## **NURSING PRACTICE**

## Stress, Coping Strategies, Quality of Life and Lived Experiences of Women with Pregnancy-induced Hypertension

<sup>1</sup>Raddi Sudha A,<sup>2</sup> Nayak Baby S, <sup>3</sup> Prakash Ratna, <sup>4</sup> Randhir Puri, <sup>5</sup> MC Metgud

Place of Conduction of Study: KLES, Dr Prabhakar Kore Hospital and Medical Research Center Nehrunagar Belgaum - 590010. Ph: 0831-2473777, Fax: 0831-2470732, e-mail: klehosp@satyam.net.in

## **Abstract**

**Objectives:** To explore and assess the levels of stress and its manifestation and different stressors in women with pregnancy-induced hypertension and to identifying the coping strategies used by women with PIH in response to stress.

Methods: The research approach for the first phase of study was corelational and the subjects were selected by convenience sampling technique and for the second phase qualitative using phenomenology to study the lived experiences. The study comprised of 65 women with PIH, in the Phase I and 6 women with PIH in the Phase II, who were admitted in antenatal wards of KLES Hospital and Medical Research Centre and District Hospital Belgaum. The data on coping strategies was collected using a standardized tool, the Jalowiec coping scale and data on quality of life of women with PIH was collected using another standardized tool – the World Health Organization Quality of Life scale (WHOQOL-BREF). The qualitative data was collected using a semistructured interview schedule and the audiotaping of the verbatum of lived experiences.

**Results:** In the Phase I it was found that majority (64.61%) of women had moderate stress levels. The finding indicated that there was no correlation between levels of stress and use and effectiveness of coping strategies. ( $r_{1.(65)} = 0.1226$ , P > 0.05,  $r_{2.(65)} = 0.1805$ , P > 0.01). The association between levels of stress and quality of life of women with PIH showed that quality of life was independent of levels of stress. The chi-square value ( $\lambda 2_{effect} = 12.137$ ) between age and effectiveness of coping strategies was significant which showed that effectiveness of coping strategies were dependent on the age of the women with PIH. In the Phase II based on the analysis of data four themes emerged from the women's perspective of the phenomenon under study.

Theme 1: Impact of bed rest.

Theme 2: Unaware of PIH and its effect on self and unborn child.

Theme 3: Fear of outcome of pregnancy.

Theme 4: Psychological impact of symptoms of PIH.

**Conclusion:** All these four dimensions depict the importance of holistic and comprehensive care.

**Keywords:** Pregnancy induced hypertension, stress, coping strategies, quality of life, lived experiences.

## INTRODUCTION

Pregnancy induced hypertension is a complication of pregnancy that cannot be taken lightly. Maternal and fetal morbidity and mortality are higher than normal when pregnancy gets complicated with hypertension. PIH in its severe form is seen when the blood pressure levels noted are equal or more than 170 mmHg systolic and 110 mmHg diastolic. PIH is a global problem and complicates approximately 10-17% of pregnancies and is therefore most common problem requiring special attention in antenatal and intrapartum period. The incidence of pregnancy induced hypertension (PIH) in India ranges from 5-15%. The incidence of PIH in pre-emigravidae is 16%, and multigravidae 7%, primary pre-eclampsia occurs in 70% of PIH cases and secondary pre-eclampsia in 30% of all PIH cases. The incidence of PIH was found to be 14% in primigravida and 16% multigravida's in selected hospital of Belgaum, Karnataka.

Stress is present in confinement and immobilization. Women experience profound changes in emotional, social and cognitive status. "Pregnancy induced hypertension is a high-risk" condition which implies a threat to pregnancy, either by means of the mother's health or the health of the fetus. Coping and stress are inter-related. Coping is an attempt made by an individual to resolve stress. The phenomenon of interest in the present study is "lived experiences" of women with PIH.

Quality of life measures have become a vital and often required part of health outcomes appraisal. Measurement of

<sup>&</sup>lt;sup>1</sup>Professor and Head, Department of Obstetrics and Gynecology Nursing, KLES Institute of Nursing Sciences, Belgaum Karnataka, India

<sup>&</sup>lt;sup>2</sup>Associate Professor, MCON, MAHE, Manipal, Karnataka, India

<sup>&</sup>lt;sup>3</sup>Dean, MCON, MAHE, Manipal, Karnataka, India

<sup>&</sup>lt;sup>4</sup>Classified Specialist OBG, Military Hospital, Belgaum, Karnataka, India

<sup>&</sup>lt;sup>5</sup>Associate Professor, Department of Obstetrics and Gynecology JNMC, Belgaun, Karnataka, India

QOL provides a meaningful way to determine life impact of health care where cure is not possible. Stress, coping, and quality of life are important aspects when the effects of hypertension of pregnancy on women are examined. Coping reflects a process and includes active involvement over a period of time.

Thus, this study aims to identify stress, coping strategies, quality of life (QOL) and lived experiences of women with PIH. Stress, coping strategies and quality of life are measured using quantitative research approach whereas lived experiences is studied using phenomenology as a qualitative approach. The investigator has experience with quantitative research as faculty and research guide. But is interested as a novice to be exposed to qualitative research and believes that the blending of qualitative and quantitative data in a single project can be advantageous in developing evidence base for nursing practice, by using multimethod research. The researcher believes that it will be advantageous as the two methods have complementary strengths and weaknesses, an integrated approach can lead to theoretical and substantive insights into the multidimensional nature of reality.

## **METHODS**

The data were collected from 30th April till 25th May 2006 after taking administrative permission. In the phase I data were collected using all four tools:

• Tool 1 A: Background information

Tool I B: Srivastava's socioeconomic status scale

(Modified)

Tool II : Stress and stress manifestation assessment

scale

• Tool III : Jalowiec's coping scale

Tool IV : World Health Organization Quality of Life—

WHOQOL scale.

Each subject was explained the purpose of the study and consent was obtained prior to interview. For qualitative data separate consent was taken. In phase II data was collected using Tool V, a semi-structured interview schedule and audio-taped verbatum. The investigator went through the records of cases of PIH admitted during the year, 2003, 2004 and also found out that the average number of admission of women with PIH ranged from an average of 44 cases per month, together in all the selected hospitals. Hence, the investigator had a convenient sample size of 65 women with PIH who would be available during the period of data collection in the first phase. Six women with PIH who scored as moderate to severely stressed in the stress rating scale were picked up by criterion sampling technique for qualitative analysis of "lived experiences" in the second phase.

## **RESULT**

In the phase I according to the age group majority 45 (69.23%) were in the age group of 19-24 years, and 02 (3.07%) were above 30 years. Majority 34 (53.84%) had mild PIH, 14 (21.53%) had severe PIH and 17 (26.15) had gestational hypertension. Majority 42 (64.61%) of women with PIH had moderate stress levels, 23 (35.38%), had mild stress levels (Table 1). Mean of stress levels was 57.07, standard deviation 6.59 and mean percentage 63.41, in women with PIH. The mean percentage score were apparently higher in the area of psychological manifestations (43.81%) in comparison to the physical and social manifestations, i.e. 34.97% and 21.61 respectively. The mean percentage score was higher in the area of optimistic (13.72%) coping strategies as compared to other coping strategies. The standard deviation (± 0.56) computed between coping strategies shows that fatalistic coping scores were apparently more dispersed in comparison with other coping strategies (Table 2). The adjusted median was computed for effectiveness of Jalowiec coping strategies and it was found that all eight coping strategies were falling under the category of below 2. The adjusted mean ranged from 0.346 to 0.635 and median from 1.600 to 1.857. The adjusted standard deviation ranged from 1.538 to 1.883. The better mean (1.8) and median (0.635) was for supportant coping style. Raw scores were highest among domain IV (environmental domain) for all 65 women with PIH, i.e. 773.50, which means they showed high quality of life in this domain. They fared better in domain I physical where raw scores were 762.29 and domain III (Social relationship domain) where raw scores were 760.00. They fared least in psychological domain, domain II where they scored 758, and quality of life was least is this domain. There was moderate degree of significant positive correlation between physical-psychological, physical-social and physicalenvironmental domain (Table 3). There was no statistically significant association between level of stress and quality of life at 0.05 level of significance (Table 4). No statistically significant association was found between levels of stress and selected variables like age ( $\chi^2 = 2.335$  at df 3) obstetric score  $(\chi^2 = 0.182 \text{ at df 1})$  type of family  $(\chi^2 = 0.221 \text{ at df 1})$  occupation of the women ( $\chi^2 = 3.125$  at df 4) and type of PIH ( $\chi^2 = 5.018$ at df 2) at 0.5 level of significance as P > 0.5 for all variables. The chi-square value computed between age and effectiveness of coping strategies showed a statistically significant association.  $(\chi^2_{\text{effect}} = 2.588)$ , P > 0.5. The use and effectiveness of coping strategies were independent of obstetric scores, ( $\chi^2_{use} = 378$ ,  $\chi^2_{\text{subeffect}} = 2.588 \text{ at df 1}$ ), type of family ( $\chi^2_{\text{use}} = 0.332$ ,  $\chi^2_{\text{effect}}$ = 0.451 at df 2), occupation of women ( $\chi^2_{use}$  = 3.125,  $\chi^2_{effect}$ = 1.396 at df 4) and type of PIH ( $\chi^2_{use}$  = 0.7962,  $\chi^2_{effect}$  0.7962 at df 2), but dependent on age of the women with PIH. No statistically significant association was found between quality of life and selected variables like age ( $\chi^2 = 2.187$  at df 3), obstetric score ( $\chi^2 = 1.251$  at df 1), type of family ( $\chi^2 = 4.771$  at df2), occupation of women ( $\chi^2 = 3.125$  at df 4) and type of PIH ( $\chi^2 = 1.657$  at df 2) among women with PIH at 0.05 level of significance, as P > 0.5 for all variables. In the phase II, four women with PIH were between 19-24 years of age and two were between 25-29 years of age. Two were primigravida's and four were multigravida's, four belonged to nuclear family whereas two were from joint family.

## **DISCUSSION**

The present study findings revealed that among the sixty five women with pregnancy induced hypertension, majority 69.23% belonged to the age group of 19-24 years, maximum of them, 50.76%, were multigravidae. Majority had mild PIH (53.84%), Majority, 50.67% of women, belonged to middle class, which contradicts the findings of a study¹ where majority 53.33% of women with PIH belonged to lower class. Majority 64.61% of women had moderate stress levels. In a study conducted² majority of women 51.6% primigravidae and 50% multigravidae had high stress levels, which contradicts the finding of the present study, where most of the women had mild stress levels. Similarly, in a study conducted³ majority, 75% of women had severe stress levels which again contradicts the findings of the present study.

The stress levels in the present study were found to be 57.07, standard deviation ± 6.59 and mean percentage 63.41% in women with PIH. In contrast in the findings of a study, 4 mean stress scores were 66.40, and standard deviation  $\pm$  8.13. Mean percentage scores were apparently higher in the area of psychological manifestations (43.81%) in comparison to the physiological (34.97%) and social (21.61%) manifestation, in the present study whereas in contrast, in the study<sup>4</sup> majority of women scored higher (86.22%) in social manifestations as compared to psychological (80.93%) manifestations and physiological manifestations, (78.33%). These findings contradict the findings of the present study. It was observed in the present study that most of the women used different coping styles. The mean percentage for optimistic was (13.72%), evasive (12.90%), supportant (12.90%), self-reliant (12.82%), confrontative (12.67%), palliative (12.00%), fatalistic (11.48) and emotive (11.48%). It was also found that most of the women used different coping styles and found it effective. The mean percentage scores for effectiveness of Jalowiec coping styles was 13.78%, for supportant, self-reliant (12.90%), confrontative (12.82%), evasive (12.75%), optimistic (12.75%), palliative

**Table 1:** Frequency and percentage distribution of women with PIH according to level of stress

N = 65

S. No.	Level of stress/scores	Frequency	Percentage (%)
1	Mild (30-49)	23	35.38
2	Moderate (56-68)	42	64.61

**Table 2:** Subscale wise adjusted mean, standard deviation and mean percentage distribution of use of Jalowiec coping strategies among women with PIH

N = 65

Coping strategies	No. of items	Adjusted mean score	Standard deviation	Adjusted mean percentage
Confrontative	10	1.70	± 0.32	12.67
Evasive	13	1.73	± 0.30	12.90
Optimistic	9	1.84	± 0.35	13.72
Fatalistic	4	1.54	± 0.56	11.48
Emotive	5	1.54	± 0.40	11.48
Palliative	7	1.61	± 0.42	12.00
Supportant	5	1.73	± 0.36	12.90
Self reliant	7	1.72	± 0.37	12.82

**Table 3:** Distribution of raw and transformed scores according to four domains of quality of life in women with PIH

N = 65

Domain	Raw scores	Transformed scores	
		$T_1$ - 4-20	T <sub>2</sub> - 0-100
Physical	762.29	441	1087
Psychological	758.00	509	1559
Social relationship	760.00	999	4618
Environment	773.50	477	941

**Table 4:** Association between levels of stress and QOL of women with PIH

N = 65

		QOL	
Stress	No of women	≥ Median (79)	≤ Median (79)
Mild	23	73	10
Moderate	42	18	24
	$\chi^2_{(cal)} = 0.634$	df = 1	P = 0.4266

(12.17%), Fatalistic (11.58%) and emotive (11.21%). In contrast, in a study<sup>5</sup> on women who had undergone laparoscopic sterilization the mean percentage for use of coping in confrontative style was (16%), self-reliant (15.2%), emotive style (11.65%), optimistic (10.26%), evasive (9.51%), palliative (8.14%), supportant (6.91%) and for the fatalistic coping style used was (5.3%). It was found that in a study<sup>5</sup> in contrast to present study the mean percentage scores for effectiveness of coping styles for confrontive was (15.5%), self-reliant (13.5%), optimistic (10.39%), evasive (9.68%), emotive (9.38%), supportant (8.98%), palliative (6.66%) and for the fatalistic coping style (5.18%). A study<sup>6</sup> supports the findings of the present study where subjects rated optimistic, supportive and confrontive coping style as most often used. The findings of present study are consistent with the study where most of the women's psychosocial adjustment to diabetes using Jalowiec's coping scale, reported maximum use of confrontive, optimistic and supportant and self-reliant coping. In contrast in a study<sup>5</sup> most commonly used coping styles in women who had undergone laparoscopic sterilization were confrontive, selfreliance and comotive coping style. In a study<sup>8</sup> in identifying perceived stressors and coping strategies among subjects with rheumatoid arthritis subjects used optimistic and confrontative coping strategies more as compared to others. This study supports the finding of the present study where most commonly used coping styles were optimistic (13.72%) and confrontative (12.67%). The findings of the present study indicated that raw scores for quality of life were highest among environmental domain (773.50), for all 65 women with PIH indicating high QOL in this domain. The findings of present study are supported by the findings of a study<sup>9</sup> where subjects with HIV infection fared best in the environmental domain and showed high QOL in the same. In the present study, it was found that coefficient of correlation between physical-psychological ( $r_1 = 0.5631$ ), physical-social ( $r_2 = 0.5792$ ) and physical-environmental ( $r_3 =$ 0.5218) domains showed significant moderate positive correlation between the four domains. The findings of the present study are thus consistent with the findings by the study<sup>9</sup> where in subjects with HIV infection, the magnitude of relationship between the domains was highly positive and significant. In the present study, the association between levels of stress and quality of life of women with PIH was not statistically significant. Thus, it can be interpreted that quality of life was independent of the levels of stress. In contrast a study<sup>10</sup> done on women with breast cancer contraindicated the findings of present study. It was found that in a study done to assess quality of life, depression and stress in breast cancer women, the malignant group had poorer physical and

psychological QOL and higher life stress, which indicates that poorer the quality of life, higher are the stress levels.

## **ACKNOWLEDGMENT**

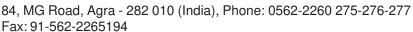
- I am equally thankful to Professor Mrs Juliana D'SA, Department of Maternity Nursing College of Nursing, MAHE, Manipal, for her keen interest taken in the conception of the study and for providing valuable guidance, incessant encouragement and suggestions.
- I fondly remember and thank Dr Aparna Bhaduri, an eminent teacher and personality who lit up the interest in qualitative approach through her course of discussions in teaching research methodology.

## **REFERENCES**

- Mani S. A protocol on nursing management of pregnancy induced hypertension based on learning needs of nurses and nursing needs of women with PIH in a selected hospital of Kolkata, West Bengal [dissertation]. Manipal: Manipal Academy of Higher Education Deemed University, 2003.
- Augustine S. A Comparative study on stressor and social support in primigravida and multigravida in selected hospitals of Udupi District [dissertation]. Manipal: Manipal Academy of Higher Education Deemed University; 2000.
- Sivagami G. A correlative study on stress and coping of HIV
  patients and its relationship with selected factors at a counseling
  centre of Udupi District [dissertation]. Manipal: Manipal
  Academy Of Higher Education deemed University; 2003.
- 4. Polit DF, Beck CT. Nursing Research: Principles and Methods. 7th Ed. Pennsylvania: Williams and Wilkins; 2004.
- Monteiro D. A study of health problems of women after laparoscopic sterilization and coping strategies used by them in a selected hospital of Karnataka State [dissertation]. Manipal: Manipal Academy of Higher Education Deemed University; 2003
- Halstead MT. Coping strategies of long-term cancer survivors. Cancer Nursing 1994; 17(2):94-100.
- Willoughy D, Kee C, Demi A. Women's psychosocial adjustment to diabetes. Journal of Advanced Nursing 2003;32(6):1422-30.
- Mahat G. Perceived stressors and coping strategies among individuals with rheumatoid arthritis. Journal Advanced Nursing 1997;25:1144-50.
- Stella M. A study to determine the impact of HIV infection on QOL of HIV positive women attending selected nongovernmental organizations of south India [dissertation]. Manipal: Manipal Academy of Higher Education Deemed University; 2004.
- Yen JY, Ko CH, Yen CF, Yang MJ, Wu CY, Juan CH, Hou MF. Quality of life, depression and stress in breast cancer women outpatients receiving active therapy in Taiwan. Psychiatric Clin. Neurosis 2006;60(2):147-53.



## Malhotra Test Tube Baby Centre Malhotra Nursing & Maternity Home (P) Ltd



e-mail: mnmhagra10@dataone.in, mnmhagra1@gmail.com Website: www.mnmhagra.com, www.mttbc.com, www.narendramalhotra.net

## Pioneer ART Centre of India in the Historic Touristy City of Taj

## Facilities available for:

- · 3D-4D Ultrasound and Operative Endoscopy
- · IVF, ICSI, TESA-ICSI
- Sperm freezing, Embryo freezing
- · Assisted Hatching, Blastocyst culture
- · Oocyte Donation Programme
- · Embryo Donation Programme
- · Sperm Banking
- · Genetic Counselling and Counselling for PGD
- · Special Benefits for Patients from Outside India

## Facilities for training:

- FOGSI recognised training courses in Ultrasound, Infertility, Endoscopy and ART
- · NARCHI recognised 1-2 years training in Obs Gyn
- ICOG recognised: 6 months trainings in ART, USG and Perinatology



## Helplines

## **Administrative and Trainings**

+91 98970 99333

+91 98970 99335

+91 92 195 39 133

## Hospital

Guddu +91 98970 99339 Naval +91 94104 09781 Ved +91 94122 63455

## IVF

+91 98970 82171

+91 94102 95301

## Travel

+91 99991 08577

+91 98371 50433

# SERVICE AVAILABLE HERE

# Services of BBH

Emergency services (24 hrs)

Plastic surgery

Pulmonology

Urology

Psychiatry

**Breast Clinic** 

Radiology

Orthopaedics

Paediatrics

Critical Care Unit

General OPD and Surgical Services

- ✓ Cardiology
  - / Dental
- Dermatology and Dermatological

Surgery

- ENT, Oromaxillo facial surgery
  - General Internal Medicine
- General Surgery
- Gynaecology and Obstetrics
- Neurology
- Nephrology
- Neurosurgery
- Oncology
- Opthalmology





dso Veb:- www.bandbhospital.com G.P.O. 2481, Gwarko, Satdobato, Lalitpur, Nepal, Tel: 5531930, 5531933, 5533206, OPD Tel: 5544800, Fax: 977-1-5528526, Email: bbhospital@wlink.com.np

Endoscopy, Colonoscopy

ERCP and other optical diagnostic procedure

- Fully equipped Laboratory with Histopathology services & expert staffed
  - Haemodialysis
- Mammography
- Mediastinoscopy

Rehabilitation Medicine

- Physiotherapy
- portable x-ray machines with Radiology department with multiple stationary and image intensifier

Therapeutic Services

Audiometry

C-arm

Diagnostic and

- Spirometry
- Throracosocpy

Color Dopple

CT Scan

ECG

- TMT
- Ultrasonography
  - Spiral CT Scan / MRI 0.35 T

(HACOOA)





Since 1997

## **FEEDBACK FORM**

Your Evaluation

Excellent/Good/Ok		
As reference on your desk fo Excellent/Good/Ok		
Your Remark :		
Contents by Authors Excellent/Good/Ok		
Your Remark :		
Printing Quality and Presenta Excellent/Good/Ok		
Your Remark :		
The Best Article you liked		
The Best presenter you liked		
The most useful Article for yo		
	ting articles and tips on E-mail	
Namo		
•		
Phone :	Mobile:	

Editor-in-Chief

Dr Narendra Malhotra

Malhotra Nursing and Maternity Home (P) Ltd., 84,

Mahatma Gandhi Road, Agra - 10 Tel: (0562)2260275,2260276

Fax: (0562)2262143 Mobile: 98200 52631

e-mail: mnmhagra1@gmail.com

Executive Editor and Hon. Secretary

Dr Randhir Puri

Ex Editor and Secretary Journal

randhir0256@gmail.com

## Submitting a paper to

## Journal of South Asian Federation of Obstetrics and Gynecology

## **INSTRUCTIONS TO AUTHORS/ CONTRIBUTORS**

## **Instructions to Contributors**

Please read the instructions carefully and follow them strictly. Submissions not complying with these instructions will not be considered.

## Submission of Contributors

All submissions and correspondence should be addressed to the Secretary, SAFOG Obstetrics and Gynecology Journal, 84, MG Road, Agra - 282010 (UP).

All articles submitted for publication are meant exclusively for publication in this Journal and must be accompanied by the following **warranty** Signed by all the authors.

"The undersigned author/authors hereby declare that the article is original, neither the article nor a part of it is under consideration for publication anywhere else and has not been previously published anywhere. We have declared all vested interests. We have **meticulously followed** the instructions. The article, if published, shall be the property of the Journal and we surrender all rights to the Editor. We agree to provide the latest follow-up of cases prior to the publication of case reports when requested".

### Vested Interests

All vested interests must be declared by all the authors, e.g. money received directly or indirectly for the study or for its presentation from all sources including commercial/ pharmaceutical companies, and including gifts, travel perks, hospitality, etc.

## Copy Right

All articles published in this Journal become the property of the Journal and should not be published or reproduced in any form, in full or in part, without the written permission of the Editor.

## Responsibility

The contents of the articles and the views expressed therein are the sole responsibility of the authors, and the editorial board will not be held responsible for the same.

## MANUSCRIPTS FOR REVIEW AND PAPER SUBMISSION

## a. THE REVIEW

Your review can be up to 2500 words in length and should highlight and discuss all interesting developments in the subject, as reflected in the recent literature. In addition to describing recent trends, you can give a synopsis of your own opinions of the topics discussed and suggest a preferred practice pattern.

## **Manuscript Format**

The review must be double-spaced and a maximum of 2500 words in length (excluding references).

Review structure: The review must contain the following:

Cover page: Stating the title, authors and their affiliations, and full contact details for the corresponding author (including phone number and e-mail address).

Introduction: This should be a paragraph of 50-100 words outlining the scope of the review and mentioning any earlier work which will place the review in context.

**Text of review:** Includes headings and titled paragraphs to subdivide the text. Ensure that at least one sentence divides each heading (i.e. do not have a subheading directly beneath a full heading).

Conclusion: A paragraph of 50-100 words drawing together the implications of the review topic and, if appropriate, giving suggestions for future research.

Acknowledgments: Of professional colleagues and funding bodies only.

Reference section: References should be in numerical sequence (Vancouver style), include the first three authors, or all authors if there are six or fewer.

## **b. SUBMITTING YOUR PAPER**

Manuscripts should be submitted by e-mail at nmnhagra1@gmail.com

If you have any query or suggestion, please do not hesitate to contact:

Dr Narendra Malhotra, Malhotra Nursing and Maternity Home

84, Mahatma Gandhi Road, Agra - 282010 UP

Ph: 260277-76-77, Resi: 260279, Fax 0562-363757

Mob: 09837033335

Dr Randhir Puri

Hon. Sec., SAFOG Journal e-mail:randhir0256@gmail.com

The manuscript file should include the text, references, structured abstract, keywords, figure legends and complete author address. References cited in figures or tables must be numbered in sequence, according to the position of the first text citation of the figure or table. Unpublished data, submitted manuscripts and personal communications must be referenced in the text only as follows:

- 1. Manuscripts must be submitted in precise, unambiguous, concise and easy to read English.
- 2. The number of authors should not exceed six.

- 3. Manuscripts should be submitted in quadruplet, alongwith the article on a rewritable CD.
  - They should be typed only on one side of the A4 size paper with **double spacing** (space between two lines **not less than 6 mm**) and **at least 2.5 cm margin** on the sides, top and bottom.
- 4. Number all page consecutively in Arabic numerals at the top right side in the following order.
  - a. Title of the article and capsule of one or two sentences giving the essence of the study.
    - Full names (beginning with **underlined surname**) and designations of all authors.
    - Institutions where the study was conducted and address (with **PIN/Zip code**) for correspondence along with telephone number, fax number and e-mail address and a list of 3 to 5 key words for indexing and retrieval.
  - b. Structured abstract: A structured abstract, limited to 150-200 words, is to be used for regular articles and not for case reports. The structured abstract is to contain the following major headings: Objectives, Methods, Results and Conclusions, Key words. The Objective reflects the purpose of the study or the hypothesis that is being tested. The methods (study Design) should include the setting for the study, the subjects, (number and type) studied, the treatment or intervention, and the **tools or statistical analysis**. The Results include the outcome of the study and statistical evaluation. The Conclusion states the significance of the results.
  - c. Text: Not to exceed six foolscap typed sheets.
    - **Introduction highlighting** the aim of the study and justification for the study.

**Methods:** Use only generic names of drugs. For referring to less than 10 persons, objects, etc., spell out the number. For more than 10, use Arabic numerals. While comparing less and 10 with more than 10 use Arabic numeral for uniformity. Number starting the sentence should be spelled out, unless it involves a decimal point. Refer obstetric cases as women and not patients. Those in comparative studies should be referred to as subjects and controls.

Results must include statistical analysis in table format, wherever applicable.

Discussion: Statements made should be supported by the data collected and/or literature references.

- d. Acknowledgment of those who have actually contributed substantially to the study mentioning their contribution.
- e. Reference List.
- f. Tables
- g. Figures with legends.
- h. Legends of photographs.
- Xerox copies of title pages of the references.
- 5. Manuscript will not be returned or preserved.

## IMPORTANT INSTRUCTIONS

- 1. All measurements must be in metric units and temperature in degree Celsius.
- 2. Use only standard abbreviations, symbols and acronyms that are universally accepted.
- ${\it 3.}\ \ \, {\it Use American Spell-Check for English, e.g.}\ \, {\it Use Fetus instead of Foetus.}$

When using Microsoft Word, Click on Tools and select Spelling and choose English (US).

- 4. References:
  - i. The number of references must not exceed 15 only **recent** (not more than 15 years old) references should be used. **Do not give text** books as references.
  - ii. References must be numbered consecutively in the sequential order in which they are mentioned in the text, tables and figures. They must be cited in the text, tables and figures as the number of the reference in the reference list as a superscript.
  - iii. References list must be set out in Vancouver style giving authors surnames and initials, title of the paper, abbreviation of the Journal, year, volume number, and first and last page numbers. Give surnames and initials of all the authors.
  - iv. Medical Journal abbreviations must be as used by Index Medicus.
  - v. Books: Text Books should not be used as references. Other books should be quoted as Authors (surnames followed by initials) of chapter/section, and its title, followed by Editors (names followed by initials), title of the book, number of the edition, city of publication, name of the publisher, year of publication and number of the first and the last page referred to.
  - vi. Abstracts of papers presented at conferences should be cited only from the published proceedings strictly using the format of the surname of authors followed by initials, title of the paper, title of the abstract book, city of publication, name of the publisher, year of publication, and page numbers referred to.
  - vii. Unpublished work, work in preparation, and personal communications should only be mentioned in the text and not used as references. Personal communication must carry the date of the communication. However, work accepted for publication should be included in the reference list as 'In Press' giving the name of the Journal.
  - viii. Quoted by references are not accepted.
  - ix. Responsibility: Authors are solely responsible for the accuracy of references.

- 6. **Tables:** The number of Tables should not exceed five. No Table should exceed the limit of one page. Each Table should be typed double spaced, on a separate sheet of paper, should carry a title and be serially numbered in Arabic numerals in the order of its first citation in the text. Each column should have a short heading with units of measure, it applicable, in parenthesis. Do not use vertical rules. Use horizontal rules only above and below column headings and at the bottom of the Table. Explanatory matter should only be given in footnotes using a, b, c, d.... as symbols sequentially. Matter given in a sentence or two in the text should not be repeated in the Table. Use graphs as alternative to Tables with many entries.
- 7. Figures and photographs: These should be serially numbered in Arabic numerals. Figures should be unmounted in black ink drawings of professional quality with clear lettering. They should have a legend. Matter given in a Table must not be repeated as a Figure. Photographs should be in colored glossy prints and if black and white there should be a sharp contrast between black and white areas. They should be 8 × 13 cm in size. If applicable a linear scale should be incorporated in the photography or magnification stated. The word "Top" should be written in the appropriate place at the back of the photograph. A legend should be supplied for each photograph typed double spaced in consecutive order on a separate sheet of paper. Costs of processing and printing of figures and photographs will have to be paid in advance by the author on acceptance of the paper.
- 8. Case reports: Because of their rarity and innovative management, case reports of practical interest to clinicians will be accepted for publication. They must not exceed three double space typed foolscap sheets, inclusive of a few references.
- 9. Reprints: Reprints can be ordered on payment by the author after acceptance of the paper.
- 10. Proof correction will be done by the Editors.
- 11. **Copyright clearance**: Copyright clearance for material/illustration that is not original must be obtained by the authors in writing from both the original authors and the publishers.
- 12. DISCLOSURES: Authors should include all relevant information regarding Conflict of interest and Sponsorship statements.