking at unilateral or bilateral acupuncture had an equal effect on reducing emetic complaints between cases and placebos (60% vs 30%).[52] Furthermore, one small trial compared both manual acupressure and placebo acupuncture for the treatment of hyperemesis and found both procedures are effective.[53] However, one wrist band study found no significant difference in the change in Rhodes Index of nausea, vomiting, and retching (RINVR)

Table 1. Antiemetic agents and supposed dosage in HG.[48-50]

FDA Category	Medication	Administration	Suggested dosage
A	Pyridoxine (vitamin B6)	Oral	20 mg 3 × per day (max. dose: 200 mg per day)
	Doxylamine	Oral	25 mg at night and 12.5 mg in the morning accompanied by 10 mg of pyridoxine (maximum dose: 80 mg per day)
B	Ondansetron (IV)	Oral/intravenously	4-8 mg 2-3× per day/2-4 mg every 6-8 h or 8 mg every 12 h IV
	Metoclopramide	Oral	5-10 mg 3-4 × per day
	Meclizine	Oral/rectal	25-100 mg 2-4 × per day/1 × per day
	Diphenhydramine	Oral/IV	25-50 mg every 6-8 h
	Dimenhydrinate	Oral/IV/rectal	50 mg 3-4× per day/62 mg 2× per day/1-3× per day
C	Promethazine	Oral/IV	12.5-25 mg up to 6 × per day
	Prochlorperazine	Rectal	25 mg per day or 2× per day
	Prednisolone	Oral	40-60 mg per day reducing by half every 3 days
	Ginger	Oral (biscuits, confectionary, crystals, powder, tablets, capsules, fresh ginger)	Up to 1 g per day in divided doses

scores between the intervention, placebo and control groups despite improvement in all groups.[54]

Ginger has been studied for treating nausea and HG. One study, which used ginger extract, showed that it did not have a significant effect on vomiting compared to the placebo.[55] However, another placebo-controlled trial of ginger capsules found reduced number of emetic episode[56], while another study reported that divided doses of ginger syrup may have an effect in reducing nausea and vomiting episodes.[57] Two studies compared ginger to Vitamin B6 for treatment of nausea and vomiting during pregnancy, found no statistical difference between ginger and Vitamin B6 and could not reject the null hypothesis that they were equivalent for treatment of nausea and vomiting.[58,59]

Hospitalization: In women with severe dehydration or ketonuria, hospitalization is required and sometimes this alone is sufficient to improve symptoms because of its potential to provide psychosocial relief. However, the treatment of dehydration is of vital importance.[60] In many cases, the primary therapeutic step is total food withdrawal and maintain hydration, electrolyte replacement, correction of potential electrolyte imbalance, administration of vitamins and parenteral administration of carbohydrate and amino acid solutions about 8400 to 10,500 kj/d).[61] Further recommended procedure for substitution of vitamins are given in Table 2.[62]

Dextrose-containing solutions should be avoided initially to prevent the development of Wernicke's encephalopathy until intravenous (IV) thiamine has been administered. High concentration of sodium chloride solution and rapid infusion should also be avoided to prevent central pontine myelinolysis. If hypokalemia develops, potassium should be added to IV fluids at a concentration of 40mEq/L and renal function should be evaluated.[63]

If the women still are dehydrated or having any other complication an alternative to parenteral nutrition,could be nasogastric enteral feeding, as in cases of intractable nausea and vomiting, NG feeding relieve symptoms and provide adequate nutritional support.[64] If hyperemesis is refractory to treatment, corticoids (for example, hydrocortisone) may also be used.[65] Corticosteroids are contemplated as safe and do not have adverse effects for the fetus. In terms of refractory cases IV administration is preferable to oral administration.[66] Alternatively, to ensure a sufficient calorie intake total parenteral nutrition (TPN) might be useful in highly refractory cases.[67] However, there are scarcity of evidence to support the use of TPN and it should only be used as a last resort when all other treatments have failed, as it can be associated with severe complications such as thrombosis, metabolic disturbances and infection.[68] For women with persistent HG symptoms, treatment should be continued until vomiting ceases or occurs less than three times a day and subsequent food reintroduction should be carried out gradually.

Psychological Therapies: Psychological therapies involve dialogues between the service provider and the pregnant woman to evaluate the psychosocial status in her marital relationship, activate individual resources and provide support regarding acceptance of the pregnancy. Psychological options such as hypnotherapy, psychotherapy or behavioral therapy

Table 2. Recommended procedure for substitution of vitamins.[62]

Parenteral nutrition via peripheral venous access		
Main infusion	Adjuvants (daily dose)	Speed of operation
500 mL glucose-infusion 5%	• 200 mg vitamin B1 (thiaminchloride), • 200 mg vitamin B6 (pyridoxine), • 200 ¼g vitamin B12 (cyanocobalamine), • 2000 mg vitamin C (ascorbic acid)	50 mL/h
Parenteral nutrition via central venous access		
Main infusion	Adjuvants (daily dose)	Speed of operation
500 mL glucose-infusion 40%	• 200 mg vitamin B1(thiaminchloride), • 200 mg vitamin B6 (pyridoxine), • 200 ¼g vitamin B12 (cyanocobalamine), • 2000 mg vitamin C (ascorbic acid)	50 mL/h

may be considered. Studies showed that in around 90% of all hospitalized HG women, symptoms ameliorate without any further psychological intervention. However, consideration of psychosocial factors while making the diagnosis may improve long-term treatment outcome.[69]

Conclusion

Since the causal factors of HG are manifold, identification, management and treatment of this condition should be multimodal, ranging from dietary and lifestyle advice to psychosomatic counseling or psychoanalytic therapy. As this condition is accompanied by a significant reduction in quality of life for the pregnant women general physicians and obstetricians should be well informed about this condition, so that they can provide advice, counseling and effective medication to pregnant women and prevent the potential adverse outcomes.

References

1. Gadsby R, Barnie-Adshead AM, Jagger C. A prospective study of nausea and vomiting during pregnancy. Br J Gen Pract. 1993, 43: 245-248.
2. Mylonas I, Gingelmaier A, Kainer F. Nausea and vomiting in pregnancy. DtschArztebl. 2007, 104: A1821-1826.
3. Lee NM, Saha S. Nausea and Vomiting of Pregnancy. Gastroenterology clinics of North America. 2011;40(2):309-vii.
4. World Health Organization. International Statistical Classification of Diseases and Related Health Problems. 10th Rev. World Health Organization; 2007. Available at: http://apps.who.int/classifications/apps/icd/icd10online2007/. Accessed on 16 January 2016
5. ACOG (American College of Obstetrics and Gynecology). Practice bulletin: nausea and vomiting of pregnancy. Obstet Gynecol. 2004, 103 (4): 803-814.
6. Golberg D, Szilagyi A, Graves L. Hyperemesis gravidarum and Helicobacter pylori infection: a systematic review. Obstet Gynecol. 2007, 110: 695-703.
7. Gadsby R, Barnie-Adshead AM, Jaggerc C. Pregnancy nausea related to women's obstetric and personal histories. GynecolObstet Invest. 1997, 43: 108-111
8. Bailit JL. Hyperemesis gravidarium. Epidemiologic findings from a large cohort. Am J Obstet Gynecol. 2005;193(3 Pt 1):811–814.
9. Gadsby R, Barnie-Adshead AM, Jagger C. A prospective study of nausea and vomiting during pregnancy. Br J Gen Pract. 1993;43(371):245–248.
10. Piwko C, Koren G, Babashov V, Vicente C, Einarson TR. Economic burden of nausea and vomiting of pregnancy in the USA. J PopulTherClinPharmacol. 2013;20(2):e149–e160.
11. Trovik, J., &Vikanes, Å. (2016). Hyperemesis Gravidarum is associated with substantial economic burden in addition to severe physical and psychological suffering. Israel Journal of Health Policy Research, 5, 43.
12. Sanu O, Lamont RF. Hyperemesis gravidarum: pathogenesis and the use of antiemetic agents. Expert OpinPharmacother. 2011;12(5):737–748
13. Roseboom TJ, Ravelli AC, van der Post JA, Painter RC. Maternal characteristics largely explain poor pregnancy outcome after hyperemesis gravidarum. Eur J ObstetGynecolReprod Biol. 2011;156(1):56–59.
14. McCarthy FP, Khashan AS, North RA, et al; SCOPE Consortium. A prospective cohort study investigating associations between hyperemesis gravidarum and cognitive, behavioral and emotional well-being in pregnancy. PLoS One. 2011;6(11):e27678.
15. Basso O, Olsen J. Sex ratio and twinning in women with hyperemesis or pre-eclampsia. Epidemiology. 2001;12(6):747–749.
16. Askling J, Erlandsson G, Kaijser M, Akre O, Ekbom A. Sickness in pregnancy and sex of child. Lancet. 1999;354(9195):2053.
17. Tan PC, Jacob R, Quek KF, Omar SZ. The fetal sex ratio and metabolic, biochemical, haematological and clinical indicators of severity of hyperemesis gravidarum. BJOG. 2006;113(6):733–737.
18. Veenendaal MV, van Abeelen AF, Painter RC, van der Post JA, Roseboom TJ. Consequences of hyperemesis gravidarum for offspring: a systematic review and meta-analysis. BJOG. 2011; 118(11):1302–1313.
19. Vikanes A, Skjaerven R, Grjibovski AM, Gunnes N, Vangen S, Magnus P. Recurrence of hyperemesis gravidarum across generations: population based cohort study. BMJ. 2010;340:c2050.
20. Soules MR, Hughes CL Jr, Garcia JA, Livengood CH, Prystowsky MR, Alexander E 3rd. Nausea and vomiting of pregnancy: role of human chorionic gonadotropin and 17-hydroxyprogesterone. Obstet Gynecol. 1980;55(6):696–700.
21. Sandven I, Abdelnoor M, Nesheim BI, Melby KK. Helicobacter pylori infection and hyperemesis gravidarum: a systematic review and meta-analysis of case-control studies. ActaObstetGynecol Scand. 2009;88(11):1190–1200.
22. Lagiou P, Tamimi R, Mucci LA, Trichopoulos D, Adami HO, Hsieh CC. Nausea and vomiting in pregnancy in relation to prolactin, estrogens, and progesterone: a prospective study. Obstet Gynecol. 2003;101(4):639–644.
23. McCarthy FP, Khashan AS, North RA, et al; SCOPE Consortium. A prospective cohort study investigating associations between hyperemesis gravidarum and

cognitive, behavioural and emotional well-being in pregnancy. PLoS One. 2011;6(11):e27678.

24. Bailit JL. Hyperemesis gravidarium: Epidemiologic findings from a large cohort. Am J Obstet Gynecol. 2005;193(3 Pt 1):811–814.
25. Dodds L, Fell DB, Joseph KS, Allen VM, Butler B. Outcomes of pregnancies complicated by hyperemesis gravidarum. Obstet Gynecol. 2006;107(2 Pt 1):285–292.
26. Veenendaal MV, van Abeelen AF, Painter RC, van der Post JA, Roseboom TJ. Consequences of hyperemesis gravidarum for offspring: a systematic review and meta-analysis. BJOG. 2011; 118(11):1302–1313.
27. Derbent AU1, Yanik FF, Simavli S, Atasoy L, Urün E, Ku_çu UE, Turhan NÖ.First trimester maternal serum PAPP-A and free ²-HCG levels in hyperemesis gravidarum. PrenatDiagn. 2011;31(5):450–453.
28. Ayyavoo A, Derraik JG, Hofman PL, Cutfield WS. Hyperemesis gravidarum and long-term health of the offspring. Am J Obstet Gynecol. 2014 Jun;210(6):521-5.
29. Dodds L, Fell DB, Joseph KS, Allen VM, Butler B. Outcomes of pregnancies complicated by hyperemesis gravidarum. Obstet Gynecol. 2006;107(2 Pt 1):285–292.
30. Gross S, Librach C, Cecutti A. Maternal weight loss associated with hyperemesis gravidarum: a predictor of fetal outcome. Am J Obstet Gynecol. 1989;160(4):906–909.
31. Mullin PM1, Ching C, Schoenberg F, MacGibbon K, Romero R, Goodwin TM, Fejzo MS. Risk factors, treatments, and outcomes associated with prolonged hyperemesis gravidarum. J Matern Fetal Neonatal Med. 2012;25(6):632–636.
32. Bolin M, Åkerud H, Cnattingius S, Stephansson O, Wikström AK. Hyperemesis gravidarum and risks of placental dysfunction disorders: a population-based cohort study. BJOG. 2013;120(5):541–547.
33. Jørgensen KT, Nielsen NM, Pedersen BV, Jacobsen S, Frisch M. Hyperemesis, gestational hypertensive disorders, pregnancy losses and risk of autoimmune diseases in a Danish population-based cohort. J Autoimmun. 2012;38(2–3):J120–J128.
34. Ahmed KT, Almashhrawi AA, Rahman RN, Hammoud GM, Ibdah JA. Liver diseases in pregnancy: diseases unique to pregnancy. World J Gastroenterol. 2013;19(43):7639–7646.
35. Jueckstock JK, Kaestner R, Mylonas I. Managing hyperemesis gravidarum: a multimodal challenge. BMC Medicine 2010;8:46. Available at: http://www.biomedcentral.com/1741-7015/8/46. Accessed August08, 2018
36. Lacasse A, Rey E, Ferreira E, Morin C, Berard A: Validity of a modified Pregnancy-Unique Quantification of Emesis and Nausea (PUQE) scoring index to assess severity of nausea and vomiting of pregnancy. Am J Obstet Gynecol. 2008, 198: e71-77.
37. Ebrahimi N, Maltepe C, Bournissen FG, Koren G: Nausea and vomiting of pregnancy: using the 24-hour Pregnancy-Unique Quantification of Emesis (PUQE-24) scale. J ObstetGynaecol Can. 2009, 31 (9): 803-807.
38. Power Z, Campbell M, Kilcoyne P, Kitchener H, Waterman H: The Hyperemesis Impact of Symptoms Questionnaire: development and validation of a clinical tool. Int J Nurs Stud. 2010, 47 (1): 67-77.
39. Mylonas I, Gingelmaier A, Kainer F: Nausea and vomiting in pregnancy. DtschArztebl. 2007, 104: A1821-1826.
40. Jednak M, Shadigian EM, Kim MS, Woods ML, Hooper FG, Owyang C, Hasler WL: Protein meals reduce nausea and gastric slow wave dysrhythmic activity in first trimester pregnancy. Am J Physiol. 1999, 277 (4 Pt1): G855-861.
41. Reichmann JP, Kirkbride MS: Nausea and vomiting of pregnancy: cost effective pharmacologic treatments. Manag Care. 2008, 17: 41-45.
42. World MJ: Ondansetron and hyperemesis gravidarum. Lancet. 1993, 341 (8838)
43. Einarson A, Maltepe C, Navioz Y, Kennedy D, Tan MP, Koren G: The safety of ondansetron for nausea and vomiting of pregnancy: a prospective comparative study. BJOG. 2004, 111: 940-943.
44. Matok I, Gorodischer R, Koren G, Sheiner E, Wiznitzer A, Levy A: The safety of metoclopramide use in the first trimester of pregnancy. N Engl J Med. 2009, 360 (24): 2528-35
45. Shrim A, Boskovic R, Maltepe C, Navios Y, Garcia-Bournissen F, Koren G: Pregnancy outcome following use of large doses of vitamin B6 in the first trimester. J ObstetGynaecol. 2006, 26 (8): 749-751
46. Einarson A, Maltepe C, Boskovic R, Koren G: Treatment of nausea and vomiting in pregnancy: an updated algorithm. Can Fam Physician. 2007, 53 (12): 2109-2111.
47. Tan PC, Yow CM, Omar SZ: A placebo-controlled trial of oral pyridoxine in hyperemesis gravidarum. GynecolObstet Invest. 2009, 67: 151-157
48. Sheehan P: Hyperemesis gravidarum—assessment and management. AustFam Physician. 2007, 36: 698-701.
49. Einarson A, Maltepe C, Boskovic R, Koren G: Treatment of nausea and vomiting in pregnancy: an updated algorithm. Can Fam Physician. 2007, 53 (12): 2109-2111.
50. Atanackovic G, Navioz Y, Moretti ME, Koren G: The safety of higher than standard dose of doxylamine-pyridoxine (Diclectin) for nausea and vomiting of pregnancy. J ClinPharmacol. 2001, 41 (8): 842-845.
51. Shin HS, Song YA, Seo S: Effect of Nei-Guan point (P6) acupressure on ketonuria levels, nausea and vomiting in women with hyperemesis gravidarum. J AdvNurs. 2007, 59: 510-519

52. deAloysio D, Penacchioni P: Morning sickness control in early pregnancy by Neiguan point acupressure. Obstet Gynecol. 1992, 80: 852-854.

53. Habek D., Barbir A., Habek J.C., Janculiak D., Bobic-Vukovic M. Success of acupuncture and acupressure of the Pc 6 acupoint in the treatment of hyperemesis gravidarum. Forsch Komplementarmed Klass Naturheilkd. 11(1): 2004; 20–23

54. O'Brien B., Relyea M.J., Taerum T. Efficacy of P6 acupressure in the treatment of nausea and vomiting during pregnancy. Am J Obstet Gynecol. 174(2): 1996; 708–715

55. Willetts K.E., Ekangaki A., Eden J.A. Effect of a ginger extract on pregnancy-induced nausea: a randomised controlled trial. Aust N Z J ObstetGynaecol. 43(2): 2003; 139–144

56. Vutyavanich T., Kraisarin T., Ruangsri R. Ginger for nausea and vomiting in pregnancy: randomized, double-masked, placebo-controlled trial. Obstet Gynecol. 97(4): 2001; 577–582

57. Keating A., Chez R.A. Ginger syrup as an antiemetic in early pregnancy. AlternTher Health Med. 8(5): 2002; 89–91

58. Smith C., Crowther C., Willson K., Hotham N., McMillian V. A randomized controlled trial of ginger to treat nausea and vomiting in pregnancy. Obstet Gynecol. 103(4): 2004; 639–645

59. Sripramote M., Lekhyananda N. A randomized comparison of ginger and vitamin B6 in the treatment of nausea and vomiting of pregnancy. J Med Assoc Thai. 86(9): 2003; 846–853

60. Masson GM, Anthony F, Chau E. Serum chorionic gonadotrophin (hCG), schwangerschaftsprotein 1 (SP1), progesterone and oestradiol levels in patients with nausea and vomiting in early pregnancy. Br J ObstetGynaecol. 1985, 92: 211-215.

61. JK Jueckstock; R Kaestner; I Mylonas. Managing Hyperemesis Gravidarum. A Multimodal Challenge. BMC Family Practice. 2010;11(54).

62. Jueckstock, J., Kaestner, R., &Mylonas, I. (2010). Managing hyperemesis gravidarum: a multimodal challenge. BMC Med. 2010 Jul 15;8:46.

63. Chiossi G, Neri I, Cavazzuti M, Basso G, Facchinetti F. Hyperemesis gravidarum complicated by Wernicke encephalopathy: background, case report, and review of the literature. ObstetGynecolSurv 2006;61:255–68.

64. Hsu JJ, Clark-Glena R, Nelson DK, Kim CH. Nasogastric enteral feeding in the management of hyperemesis gravidarum. Obstet Gynecol. 1996, 88: 343-6

65. Taylor R. Successful management of hyperemesis gravidarum using steroid therapy. QJM. 1996;89:103-107.

66. Nelson-Piercy C, Fayers P, de Swiet M.Randomised, double-blind, placebo-controlled trial of corticosteroids for the treatment of hyperemesis gravidarum. BJOG. 2001, 108: 9-15.

67. Levine MG, Esser D. Total parenteral nutrition for the treatment of severe hyperemesis gravidarum: maternal nutritional effects and fetal outcome. Obstet Gynecol. 1988, 72 (1): 102-107.

68. Ismail SK, Kenny L. Review on hyperemesis gravidarum. Best Pract Res ClinGastroenterol. 2007, 21 (5): 755-769.

69. Leeners B, Sauer I, Rath W: Nausea and vomiting in early pregnancy/hyperemesis gravidarum. Current status of psychosomatic factors. Z GeburtshilfeNeonatol. 2000, 204: 128-134.

Forensic Aspects of Transsexualism : A Review

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Abstract

Transsexualism is a serious medical, social and legal problem which cannot be ignored. Transsexualism is something which disturbs life from the outset and from every point of view. The basic problem arises due to lack of stable working definition of sex, coupled with official unwillingness or reluctance to go beyond the morphological criterion, which by itself is nowadays generally held to be insufficient and which is linked to an inflexible legal classification.

Key words : *Transsexualism. Sex change operation, Sexual Perversion.*

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Introduction

Persons who react to sexual frustrations with a regression to infantile sexuality are called perverts Sexual deviations are commonly seen in all types of races and communities. A Sexually deviant person gets pleasure from sexual acts other than heterosexual intercourse.[1] Sexual deviation are modes of sexual release and mostly men use them where normal modes of release are not available.[2] A deviant is unable to maintain normal sexual relationship and thus chooses alternative, non intimate and impersonal channels of expression. It may either be abnormal choice of sexual objects or abnormal choice of techniques of sexual gratification. Transsexualisrn is a sexual deviation in which the deviant dresses, acts, behaves, thinks, feels and believes to be of the opposite sex, but does not get excitement by these. They do this being unable to accept their own sex. It is more common in males as compared to females.[3]

In India, a common variant of Transsexualism is Hijras. It is a community in which members are impotent men who dress and live as women and undergo emasculation.[4] Their traditional way of earning is collecting and receiving payments for blessing newborn babies and newly married couples. Hijras identify themselves as in betweens, using words indicating feminized males or as women. Their collective public stances that they wish to be regarded legally and socially as women.

Though the degree to which the individual hijra actively experiences himself as women varies.[4] Some persons are born as males, join the community for a variety of economic, social and psychological reasons, while others who may share the physical and or psychological characteristics of hijra, do not join the community for various reasones.[5]

The transsexualists have the tendency to remove the genital organs of one sex or the other to become the member of opposite gender. There are many reports of sex changing operation from male to female and vice versa.[6] In our country, the majority of hijras have the central ritual of operation where a part or all of the male genitals are removed, which becomes the most authentic way of identifying oneself as a hijra. During this process of operation, many persons die as it is performed by an unqualified doctor [quack], without any anesthesia or aseptic operation theatre, by using any sharp knife, stitches are made and the wound is left as such to heal by itself.[4,6]

Medico-Legal Issues[6]

Transsexualisrn per se does not pose much of the legal issues, but the real problem arises when a transsexualist gets his/her sex changed to opposite sex and desires his/her rights or dies/hurts himself/herself during sex-change operation. In September 1976, D.Can Oosterwijck a Belgian female to male transsexual, brought a successful case against Belgium before the European Commission of Human

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Rights' in Strasbourg and claimed that Belgium had violated his basic human rights by refusing to change his legal sexual status following sex change surgery.

Civic Rights Issues

Various issues of civil rights raise sex change operation such as: (i) change of name (ii) change of sex (iii) Marriage.

Change of Name[7]: Various countries allow a person's name to be changed to another not corresponding to his legal sex, and this, often irrespective of surgery. In some countries, this change can be formalized by a legal document known as deed poll, while in others including India, no such formality is required; just an announcement in newspaper and an affidavit in the court is sufficient. In Norway, transsexuals under treatment with a view to sex redetermination may obtain an asexual or neutral name by a license granted by the Ministry of Justice, but a name of the opposite sex can only be allowed, following a sex change operation and consequent change of sexual status on the birth certificate. Countries like Austria, Portugal and Spain do not allow forenames which do not correspond to the person's legal sex.

Change of Sex[8]: Legal change in sexual status requires alteration in the sex entry in birth register and certificates. Most of the countries do not have specific rules, regulations following sex change operation prove to be much more complex and controversial than mere change in names. Very few countries such as Sweden and Germany have specific law to regulate transsexuals and have provisions for change in sex, while majority of the countries are silent on this.

Marriage[9]: The principle of law on marriage is that it is a relationship between two persons of opposite sex and is therefore dependent on the legal sex of the parties. Hindu marriage Act debars an individual having ambiguous sex from marriage. Thus, post operative transsexuals may be the members of their original sex only if their own changed sexual status has been legally recognized. This is the position in Sweden, Germany, Norway and also in our country. In many other countries, on the other hand, rather incongruous position is that an operated male to female transsexual cannot, after the operation, validly marry a male or an operated female to male transsexual.

Legality of Sex Change Operation[10]

Sex change operation has multifaceted effect on the life of a person and gives rise to medico legal, social and moral controversies. Very few countries such as Sweden and Germany[8] have so far legislated specifically on the subject of transsexuals that entered in parish register and who for a considerable time have behaved accordingly and may be expected to continue living in such a sex role, on application, may obtain an official recognition that they belong to the other sex. Applicant must be an unmarried Swedish citizen of at least 18 years of age and must have undergone sterilization or for other reasons be incapable of procreation. Responsibility for decisions to grant sex reassignment rests with the National social Welfare Board, which is also the authority to grant permission for sex change operation. Being clearly a pioneer legislation, not many countries have followed the provisions. In the absence of specific legislation on the subject, the legality of sex change operations is still a matter of speculation and debate in majority of countries generally, sex change operation are considered legal if they are medically indicated, that is to say, if they have a genuine therapeutic purpose. On the whole, it seems that in many European countries, the so called sex change operation are not considered to be illegal. The legality of sex operation in general does seem, however, to call for a standardization of its conditions, which would take into account not only the quality of the patient's good faith, but also, where the transsexual already has a family, the social implications of the interested third parties. This will help reduce the high mortality attached to these types of operations.

Conclusion

Transsexualism is a serious and emotional problem involving medical, legal, social and psychological issues. If the transsexual is not to be left to continue to live in a bewildering limbo of legal and social ambiguity, a satiafactory solution to the problem is to be sought through full and frank co-operation between experts of both medical and legal fields, care of the interests of both the transsexual as well as the society. So far very few countries have come up with specific legislations on this subject and there is an urgent need for others to frame comprehensive laws to take care of all the aspects of transsexualism; this is more so in countries like ours where high mortality is associated with sex change operations performed most unqualified persons.

Reference

1. Freud S. Three essays on the theory of sexuality. Standard Edition, New York: Global Grey ebooks; 1953.
2. Edwards D. Sexual behaviors of college students. Unpublished manuscript. Ernroy University; 1977.
3. Mihanty GA. Text book of Abnormal psychology. 2nd Ed. New Delhi: Kalyani Publishers; 1989.
4. Nanda S. The Hijras in India. Mec T Law; 1984.
5. Carstairs GM. Hijra and Jiryan. Two derivatives of Hindu's attitudes to sexuality. Br. J Med Psychol 1956; 29: 128-138.
6. Verma SK. Sex change operations -Foetal outcome. J Crimino & Criminal 1993; 14(182): 52-54.
7. Nelson C, Paitich D, Steiner BW. Medicolegal aspects of transsexualism. Can Psych Assoc J 1976; 21(8): 557-64.
8. Kucheria K, Ammini AC and Taneja N. Clinico-genetic and Hormonal profile of Eunuchs (Hijras). JFMT 1987; 4(3): 1-3.
9. Hoenig J. The legal position of the transsexual mostly unsatisfactory outside Sweden. Can Med Assoc J 1977; 16: 319-323.
10. Leinicke S. "Postoperative Transsexuals' Right to Marriage". The Modern Ameracian, Spring 2005;1(7): 18-21.

Case Reports

Diminished Muscle Power of all Four Limbs: An unusual Side Effect of Oral Contraceptive Pill: A Case Report

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Abstract

Introduction: *Oral contraceptive pill (OCP) induced myopathy is almost inimitable. Here is a case of myopathy in a patient who was on oral contraceptive pill is being reported.*

Case Report: *A young female of 37 years, developed muscular pain in proximal muscles and weakness after taking OCP for 18 months. She started feeling lethargic and had muscle ache about 6 months before presentation. Her symptoms completely disappeared within 4 weeks of discontinuing the OCP.*

Conclusion: *Myopathy is infrequent with OCP. Given the temporal relation of disease and resolution after stopping the drug may indicate that this side effect needs more careful attention and high degree of suspicion for patients on OCP.*

(MH Samorita Med Coll J 2018; 1(1): 32-34)

Introduction

In 1932 Cushing first discovered steroid induced myopathy.[1] The formal entry of steroid in clinical practice was in 1948 and Dubois first documented iatrogenic steroid induced myopathy in 1958.[2] Though chronic form is very much common but few acute cases are also reported.[2] The range of clinical presentation involves muscle ache, proximal myopathy to quadriplegia.[3]

Though oestrogen and progesterone are not glucocorticoid but structurally being a steroid, here is reported a case of myopathy taking contraceptive pill.

Case Report

A 37-year-old lady, mother of one son, presented to outpatient department with the complaints of pains in all four limbs, progressively increasing lethargy and weakness for 6 months. Initially it was mild but later on she had difficulty in her daily activities like lifting household weights, combing her hair and climbing stairs. She sought medical help and was treated with acetaminophen without any response. Her co-morbidity was hypertension which was under control with amlodipine. About 8 weeks before this consultation she was treated successfully for pelvic inflammatory disease with amoxicillin and metronidazole.

On query, she gave history of taking oral contraceptive pill (OCP) containing oestrogen and progesterone for last 18 months. She had no history of fever, cough, rash, joint pain, difficulty in breathing or swallowing, urinary or gastrointestinal symptoms or cold intolerance. Her family history was nothing contributory.

On physical examination, her vital signs were within normal limit with 97% oxygen saturation on inhaling room air. Her orientation and alertness were normal. There was no tenderness or wasting of upper or lower limbs including the small muscles of hands. All cranial and peripheral nerves were also functionally normal. She had difficulty in standing from squatting position. Muscle strength was 3 over 5 in upper limb and 4 over 5 in lower limb proximal muscles in both the flexor and extensor group. Distal muscles were 4 over 5 in strength.

Her deep tendon reflexes were found to be normal with planter flexor. Her gait was normal. Other systemic

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examination revealed no abnormality including cardiovascular, respiratory and alimentary system.

Laboratory examinations revealed slightly lower hemoglobin of 11 mg/dl along with mildly elevated erythrocyte sedimentation rate (ESR) of 30 mm in 1st hour. C reactive protein was 6.2mg/dl (ref <5mg/dl). Creatine Phosphokinase (CPK) was elevated to 799 U/L (reference range for female: 30 – 135 U/L) along with mildly elevated aspartate aminotransferase (AST) of 69 IU/L (ref < 40 IU/L) and Alkaline phosphatase of 62 IU/L (reference range IU/L). Alanine aminotransferase (ALT), antinuclear antibody titer were negative (ANA titer) and renal function was normal. Urine analysis was normal and urine for myoglobin was negative. Thyroid function and basic metabolic panel were also normal. An Electromyogram (EMG) and muscle biopsy were planned but not pursued for unaffordability from patient's part.

She was advised to stop her OCP and to take oral acetaminophen extended release tablet 665 mg every 12 hours as needed for aches and pains. A return visit was scheduled after 4 weeks. On the return visit, she reported complete resolution of her symptoms with normal muscle power of 5 over 5 in both her upper and lower limbs. Laboratory tests also became normal with a CPK level of 121 U/L. The diagnosis of OCP induced myopathy was confirmed in a retrospective clinical manner by exclusion.

Discussion

Innumerable drugs are responsible for myotoxic effect in various ways. Myopathy in a formal term refers to any disease involving muscles and often used interchangeably with the term myositis. In socioeconomic perspective of Bangladesh, vague symptoms like myalgia, weakness, lethargy and cramping are often overlooked and treated as somatization. Clinical presentations of drug induced myopathy are often polymorphic and include fatigue, muscle aches, tenderness, nocturnal muscle cramping and weakness.[3,4] Histopathological features of muscle biopsy are mostly non specific but may reveal inflammation, atrophy and in some cases apoptosis, necrosis and regeneration. Biopsy is mostly useful when the CPK level remains elevated despite withdrawal of suspected drug.[5,6] In present case, serum CPK level returned to normal level after withdrawal of drug and so muscle biopsy remained undone.

A number of tests are available for the diagnosis of myopathy. Significantly elevated CPK level is indicative of muscle involvement. Other tests include serum ALT, AST, EMG and muscle biopsy. Diagnosis of drug induced myopathy almost attribute clinical suspicion whereas laboratory tests are supportive. In this case serum CPK and AST levels were normal. Other reported cases had elevated CPK, AST and ALT.[7,8] Askari et al. did not find CPK elevation as a consistent finding in their steroid induced myopathy reported cases.[9] EMG may reveal normal or abnormal. Usually abnormal report shows normal sensory and motor conduction velocities with decreased amplitude of muscle action potentials. EMG was not done in this case. As muscle biopsy is often not require[9] CPK comes down to normal. Muscle biopsy was not done in this case and patient was reluctant, because of patients unwillingness biopsy.

OCP induced myopathy is reported rarely. Corticosteroid induced myopathy is well established and extensively reported. This patient took both estrogen and progesterone containing pill for 18 months. OCP is also a steroid component and the reported case responded after contraceptive withdrawal. That is why this case was selected to be reported.

Conclusion

Lethargy and features of neuropathy like climbing stairs, combing hair etc are uncommon side effects of OCP induced myopathy. So, the physician should be aware of these features during prescribing OCP, so that it can be withdrawn before permanent damage due to drug induced myopathy. More study is needed to find out the exact incidence of sex hormone induced myopathy, so that early comprehension can help to diagnose the effect.

Abbreviations

ALP: alkaline phosphatase; ALT: alanine aminotransferase; ASM: acute steroid myopathy; AST: aspartate aminotransferase; CPK: creatinine phosphokinase; CRP: C-reactive protein; EMG:

electromyography; ESR: erythrocyte sedimentation rate.

References

1. Cushing H. The basophil adenomas of the pituitary body and their clinical manifestations. Bull Hopkins Hosp 1932; 50:137.
2. Dubois EL. Triamcinolone in the treatment of systemic lupus erythematosus. J Am Med Assoc 1958; 167(13): 1590-99.
3. Sathasivam S, Lecky B. Statin induced myopathy. BMJ 2008; 337(nov06): 2286.
4. Argov Z. Drug-induced myopathies. Curr Opin Neurol 2000; 13(5): 541-5.
5. Singleton JR, Baker BL, Thorburn A. Dexamethasone inhibits insulin-like growth factor signaling and potentiates myoblast apoptosis. Endocrinology 2000; 141(8): 2945-2950.
6. Smithson J. Drug induced muscle disorder: Clinical update 2009; 28(12): 1056.
7. Van Marle W, Woods KL. Acute hydrocortisone myopathy. Br Med J 1980; 281(6235): 271-272.
8. Kumar S. Steroid-induced myopathy following a single oral dose of prednisolone. Neurol India 2003; 51(4): 554-556.
9. Askari A, Vignos PJ Jr, Moskowitz RW. Steroid myopathy in connective tissue disease. Am J Med 1976; 61(4): 485-492.

Lymphangioma of the Tongue: A Case Report and Review of Literature

Basak AK[1], Debnath J [2], Parvin S[3], Hossain MI [4], Nahar N[5], Maksud M[6], Islam MS[7]

Abstract

Lymphangioma are benign tumours resulting from a congenital malformation of the lymphatic system, they are relatively uncommon and usually diagnosed in infancy and early childhood. Commonly located at head and neck, rarely occur in the oral cavity. Intraoral lymphangiomas occur more frequently on the dorsum of the tongue, followed by palate, buccal mucosa, gingiva and lips. Lymphangioma of the tongue is a common cause of macroglossia in children associated with difficulty in swallowing and mastication, speech disturbances, airway obstruction, mandibular prognathism, openbite and other possible deformities of maxillofacial structures.We report a case of 11-year-old female with lymphangioma of tongue and was present since birth.

***Key words**: Macroglossia, lymphangioma, developmental malformation, tongue.*

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Introduction

Lymphangiomas are benign hamartomatous malformation arising from sequestration of lymphatic tissue. Lymphangiomas have marked predilection for the head and neck region(50-70%).[1] About half of the lesions are noted at birth and around 90% develop by 2 years of age. Histopathological features consist of multiple intertwining lymph vessels in a loose fibrovascular stroma.

Case Report

An 11-year-old girl reported to the OPD of Kumudini Women's Medical College Hospital with the complaint of a swelling on the anterior two third of dorsum of the tongue, associated with biting of the tongue on mastication. The lesion was present from birth. Her parents noticed it increasing in size along with growth of the child. There was no family history of such disease. On inspection, there was a marked soft tissue swelling with numerous papillary and nodule like projections which made it appear irregular and granular. On palpation, the swelling was soft, nontender and pebbly. The mouth opening was normal and there was no restriction of functions of the tongue. Medical investigations were within normal limits. On the basis of history and clinical examination a provisional diagnosis of lymphangioma was made.

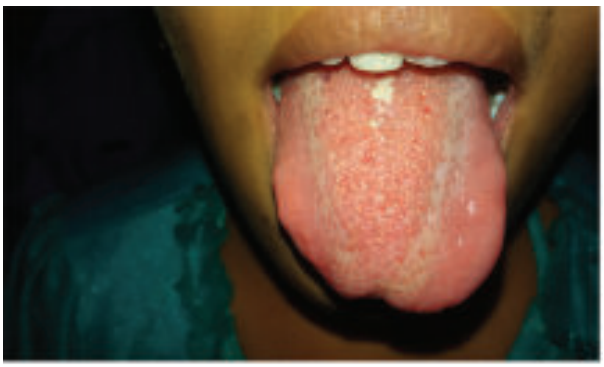

Fig.-1: *Lymphangioma of tongue*

(Picture showing numerous papular and nodular lesion giving warty appearance of the tongue).

Discussion

Lymphangioma is a rare, benign, congenital malformation of unknown aetiology that originates from lymph vessels and this entity was first

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described by Virchow in 1854.[2] Lymphangioma are uncommon congenital hamartomas of the lymphatic system. Lymphangiomas have a marked predilection for the head and neck region, which accounts for about 75% of all cases and about 50% of these lesions are noted at birth and around 90% develop by two years of age.[3] However, diagnosis of lymphangioma in adult is a rare occurrence.[3] The clinical appearance of lymphangioma depends on the extension of the lesion. Superficial lesions consist of elevated nodules with pink or yellow color. Deeper lesions are described as soft, diffuse masses with normal colour.[4] Lymphangioma can be classified histopathologically as:[5]

1. Lymphangioma simplex (composed of small thin-walled lymphatics).
2. Cavernous lymphangioma (composed of dilated lymphatic vessels with surrounding adventetia)
3. Cystic lymphangioma (consisting of huge, macroscopic lymphatic spaces surrounded by fibrovascular tissues and smooth muscles).
4. Benign lymphangioendothelioma (lymphatic channels appear to be dissecting through dense collagen bundles)

Lymphangiomas are classified according to their clinical presentation into Macrocystic (cavities larger than about 2 cm^3), Microcystic (cavities smaller than 2 cm^3) and mixed (combining these two types)[6]. They are always present at birth, but may go unnoticed until after dentition erupts or even after puberty. However, there have been reports of its occurrence in adults.[7]

Oral lymphangiomas may occur at various sites but are more frequent in the anterior two-third of the tongue and may enlarge to a great extent that results in macroglossia, which may impair speech and eating and may become life-threatening due to their size or secondary infection.[1,8,9] Usually, the tumour is superficial in location and demonstrates a pebbly surface, resembling a cluster of translucent vesicles. The surface appears like frog eggs or tapioca pudding. Deeper lesions present as soft, ill-defined masses.

The superficial lesions are manifested as papillary lesions, which may be of the same colour as the surrounding mucosa or of a slightly reddish hue. The deeper lesions appear as diffuse nodules or masses without any significant changes in surface texture or colour.

Histopathologic features consist of lymphatic vessels with marked dilatations.[10] The vessels often diffusely infiltrate and adjacent soft tissues demonstrate lymphoid aggregates in their walls. The lining endothelium is thin and the spaces contain proteinaceous fluid and lymphocytes. Secondary haemorrhage may be noticed in the lymphatic vessels. The lymphatic spaces contain lymphatic fluid, red blood cells, lymphocytes, macrophages and neutrophils. Surrounding connective tissue stroma consist of loose fibrotic tissue with a number of inflammatory cells.[1,11-13] The capillary lymphangioma consists of small capillary-sized vessels, cavernous lymphangioma consists of larger dilated lymph channels, and cystic lymphangioma exhibits large macroscopic cystic spaces. More often, all sizes of vessels may be found within the same lesion.

In the intraoral lymphangiomas, lymphatic vessels are located just beneath the epithelium, often replacing connective tissue papillae.

The differential diagnosis for lymphangioma includes Haemangioma, Amyloidosis, Congenital hypothyroidism, Neurofibromatosis, Mongolism, Primary muscular hypertrophy.[12]

The Treatment of lymphangioma depends upon their type, size, involvement of anatomical structures and infiltration to the surrounding tissues. Microcystic lesions do not respect tissue planes, are diffuse and difficult to eradicate, whereas macrocystic lesions are localized and easily excisable. Treatment is aimed at complete surgical excision. Partial surgical excision, injection of sclerosing solution (OK432), electrocoagulation, cryotherapy, embolization, steroid administration, radiation and LASER surgery may be the different modalities of treatment of diffuse lymphangioma of tongue.[1,13,14]

Conclusion

Though lymphangioma occurs rarely in the oral cavity specially in the tongue, early recognition allows proper initiation of treatment and prevents the occurrence of complications.

References

1. Nuville BW, Damm DD, Allen CM, Bouquot JE, Oral and maxillofacial pathology. 3rd ed. Netherlands: Elsevier Inc; 2009.

2. Kheur Supriya M, Samaptika R, Yashwant I, Desai RS. Lyphangioma of tongue: A Rare entity. Ind Journ Den Adv 2011; 3(3): 35-37

3. Sunil S, Gopal Kumar Devi, Sreenivasan BS. Oral lymphangioma-Case reports and review of literature. Contemporary Clinical Dentistry. 2012; 3(1): 116-18.

4. Mousumi G, Sanjoy S, Gukkulakrishnan,Singh Amit. Lymphangioma of the Tongue. Natl J Maxillofac Surg 2011; 2(1): 86-8.

5. Rajendra R, Sivapathasundharam B. Shafer's textbook of oral pathology. 6th ed. Netherlands: Elsevier INC; 2009.

6. Leboulanger N, Roger G, Caze A, Enjolras O, Denoyelle F, Garabedian EN. Utility of radiofrequency ablation of hemorrhagic lingual lymphangioma. Int J ped Otorhinolaryngol 2008; 72: 953-58.

7. Ikeda H, Fujita S, Nonaka M, Uhera M, Tobita T, Inokuchi T. Cystic lymphangioma arising in the tip of the tongue in an adult. Int J Oral Maxillofac Surg 2006; 35: 274-6.

8. Fliegelman LJ, Friedland D, Brandwein M, Rothschild M. Lymphatic malformation: Predictive factors for recurrence. Arch Otolaryngol Head Neck Surg 2000; 123: 706-10.

9. Marx RE, Stern D. Illinosis: Oral and maxillofacial pathology: A rationale for diagnosis and treatment. Quintessence Publishing Co, Inc Carol stream; 2003.

10. Rathan J Jeeva,Vardhan BG Harsha, Muthu MS,Venkata Chalapathy, Saraswathy K, Sivakumar N. Oral lymphangioma: A Case report. J Indian Soc Pedod prev Dent. 2005; 23: 185-9.

11. Guelmann M, Katz J. Macroglossia combined with lymphangioma- A Case report, J Cli Pediatr Den. 2003; 27: 167-70.

12. Greenberg M, Glick M and Jonathan AS. Burket's Oral Medicine. 10th edition. BC Decker; 2008.

13. Balakrisahnan A, Bailt CM. Lymphangioma of the tongue. A review of pathogenesis, treatment and the use of surface LASER photocoagulation. J Laryngol Otol 1991; 105: 924.

14. Ethunandan M, Mellor TK. Haemangiomas and Vascular malformation of the maxillofacial region- A review. Br J Oral Maxillofac Surg 226; 44: 263-72.

Abstract from Current Literatures

(MH Samorita Med Coll J 2018; 1(1): 38-40)

EFFECT OF PRECHEMOTHERAPY STEROID ON INITIAL TUMOR LOAD: AN OUTCOME INDICATOR OF INDUCTION OF REMISSION IN CHILDHOOD ACUTE LYMPHOBLASTIC LEUKEMIA (ALL)

Muhammad Tawfique, Rashed Jahangir Kabir, Chowdhury Yakub Jamal, Abdul Mannan Mia, Najnin Umme Zakia

Background: Treatment of Acute Lymphoblastic Leukemia (ALL) is mainly chemotherapy based. In the past outcome of treatment with polychemotherapy was dissatisfying. Recently success have improved as risk based polychemotherapy has been employed. Therefore in modern approach of the treatment of ALL of children assessment of risk factors has become a key issue. It has been observed in the studies abroad that response to prechemotherapy corticosteroid could be a clue to the good response to chemotherapy

Objectives: The objectives of this study were to see the effects of dexamethasone on initial tumor load and to observe the relationship of the effects of prechemotherapy dexamethasone on tumor burden and the outcome of Induction of Remission.

Materials and Methods: This was a prospective study carried out from January 2004 to June 2005 in the Department of Pediatric Hematology and Oncology at Bangabandhu Sheikh Mujib Medical University (BSMMU). All the cases between one to fourteen years of either genders were enrolled into the study after their confirmation as ALL. Tumor load was assessed before the beginning of prechemotherapy dexamethasone and after the day 7 of prechemotherapy dexamethasone. After reassessment of tumor load, polychemotherapy of Induction of Remission was begun. Bone marrow study was performed every seven days after starting Induction chemotherapy until the bone marrow remission was achieved. Then the effect of prechemotherapy dexamethasone on tumor load was compared with the outcome of Induction polychemotherapy. The results were analyzed maintaining standard procedure with SPSS version 10.0.

Results: A total of 40 patients were enrolled into the study. Among them 21 were male and nineteen were female. Thirty were FAB L1 and ten were L2 morphologically. Reduction of tumor load was evident as estimated by peripheral blast count together with hepatic and splenic mass. Response to prechemotherapy dexamethasone was good in 21 out of 28 patients with the WBC count below 50x109/L as compared to only 4 out of 12 with the WBC count >50x109/L (P=0.013). Similarly, 21 in 24 in the group <25x109/L of Initial Blast Cell count responded good as compared to 4 in 16 with >25x109/L Initial Blast Cell count (P=0.000). Among the 25 good responders to prechemotherapy dexamethasone 24 went into remission within 7 days of induction and among the 15 poor responders only 6 went into remission within 7 days of induction (P=0.000).

Conclusion: Response to pre-chemotherapy dexamethasone could be a strong guide to predict the outcome of induction chemotherapy and help in risk stratification of childhood Acute Lymphoblastic Leukemia.

Keywords: Prechemotherapy, initial tumor, ALL, Dexamethasone.

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EFFECT OF ORAL ERYTHROPOIETIN IN PREVENTION OF ANEMIA OF PREMATURITY

Md. Jamshed Alam, Md. Kamrul Ahsan Khan, Nazmun Nahar, Sanjoy Kumer Dey, Md. A. Mannan, Mohammod Shahidullah

Introduction: Anemia of prematurity (AOP) is a common problem of very low birth weight babies. Blood transfusion is a necessity when it occurs in moderate to severe form putting the child in to the risk of transfusion related complications. Erythropoietin, a potent stimulator of hemopoesis is available in breast milk in good amount and absorbed intact under physiologic condition. In this background oral recombinant human erythropoietin (rhEPO) can be a useful alternative to its subcutaneous administration in prevention of AOP.

Objective: To evaluate the efficacy of oral rhEPO in the prevention of AOP in very low birth weight (VLBW) neonates.

Methods: This randomized controlled study conducted in the NICU of BSMMU over one year.

Total 60 preterm (<34 weeks)VLBW (<1500g) infants were enrolled and randomly divided into Control (group-I), Oral (group-II) and Subcutaneous (group III). Experimental groups (group-II & group-III) received rhEPO 400 IU/Kg, 3 times weekly in oral and subcutaneous (S/C) route respectively and continued for 2 weeks (Total 6 doses). Therapy was initiated 14 days after birth when the baby achieved oral feeding of at least 50 ml/kg/day of breast milk. All infants received oral iron and folic acid supplementation up to 12 weeks of postnatal age. Transfusion data were recorded. Anthropometric and hematological assessments were done at 2, 4, 6 and 12 weeks of age.

Results: Baseline clinical characteristics and hematological values were almost similar in all groups. Mean hemoglobin were 11.34±0.68gm/dl, 11.88±0.54gm/dl& 12.12±1.32 gm/dl, the mean hematocrit were 34.11±2.03%, 35.66±1.65% & 36.38±3.97% and the mean reticulocyte were 7.56±2.48%, 9.85±1.50% & 9.22±3.11% in the control, oral and subcutaneous group respectively and the differences are statistically significant ($p<0.05$).Weight gain was higher in the intervention group at 6 and 12 weeks follow up than the control group($p<0.05$).Only 2 (5.25%) infants, one in each of the intervention groups required blood transfusion, compared to 6 (31.5%) infants in control group ($p<0.01$).

Conclusion: Oral EPO is as good as subcutaneous use of EPO in stimulating erythropoesis, maintaining HCT and Hb at high level and is safe in preterm baby.

Key words: Preterm very low birth weight, Anemia of prematurity, oral rhEPO.

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DIABETES MELLITUS AND HEART FAILURE

Michael Lehrke MD, Nikolaus Marx MD

Epidemiologic and clinical data from the last 2 decades have shown that the prevalence of heart failure in diabetes is very high, and the prognosis for patients with heart failure is worse in those with diabetes than in those without diabetes. Experimental data suggest that various mechanisms contribute to the impairment in systolic and diastolic function in patients with diabetes, and there is an increased recognition that these patients develop heart failure independent of the presence of coronary artery disease or its associated risk factors. In addition, current clinical data demonstrated that treatment with the sodium glucosecotransporter 2 inhibitor empagliflozin reduced hospitalization for heart failure in patients with type 2 diabetes mellitus and high cardiovascular risk. This review article summarizes recent data on the prevalence, prognosis, pathophysiology, and therapeutic strategies to treat patients with diabetes and heart failure.

The American Journal of Medicine (2017), [30, S40-S50].

DIABETES AND RAMADAN: PRACTICAL GUIDELINES MOHAMED HASSANEIN

Monira Al-Arouj, Osama Hamdy, Wan Mohamad Wan Bebakar, Abdul Jabbar, Abdulrazzaq Al-Madani, Wasim Hanif, Nader Lessan, Abdul Basiti, Khaled Tayeb, MAK Omar, Khalifa Abdallah, Abdulaziz Al Twaim, Mehmet Akif Buyukbese, Adel A. El-Sayed, Abdullah Ben-Nakhi

Ramadan fasting is one of the five pillars of Islam and is compulsory for all healthy Muslims from puberty onwards. Exemptions exist for people with serious medical conditions, including many with diabetes, but a large number will participate, often against medical advice. Ensuring the optimal care of these patients during Ramadan is crucial. The International Diabetes Federation (IDF) and Diabetes and Ramadan (DAR) International Alliance have come together to deliver comprehensive guidelines on this subject. The key areas covered include epidemiology, the physiology of fasting, risk stratification, nutrition advice and medication adjustment. The IDF-DAR Practical Guidelines should enhance knowledge surrounding the issue of diabetes and Ramadan fasting, thereby empowering healthcare professionals to give the most up-to-date advice and the best possible support to their patients during Ramadan

http://dx.doi.org/10.1016/j.diabres.2017.03.003

HBA1C AS A PREDICTOR OF DIABETES AFTER GESTATIONAL DIABETES MELLITUS

Rickard Claesson, Claes Ignell, Nael Shaat, Kerstin Berntorp

Aim: We wanted to investigate third-trimester HbA1c as a predictor of diabetes after gestational

diabetes mellitus (GDM). Methods: Women with GDM were followed up prospectively for five years from pregnancy to detect the development of diabetes. The ability of HbA1c to predict diabetes was evaluated with receiver-operating characteristic (ROC) curves and logistic regression analysis. Results: By five years, 73 of 196 women had been diagnosed with diabetes. An optimal cut-off point for HbA1c of 36mmol/mol (5.4%) could predict diabetes with 45% sensitivity and 92% specificity. For HbA1c e”39mmol/mol (e”5.7%), sensitivity, specificity, and positive predictive value were 30%, 97%, and 91%, respectively. In logistic regression analysis, adjusting for the diagnostic glucose concentration during pregnancy, HbA1c levels in the upper quartile (e”36mmol/mol) were associated with a 5.5-fold increased risk of diabetes. Conclusion: Third-trimester HbA1c levels in the pre-diabetes range revealed women with post-partum diabetes with high specificity and high positive predictive value. HbA1c testing could be used as a strategy to select high-risk women for lifestyle interventions aimed at prevention of diabetes starting during pregnancy. The results should encourage further validation in other populations using new diagnostic criteria for GDM. (PDF) HbA1c as a predictor of diabetes after gestational diabetes mellitus.

http://dx.doi.org/10.1016/j.pcd.2016.09.002

Notes and News

(MH Samorita Med Coll J 2018; 1(1): 41)

Bangladesh has a unique health system under Ministry of Health and family Welfare starting from tertiary level hospitals at different medical colleges, different specialized Institutes in the capital to union sub-centre and community clinics at grass-root level. But the service coverage is not adequate for the people of the densely populated country, Bangladesh. Privatization of health care service is very important for our country. With this point in view, MH Samorita Medical college was established in the year 2010 with affiliation to Samorita Hospital at Panthopath, Dhaka. Later this Medical College and Hospital was shifted to its own new building at Tejgaon, love Road in 1st July' 2014. This 500 bedded hospital is a well equipped hospital delivering both general and specialized services, including ICU, NICU, HDU, CCU, Cath lab, CT scan, Dialysis unit etc. All the departments started their activities gradually. The Out Patient Department and Emergency department started their activities from 23rd October, 2014; ICU from 1st July' 2015, NICU from 1st July' 2016 and CCU from 9th October' 2016.

Currently 8th batch of MBBS students are running in MH Samorita Medical College and Hospital. Regular CME and Seminars are organized in this institute to enrich the knowledge of the faculty members as well as the students.

Cultural activities in different occasions, like Nobobarsho, Independence day, Victory day, National Mourning day are regularly observed in this college. Other extra-curricular activities like picnic, sports, debate club are also organized here.

The following students obtained **honours** in respective subjects against their names

Name	Course	Type of Exam.	Year of Exam	Exam. Roll No.	Subject
Nabila Haque	MBBS	2nd Professional	July. 2016	3191	Pharmacology
Anika Bushra	MBBS	2nd Professional	July' 2016	3202	Pharmacology
Saraban Tohora	BDS	1st Professional	February'2017	800	Anatomy
Purushottam Panday	BDS	1st Professional	February'2017	812	Anatomy
Fabbiha Akter Bhuiyan	MBBS	1st Professional	May'2017	3126	Biochemistry