

SRI. KRISHNA MEDICAL COLLEGE , MUZAFFARPUR (BIHAR)

Department of Pathology.

TO WHOM IT MAY BE CONCERNED

This is to certify that Dr.Pawan Kumar Shah ,Asstt.Prof.of Pathology has
Carried out research work on topic :-

"Study of Role of Endometrial Biopsy in Case of Primary Infertility in Sri.
Krishna Medical College,Muzaffarpur.

Which has been published in IMJ (NIC/BID/ICMR/,JR/ 233 Dt. 14.12.12

INDEX MEDICUS by NIC, NEW DELHI, GOVT. OF INDIA).

This is certified that this work is done by Dr.Pawan Kumar Shah in my
department & with my consent . And he is the sole & first author of
above mentioned topic.


PROF. & H.O.D of PATHOLOGY.
S.K.Medical Collegae,Muzaffarpur.



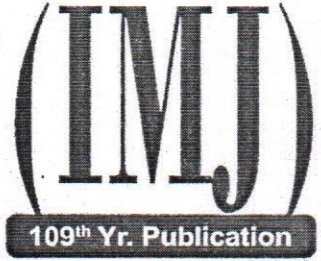


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Dated: 07/03/16.

To,
DR. Pawan Kumar Shah,
Assistant Professor, Dept. of Pathology,
SKMCH, Muzaffarpur, Bihar.

SUB: "Study of role endometrial biopsy in case of primary infertility in Sri Krishna Medical College, Muzaffarpur."

Respected Sir/Madam,

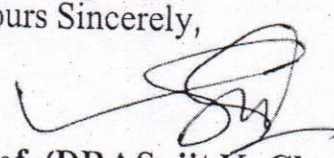
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Please bear with us as we have space constraint to publish the said article.

We will try to accommodate as soon as possible when space provided.

Thanking You.

Yours Sincerely,


Prof. (DR.) Sujit K. Chaudhuri
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second one was meconium aspiration (8%) and third was RDS/Prematurity (5%).

In the eclamptic patients, the neonatal morbidity was significantly higher (48.7%), birth asphyxia was the commonest (15.8%) but severe birth asphyxia was present only in 2.6%. Incidence of meconium aspiration was also quite high (i.e. 14.5%). None of the babies developed features of hypermagnesimism after treatment with magnesium sulphate.

CONCLUSION

To conclude, it can be emphasized that magnesium sulphate is the drug of choice for the prophylactic as well as therapeutic management of severe pre eclampsia and eclampsia respectively. It is very efficient in the prevention of fits in severe pre eclampsia and reduction of fits recurrence rate in eclampsia, it is also efficient in reducing maternal morbidity, maternal mortality, neonatal morbidity and improving perinatal outcome along with very few troublesome side effects.

Safety of the drug for both mother and foetus as revealed by this study appears to correlate with high rate of acceptance of this drug for management of pre eclampsia-eclampsia among obstetricians in other countries as well. Due to its effectiveness, magnesium sulphate is one of the anticonvulsants approved by US. FDA to be used in severe pre eclampsia and eclampsia. The drug should be more extensively used in our country as it is cheap and in this study, has proved effective too.

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ORIGINAL & CLINICAL RESEARCH

INTRODUCTION

Every married women nurtures a deep felt desire to become a mother, unfulfilment of which is not only a cause of distress, mentally but also socially to the women and their family especially in India. The barren marriage is a problem as old as the history of mankind. Failure of married couple of reproductive age group to conceive after twelve months or more of unprotected intercourse (or six months if the women is over age 35yrs) or the inability to carry a pregnancy to live birth is called Infertility. Infertility affects approximately 10 -12% of the population. Since infertility strikes diverse group affecting people from all socioeconomic levels and cutting across all racial, ethnic and religious lines. Chances are great that a friend, relative, neighbor, or perhaps you are attempting to cope with medical and emotional aspect of infertility. Approximately one third of infertility is attributed to the female partner, another one third to the male partner and one third is caused by combination of problems in both partner or is unexplained. Infertility can be primary when it occurs in a women who has never established a

pregnancy or it can be secondary when it occurs in a women who has a history of one or more previous pregnancies. Medically the cause of infertility may be divided as ovulatory dysfunction (40%), tubal and pelvic pathology (40%), unexplained infertility (10%), cervical factors (5-10%) and uterine factors(5%). Though there may be multiple reasons, disturbances in development of endometrium during the postovulatory phase could be an important factor, as the endometrium is the site of implantation. Infertile patients often have out of phase endometrium under normal

physiological conditions the uterine mucosa is a close gauge to the ovarian activity. The cyclic alterations occurring in the endometrium during reproductive life are a prerequisite for the ultimate function of uterus to house and support the conception, where the morphological and biochemical changes of uterine mucosa are likely to play an important role in the implantation of fertilized oocyte. Thus the alteration of the human endometrium during normal menstruation cycle is a prime concern. Evidence of ovulation and cause of ovulatory dysfunction can be obtained by

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Study of Role of Endometrial Biopsy in Case of Primary Infertility in Sri Krishna Medical College, Muzaffarpur

study of serial vaginal cytology, endometrial biopsy, and hormonal assessment. As the endometrial biopsy and histology demonstrate secretory endometrial development which results from the action of progesterone thus gives evidence of ovulation or anovulation and luteal phase deficiency besides giving information regarding various endometrial pathology, was long considered the gold standard among methods for evaluating the quality of luteal functions for diagnosis of luteal phase deficiency with certain limitations in accuracy and precision.

Thus in this study we have stressed on histopathological features of endometrium in primary infertility, to date the endometrium and to categorise them in various types based on microscopy of endometrial tissue being sent in pathology department of Sri Krishna Medical college.

MATERIAL AND METHOD

This study has been done on 130 endometrial samples of patients having primary infertility, during the period of one year from March 2015 to February 2016, at Sri Krishna Medical College, Muzaffarpur, Bihar. A detail relevant history recorded regarding duration of infertility, result of any previous evaluation and treatment, menstrual history (age at menarche, cycle length, onset/severity of dysmenorrhoea, previous method of contraception, coital frequency and sexual dysfunction, any h/o thyroid disease, pelvic or abdominal pain and dyspareunia, family h/o birth defect, mental retardation, early menopause, occupation and use of tobacco and alcohol.

In this study all the patients were ranging between the age group of 18 years to 38 years with a mean age of 24.76 year, while 23 patients (17.7%) were in the age group of 18-20 years, 62 patients (47.5%) in the age group of 21-25 year, 41 patients (31.5%) in the age group of 26-30 years, 3 patients (2.3%) in the age group of 31-35 years, and 1 patients (0.8%) were 38 years of age. It was observed that duration of infertility varied from 1-12 years, while 54 patients (41.5%) came to hospital within 2-3 years duration of marriage followed by 29 patients (22.3%) in 4-5 years, 21 patients (16.2%) in 6-7 years, 11 patients (8.5%) in 8-9 years and 6 patients (5.0%) had duration of 10-11 years and 1 patients had 12 year h/o

infertility. The mean years of infertility was 4.43 years. The endometrial samples were consisted of 126 endometrial biopsy and 4 curettage material. Which was grossly grayish white to grayish brown in colour & the amount varied from scant (i.e. <0.5 0.5cm) in 52 cases (40%), moderate (1.2cm 1.2cm) in 60 (46.2%) cases and abundant (>2.0cm 2.0cm) in 18 cases. Material was immediately placed in fixative followed by routinely processed and paraffin section of 5-6 micron, using haematoxyline and eosin were prepared and studied microscopically.

RESULT

In this study of 130 cases, endometrial sample sections in 43 cases (33.1%) showed proliferative phase suggestive of anovulatory cycle where sparse narrow and straight endometrial glands lined by low columnar cells embedded in loose stroma of spindle shaped cells in 26 section, while in 3pts section endometrial glands were more elongated and lined by tall columnar cells, with stromal edema. Remaining 14 section showed tortuous endometrial glands lined by pseudostratified epithelium with compact stroma and slightly enlarged stromal cells. Irregular proliferative endometrium was seen in 12 sections (9.2%) where irregularly shaped enlarged glands interspersed among normal proliferative glands resulting in dys synchronous development of endometrium. The gland were lined by pseudostratified epithelium at places, ciliated epithelium was seen in all these cases. The stroma was mitotically active proliferative type. Simple hyperplasia was seen in 9 (6.9%) cases where section shows cystically dilated proliferating glands of varying size, lined by tall columnar cells with many clear cells, while stroma was dense and compact with stromal cells having scant cytoplasm. Adequate secretory phase seen in 46 cases (35.4%) showing subnuclear vacuolation in more than 50% gland (16days), in 3 cases uniform subnuclear vacuolation pushing nuclei towards apex (17days), in 1 cases nuclei return to base with secretion at tip of epithelial cells give frayed appearance (18days), in 6 cases secretion at free margin seen as a globular cap (19days) in 1 case dilatation of glands filled with secretion (20days), in 5 cases beginning of stromal edema, stromal cells appear as naked nuclei (21 days), in 3 cases maximal stromal edema (22days), in 3 cases prominent spiral arterioles (23days), in 16 cases predecidualization of periarterial stromal cells (24days), in 5 cases predecidualization of

upper compact layer with appearance of endometrial granulocytes (25days), in 1 cases predecidualization of entire compacta layer, predominant endometrial granulocytes (26days), in 1 cases saw toothed shaped glands, very dense predecidual stroma (27 days). Deficient secretory phase or luteal phase deficiency was seen in 15 (11.5%) cases. There were 9 cases (6.9%) of deficient secretory phase with apparent delay and 6 cases (4.6%) of deficient secretory phase with dissociated delay. ultrasonography findings reveal fibroid in 1 cases and polycystic ovarian disease in 1 cases. Where section was showing cork screw shaped gland with subnuclear vacuolation (16days) pushing nucleus to the apex (17days), gland with frayed luminal margins due to secretion with nucleus at the base of glandular epithelium (18days), prominent spiral arteriole (23days). Deficient secretory phase with dissociated delay was seen in 6 cases showing widely spaced poorly convoluted glands with variation in development of glands and stroma, with glandular epithelial lining having dense hyperchromatic nucleus, decreased luminal secretion, subnuclear vacuolation, spindle shaped stromal cells with decreased stromal differentiation. Abortive secretion was seen in 1 case (0.8%) showing straight and narrow glands lined by cuboidal epithelium. Some of the glands showed randomly distributed tiny subnuclear vacuoles with loose spindle shaped stromal cells. Arias stella reaction was seen in 1 case (0.8%) showing star shaped glands lined by epithelial cells having grotesquely shaped nucleus with dense chromatin and abundant clear cytoplasm, spindle shaped stromal cells with scant cytoplasm. Tuberculous endometritis was seen in 3 cases (2.3%) showing proliferating endometrial glands comprising granulomas with central caseation surrounded by radiating epitheloid cells and lymphocytes.

DISCUSSION

Primary infertility is one of the common condition for which married women seeks medical advice. In India there are an estimated 10.2 million infertile couple. Female infertility may occur due to disturbances of genital system or part of central nervous system that control the ovaries hormonally. In this study we have observed that the commonest age group belonging to 21-30yrs with a peak at age 22yrs. This study is in accordance with the findings of Ramesh Kumar & Thomas (1991), while the duration of infertility ranged from 1-12yrs with a mean of 5.5yrs which are in accordance with findings of USHA KS (1989) having a mean of 6.5yr. Majority of cases 89

100.0% had regular menstrual pattern, irregular history was noted in 41 cases (31.5%) of which 36 cases (87.8%) were found to have uterine & /or ovarian pathology similar to studies done by Gupta A et al (1989), MP. Zawar (2003), Girish CJ (2006) and Kajal (2008).

In a developing country like India where complex expensive immunological & hormonal assay procedure are not easily available in small city and in rural areas, endometrial biopsy is a valuable investigation for primary infertility. Proper correlation, clinical data and dating of endometrium helps to diagnose functional abnormalities of the endometrium as well as intrinsic abnormalities, most of whom are otherwise asymptomatic in pts of infertility. In spite of certain limitation in dating of endometrium and its accuracy, endometrial biopsy still remains the most accepted and widely studied parameter providing sufficient information about the hormonal status of the endometrium. However in 35.4% of cases no cause can be found for infertility. The entire reproductive process is controlled by brain, so in today fast paced world factors like chronic

stress, high pressure work, emotional distress and even life style take a toll on the reproductive process.

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ORIGINAL & CLINICAL RESEARCH

ABSTRACT

This study was done to see that whether there is any effect on hearing loss or not. That hearing loss is becoming increasingly more common amongst younger people. Approximately, 20-30 million people between the ages of 20 and 69 years have high frequency hearing loss due to chronic exposure to loud noise above 90 decibels (dB) due to the advent of MP3 players and cellphones, according to the National Institute of Deafness.[1] Most MP3 players today can produce sounds up to 120 dB and that long term cell phone use to hear music may cause damage in the inner ear. In today's society, these devices are indispensable and are part of day to day life.

A total of 200 students from Jawaharlal Nehru Medical College Bhagalpur were chosen as part of the study. They were divided into four groups, Group A comprising 50 students who had a habit of listening to music through ear phones at least 2 h a day, Group B comprising 50 students who are used to earphone music less than 1 h per day and Group C comprising of 50 students who very

occasionally use ear phones, but hear music mostly through speakers and Group D comprising of 50 students who are usually unaware of ear phone music and are not used to it. All the groups were subjected to pure tone audiometry and the audiogram was obtained. The study revealed high frequency hearing loss in 12% of Group A and 8% in Group B; whereas, in there were no hearing impairment in Groups C and D indicating a significant role of prolonged ear phone music as a cause of high frequency hearing loss in students. The thin percentage and absence of hearing loss in Groups B, C, and D suggests the impact of the duration of exposure also has a role in the pathology of hearing loss. This study

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Study on Effect of Ear Phones on High Frequency Hearing Loss in Medical Students of Bhagalpur District

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proves that the prolonged usage of loud ear phone music is harmful to the ears and a simple way of pass time by hearing to ear phone music might cause hearing loss. Hence, this study was conducted to create awareness regarding prolonged exposure to loud noise either through an MP3 player or cell phone music.

KEYWORDS : Ear phones, High frequency hearing loss, Loud music, Prolonged duration, Audiometry

INTRODUCTION

The pervasive MP3 music player or the more common cell phone music has become one of the most common device