INTRODUCTION

Pelvic inflammatory disease (PID) is an infection of the upper part of the female reproductive system namely the uterus, fallopian tubes, and ovaries, and inside of the pelvis [1-3]. The incidence of acute PID has decreased in many countries, though its true prevalence is not well known because most of cases are subclinical [3,4]. According to previous studies, its incidence varies between 0.28% and 1.67% worldwide [5,6]. PID affects predominately in the reproductive age years with its highest prevalence being in the second and third decades [7].

The inflammation observed in PID results from infection, mostly bacterial [3]. The micro-organisms responsible can be Chlamydia trachomatis, Neisseria gonorrhoea, Streptococcus sp, Enterococcus faecalis, Escherichia coli, Klebsiella, Staphylococcus sp [8-11].

It is estimated that about 10% of women infected by Chlamydia trachomatis subsequently develop PID [10]. More recently, genital tract mycoplasmas, especially Mycoplasma genitalium, have been implicated as a cause of acute PID [12, 13]. Most often, many microorganisms are simultaneously involved [11, 12]. Risk factors for PID are multiple sexual partners, single status, lower socioeconomic status, young age (30 years), intrauterine contraceptive device, endometrial biopsy, hysteroscopy, HSG (Hystero-Salpingography) [5,14]. Complications of acute PID include tubal infertility, ectopic pregnancy and chronic pelvic pain [3].

In India, women of reproductive age group are more reluctant to seek medical care because of lack of privacy, lack of female doctor at the health centers, the cost of treatment and their subordinate status as well as the culture of silence. The most serious sequelae arising in women due to RTI’S are reported to be Pelvic inflammatory disease (PID) [15]. This disabling disease can be prevented by better obstetric & delivery care, family planning care, safe way of pregnancy termination & health education [10]. This study was done to find out...
the clinical profile of PID in a tertiary care centre.

MATERIALS AND METHODS

Study design: Cross sectional descriptive study

Ethics approval: The study was approved by the institutional ethics committee and informed consent was obtained from the participants

Study place: The study was conducted at the Department of Obstetrics and Gynaecology in DVVPF’s medical college & hospital, Ahmednagar, Maharashtra,

Study period: study was conducted during period from January to December 2016.

Study population: Total 200 patients of reproductive age group suffering from PID were selected randomly.

Inclusion criteria: Patients complaining of lower abdominal pain, vaginal discharge & having adnexal as well as cervical motion tenderness on bimanual examination between the age group of 18-45 years.

Exclusion criteria: Women of child bearing age with established other causes of lower abdominal pain, pregnant women, before menarche and postmenopausal women were excluded. Methodology: History & examination was conducted in details as per prescribed proforma. All the parameters like age, parity, socioeconomic status, age of marriage, sexual behavior, Presenting complaints and use of contraceptive were recorded.

Statistical analysis: Data were analyzed in tabular form & in percentage. Findings from this study were compared with similar other studies.

RESULTS

Table 1. Age wise distribution of cases

| Age group(years) | Number of patients | Percentage |
|------------------|--------------------|------------|
| <20              | 4                  | 2          |
| 20-24            | 59                 | 29.5       |
| 25-29            | 53                 | 26.5       |
| 30-34            | 39                 | 19.5       |
| 35-40            | 31                 | 15.5       |
| >40              | 14                 | 7          |
| Total            | 200                | 100        |

Most common age group was 20-24 years (29.5%), followed by 25-29 years (26.5%). Least common age group was <20 years (2%).

Table 2. Parity wise distribution of cases

| Parity | Number of patients | %  |
|--------|--------------------|----|
| 0      | 10                 | 5  |
| 1      | 22                 | 11 |
| 2-5    | 116                | 58 |
| >5     | 52                 | 26 |

Maximum number of cases was seen in parity between 2-5 (58%). Incidence was minimum in nullipara (5%).

Table 3. Distribution of cases according to education

| Education | Number of patients | % |
|-----------|--------------------|---|
| Illiterate| 72                 | 36|
| Primary   | 56                 | 28|
| SSC       | 34                 | 17|
| HSC       | 24                 | 12|
| Graduate  | 14                 | 7 |

Incidence of PID was commonest amongst illiterate women (36%), followed by women having education up to primary level (28%).

Table 4. Distribution of cases according to socioeconomic class

| Socioeconomic class | Number of patients | Percentage |
|---------------------|--------------------|------------|
| Lower class         | 148                | 74         |
| Middle class        | 39                 | 19.5       |
| Higher class        | 13                 | 6.5        |

Maximum number of cases was seen in women from lower socioeconomic class (74%). In higher socioeconomic class only 6.5% cases were seen.

Table 5. Distribution of cases according to marital status

| Marital status | Number of patients | Percentage |
|----------------|--------------------|------------|
| Unmarried      | 2                  | 1          |
| Married        | 158                | 79         |
| Remarried      | 28                 | 14         |
| Separated      | 5                  | 2.5        |
| Widow          | 7                  | 3.5        |

Out of 200 cases, 79% patients were married, 14% were remarried. Incidence was lowest in unmarried group (1%).

Table 6. Distribution of cases according to age at marriage

| Age of marriage (years) | Number of patients | Percentage |
|------------------------|--------------------|------------|
| Before 20              | 96                 | 48         |
| 20-30                  | 67                 | 33.5       |
| After 30               | 37                 | 18.5       |

Most of the women in the study were married before the age of 20 years (48%), followed by between 20-30 years (33.5%)
### Table 7. Contraception practice

| Contraception used | Number of patients | Percentage |
|--------------------|--------------------|------------|
| Barrier            | 12                 | 6          |
| OC pills           | 6                  | 3          |
| IUCD               | 52                 | 26         |
| Tubectomy          | 28                 | 14         |
| None               | 102                | 51         |
| Total              | 200                | 100        |

51% cases did not use any contraception. IUCD users were 26%. 14% underwent tubectomy.

### Table 8. Presenting complaints

| Complaint             | Number of patients | Percentage |
|-----------------------|--------------------|------------|
| Pain in abdomen       | 187                | 93.5       |
| Backache              | 114                | 57         |
| PV discharge          | 132                | 66         |
| Fever                 | 102                | 51         |
| Nausea & vomiting     | 42                 | 21         |
| Others                | 15                 | 7.5        |

Presenting complaints were pain in abdomen (93.5%), per vaginal discharge (66%), fever (51%).

### Table 9. Per Abdomen Examination findings

| Per abdomen       | Number of patients | Percentage |
|-------------------|--------------------|------------|
| Tenderness        | 190                | 95         |
| Palpable mass     | 22                 | 11         |

Abdominal tenderness was seen in 95% of cases. Palpable mass was present in 11% of cases.

### Table 10. Pelvic Examination findings

| PV findings          | Number of patients | Percentage |
|---------------------|--------------------|------------|
| PV discharge        | 142                | 71         |
| Cervical motion tenderness | 168             | 84         |
| Forniceal tenderness | 178                | 89         |
| Adnexal mass        | 39                 | 19.5       |

Forniceal & cervical motion tenderness were the commonest Per Vaginal examination findings seen in 89% & 84% cases respectively. Other findings were per vaginal discharge (71%), adnexal mass (19.5%).

### DISCUSSION

PID is one of the common clinical complaints in gynecologic practice. PID implies inflammation of the upper genital tract involving fallopian tube as well as ovaries because most of PID is due to ascending or blood borne infection, the lesion is often bilateral though one tube may be affected than the other.

In our study most common age group was 20-24 years (29.5%), followed by 25-29 years (26.5%). Least common age group was <20 years (2%). These findings are similar to study conducted by Elie Nkwabong et al [16] which also shows maximum age incidence in 20-24 years age group (27.2%), followed by 25-29 years (24.3%). PID affects predominately in the reproductive age years with its highest prevalence being in the second and third decades [7].

Maximum number of cases in this study was seen in parity between 2-5 (58%). Incidence was minimum in nullipara (5%). These findings are consistent with study by S Ahmed et al [17] who have documented maximum incidence of cases in parity between 2-5 (56%).

In this study incidence of PID was commonest amongst illiterate women (36%), followed by women having education up to primary level (28%). If we compare this study with study by Elie Nkwabong et al [16] where maximum incidence of PID in women having education below SSC (54.3%) followed by education below primary education (20%).

In our study maximum number of cases was seen in women from lower socioeconomic class (74%). In higher socioeconomic class only 6.5% cases were seen. These findings are comparable with that of S Ahmed et al [17], where 60% & 36% cases were from low & middle class respectively & only 4% cases belonged to higher class. This supports the fact that PID is common amongst women from lower socioeconomic class.

Out of 200 cases in our study, 79% patients were married, 14% were remarried. Incidence was lowest in unmarried group (1%). These findings are somewhat comparable with study by S Ahmed et al [17], where married patients contribute to 90% of cases, but different from study by Elie Nkwabong et al [16] who found out incidence in married patients somewhat lower (41%). Marital status is often referred to as risk marker for PID because active sexual life has an impact on the occurrence of PID [18].

In our study 51% cases did not use any contraception. IUCD users were 26%. 14% underwent tubectomy. These findings are comparable with study by Patel Sangeeta et al [19] who found out 19.33% cases using IUCD as a contraceptive agent. During IUCD insertion, there is introduction of vaginal and cervical organisms into the endometrial cavity and accounts for most cases of IUCD related PID [17].
Presenting complaints in this study were pain in abdomen (93.5%), per vaginal discharge (66%), fever (51%). These findings are somewhat comparable with the study by Elie Nkwabong et al [16], where pain in abdomen, per vaginal discharge & fever seen in 75.7%, 73.27% & 70.85% cases respectively.

In present study abdominal tenderness was seen in 95% of cases. Palpable mass was present in 11% of cases. These findings are comparable with study by S Ahmed et al [17], who have documented incidence of abdominal tenderness & palpable abdominal mass 100% & 16% respectively.

In our study forniceal & cervical motion tenderness were the commonest Per Vaginal examination findings seen in 89% & 84% cases respectively. Other findings were per vaginal discharge (71%), adnexal mass (19.5%). These findings are comparable with study by S Ahmed et al [17], who have documented incidence of forniceal & cervical motion tenderness & per vaginal discharge 100%, 100% & 16% respectively.

CONCLUSION

Present study shows that incidence of pelvic inflammatory disease is higher in age group between 20-29 years, multipara, women from lower socioeconomic class & illiterate women. Pain in lower abdomen, per vaginal discharge & fever are the commonest complaints. Most of the patients on examination had forniceal & cervical motion tenderness.

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