Original Article

Per-vaginal Findings among the Women with Pelvic Inflammatory Diseases at a Tertiary Care Hospital in Dhaka City

Tahamina Khanum[1], Nasima Begum[2], Kazi Mobina Akhter[3]
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Abstract

Background*: Pelvic inflammatory disease (PID) is a major health problem for adult female. Women presented with pelvic inflammatory diseases give different per-vaginal findings. So we designed this study to assess the per-vaginal findings among the women presented with pelvic inflammatory diseases.* ***Objective****: The purpose of the present study was to measure the per-vaginal findings among the women with PID.* ***Materials and Methods****: This cross-sectional study was conducted in the Department of Obstetrics and Gynaecology at Dhaka Medical College & Hospital, Dhaka during January to June 2007. Women in the age group of 15−45 years presented with lower abdominal pain, tenderness, per-vaginal discharge and cervical motion tenderness were included in this study. After taking verbal consent from the patients, a pre-designed data collection sheet was filled in after per-vaginal examination.* ***Results****: The study was done on 50 cases, of which 20% patients had 1st degree perineal tear, 6% had utero-vaginal prolapse and 24% had foul-smelling vaginal discharge. Majority (90%) patients had healthy vagina. Ninety percent patients had anteverted uterus; and uterus was mobile in 60% cases. Cervical motion tenderness was present in 44% cases, tenderness of fornix was found in 34% cases and thickening of fornix was found in 22%.* ***Conclusion****: In this study first degree perineal tear, foul smelling vaginal discharge and cervical motion tenderness are the commonest findings among the women presented with pelvic inflammatory diseases.*

Key words*: Per-vaginal findings; Pelvic inflammatory diseases; Perineal tear*

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Introduction

Pelvic inflammatory disease (PID) is a major health problem for adult female in Bangladesh.[1] PID may develop due to many causes; majorities are due to iatrogenic. Procedures that may cause PID include cervical dilatation, abortion, curettage, tubal insufflations, intrauterine contraceptive devices (IUCD), hysterosalpinogography.[2] In western countries, the origin of pelvic inflammatory disease is mainly due to sexual abuse.[3]

In third world countries like Bangladesh, unsafe delivery and abortion play main role in the development of pelvic inflammatory disease.[4] Sequelae in the pelvic inflammatory disease include ectopic pregnancy, infertility, chronic pelvic pain, hydrosalpinx, and tubo-ovarian abscess.[5]

It has been documented that risk for ectopic pregnancy and infertility after pelvic inflammatory diseases is increased up to ten-fold (which ranges between 5.8% and 60.0% cases).[5] However, it depends on the severity, number of infection and age of women.[6] As patients present with different signs and symptoms, we designed this study to measure the pervaginal findings among the women presented with pelvic inflammatory diseases.

1. Assistant Professor, Department of Obstetrics & Gynaecology, Enam Medical College & Hospital, Savar, Dhaka
2. Assistant Professor, Department of Obstetrics & Gynaecology, Enam Medical College & Hospital, Savar, Dhaka
3. Junior Consultant, Department of Obstetrics & Gynaecology, National Institute of Cancer Research & Hospital, Dhaka
Correspondence *Tahamina Khanum, Email: drtahamina75@gmail.com*

Materials and Methods

This observational cross-sectional study was conducted in the Department of Obstetrics and Gynaecology of Dhaka Medical College & Hospital (DMCH), Dhaka. The duration of study was from January 2007 to June 2007. Women in the age group of 15 to 45 years who presented with lower abdominal pain, tenderness, per-vaginal discharge and cervical motion tenderness were included in this study. Women with fibroid uterus, uterovaginal prolapse or cystocele were excluded from this study. The clinical diagnostic criteria of PID was one or more of the following criteria on pelvic examination ─ cervical motion tenderness, uterine tenderness and adnexal tenderness. Other criteria that can improve the specificity of diagnosis are oral temperature >101°F (>38.3°C), abnormal cervical or vaginal mucopurulent discharge, presence of abundant numbers of white blood cells on saline microscopy of vaginal fluid, elevated erythrocyte sedimentation rate, elevated C-reactive protein level and laboratory documentation of cervical infection with gonorrhea or chlamydia.[6] After attending Gynaecology OPD in DMCH an introduction was given to the patients regarding the purpose and importance of the study. Informed verbal consent was taken from the subject before enrollment in this study. After taking verbal consent from the patients, a pre-designed data collection sheet was filled in after the per-vaginal examination (inspection, palpation and bimanual examination). Statistical Packages for Social Sciences (SPSS) version 20.0 was used for the statistical analyses. Categorical data were presented as frequency and percentage.

Results

The study was performed on 50 cases. Out of 50 cases of pelvic inflammatory disease majority (50%) belonged to the age group of 26−35 years (Table I). Among them 20% patients had 1st degree perineal tear, 6% utero-vaginal prolapse, 24% had foul-smelling vaginal discharge and 50% without foul smelling vaginal discharge (Table II).

Table I: Age distribution of the patients (N=50)

Age group (years)	Frequency	Percentage
≤25	11	22
26−35	25	50
>35	14	28
Total	50	100

Table II: Findings on inspection of external genitalia

Findings	Frequency	Percentage
1st degree perineal tear	10	20
Utero-vaginal prolapse	3	6
Discharge		
Foul-smelling	12	24
Without foul-smelling	25	50

Among 50 PID patients, 90% had healthy vagina and the rest 10% women presented with congested vagina; cervical erosion was found in 10% patients and 6% women presented with cervicitis (Table III).

Table III: Findings of per-speculum examination of the study population

Findings	Frequency	Percentage
Vagina		
Healthy	45	90
Congested	5	10
Cervix		
Cervical erosion	5	10
Cervicitis	3	6

On bimanual examination, anteverted uterus was present in 90% patients, 10% uterus were retroverted, 60% were mobile, 4% were restricted, 2% were fixed, cervical motion tenderness was present in 44% cases, tenderness of fornix in 34% and thickening of fornix in 22% (Table IV). Unilateral tubo-ovarian mass was present in 4% and it was bilateral in 2% cases (Table IV).

Table IV: Findings on bimanual examination of uterus

Findings	Frequency	Percentage
Uterus bulky		
Anteverted	45	90
Retroverted	5	10
Mobile	30	60
Restricted	2	4
Fixed	1	2
Cervical motion tenderness	22	44
Tenderness of fornix	17	34
Thickenings of fornix	11	22
Tubo-ovarian mass		
Unilateral	2	4
Bilateral	1	2

Discussion

Prevalence of PID is increasing all over the world. Five percent of the gynaecological admissions in the hospitals of India and Pakistan are due to PID, and in Africa it is 17−44% cases.[7] It is seen in about one percent in the age group of 20 to 24 years.[8] The rising incidence of PID leads to considerable impact on reproductive health of an individual.

In this study, 50 cases of PID were enrolled from the women living in Dhaka city. It has been shown that the highest percentage (50%) of PID is in the age group of 26 to 35 years. Jossens et al[3] have mentioned that women with PID are usually under the age of 25 years. Shah et al[9] have shown in their study that 87% of the patients belong to the age group of 20 to 35 years. Tarafder[10] has shown the highest incidence (55.2%) of PID in the age group of 26 to 35 years. In another study[11] it has been concluded that cases of PID are usually between the age group of 30 to 44 years (67.1%).

Pelvic inflammatory disease occurs more commonly in the younger age group in the western countries, where it is mostly STD-related. In the developing countries it is more common in this younger age group and mostly related to the obstetrical events.[12] Younger age is marked by the biological characteristics favourable to develop PID. These are lower prevalence of protective chlamydial antibody, longer zone of cervical ectopy and greater permeability of the cervical mucus.[13]

In United States more than one million women are affected by PID each year.[10] A number of risk factors have been linked to PID including young age, age of first intercourse, multiple sex partners, history of STD, vaginal douching, use of intrauterine contraceptive devices etc.[14] In the present series 20% of the patients had perineal tear with evidence of traumatic delivery. Sultana[15] has shown that 70% cases have perineal tear while Tarafder[10] has shown it in 48% cases. Traumatic delivery may be the possible source of contamination from lower to the upper genital tract.

In this study 6% cases had the evidence of chronic cervicitis and majority of them had the evidence of parametrial involvement by positive cervical motion tenderness. In 6% cases there are palpable adnexal mass on bimanual examination. It is thought that adnexal mass is squeal of chronic pelvic infection and also severe form of acute PID.[12] Initially there is an acute salpingitis which is gradually healed up resulting in kinking of the tube. Later it becomes adherent to the adjacent structures like ovary, uterus, intestine and omentum and tubo-ovarian mass develops.

Tubo-ovarian abscess is a serious consequence of pelvic inflammatory disease, especially in the adolescent population.[16] Early diagnosis and treatment are essential to prevent further squeal including infertility, ectopic pregnancy and chronic pelvic pain. But all patients do not present with pelvic pain, pelvic mass and fever.

In conclusion, the present study reveals that first degree perineal tear, foul-smelling vaginal discharge as well as cervical motion tenderness are the most common findings among the women presented with pelvic inflammatory diseases. Cervical erosion and cervicitis are also found in these cases. Tenderness of fornix, thickenings of fornix and unilateral tubo-ovarian mass are also common findings among the women with PID.

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