

## **PELVIC ABSCESS AT JOS UNIVERSITY TEACHING HOSPITAL, JOS, NORTH CENTRAL NIGERIA**

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### **ABSTRACT**

#### **Background:**

Despite the availability of antibiotics and surgery, pelvic abscess remains one of the major gynaecological problems of developing societies. It remains a source of concern because of its potential for life threatening morbidity and mortality which may approach 100% if not effectively managed.

#### **Objectives**

The study objectives were to determine the incidence of pelvic abscess in this institution, identify risk factors, review the management of these patients and suggest ways of improving the services offered.

#### **Methods**

A retrospective analysis of 35 cases of pelvic abscess admitted and managed at

the Jos University Teaching Hospital over a three year period (January 1998- December 2000) was carried out. The data extracted from the case notes include the age of patient, ethnicity, religion, parity marital status, complications and interventions instituted

#### **Results**

During the period, there were 2135 gynaecological admissions; thus the incidence of pelvic abscess in the hospital was 1.79% (35). Most of the patients (82.7%) were aged below 30 years, and 86% were of parity 2 and below.

In 19 patients (54.3%), the abscess followed induced termination of pregnancy. After an initial preparation with intravenous fluids, broad spectrum antibiotics, correction of fluids and electrolytes imbalance and blood transfusion (where indicated), for about 24-

72 hours, the patients were subjected to definitive surgery; laparotomy.

### **Conclusion**

Pelvic infection is a disease of the young and low parity woman and there is a strong relationship between induced abortion and pelvic abscess in this environment. Laparotomy and drainage is advocated after adequate pre-operative resuscitation so as to decrease mortality and morbidity.

**Key words:** management, pelvic abscess, Jos University Teaching Hospital.

### **Introduction**

Pelvic abscess remains one of the major gynaecological problems of the developing world.<sup>1</sup> it remains a source of concern because of its potential morbidity and mortality,<sup>2</sup> which may reach 100% when it is not drained. It constitutes a serious challenge to the practicing gynaecologist.

Apart from the long term complications, such as tubal blockage, infertility and chronic pelvic pain, the routine management of this condition is plagued with delay in recovery and prolonged hospitalization.<sup>2,3</sup>

Pelvic abscess is a common complication of pelvic inflammatory disease (PID).<sup>4</sup> In most instances in this country, it is either postpartum or secondary to post abortal sepsis.<sup>2,5,6</sup> It may also follow surgical procedures, or arise as a result of extension from other intra abdominal inflammatory conditions such as appendicitis, diverticulitis, etc.<sup>2,3,4,5,6,7</sup>

The polymicrobiology of pelvic abscess has been extensively documented.<sup>1,2,3,3,4,5,8</sup> The microorganisms include Neisseria gonorrhoea, Chlamydia trachomatis, bacteroides species, peptostreptococci, staphylococci, streptococcus faecalis and hosts of other organisms.<sup>8,9</sup> In one study, out of 20 cultures from pelvic abscess at operation, anaerobes were the most common bacteria isolated.<sup>10</sup> The classical management of pelvic abscess consists of maintenance of fluid and electrolyte balance, antibiotics, analgesics and drainage.

### **Materials and Methods**

The study was a review of 35 cases of pelvic abscesses admitted into the Jos University Teaching Hospital over a three year period; January 1998 to December 2000. Diagnosis was mainly clinical and in some cases ultrasonography. The case notes

of 35 cases were reviewed and form the basis of this study.

## Results

During the study period, there were 2,135 gynaecological admissions. Thus the incidence of pelvic abscess in the hospital was 1.78% or 1 in every 56 patients.

The ages of the patients ranged from 15 to 47 years with a mean of 24.6 years (Table I). Most of the patients (82.8%) were aged below 30 years and 18 (51%) were married. The patients' parity ranged between 0 and 7, with a mean of 1.4. Seventeen patients (48.6%) were multiparous. Thirty patients (86%) were of parity 2 and below. Only three patients (8.6%) were of parity 5 and above (Table II).

Twenty three patients (65.7%) were Christians, while 12 (24.3%) were Muslims. In 19 patients (54.3%) the abscesses followed termination of pregnancy, which were all induced abortions. In 10 patients (28.6%) the abscess followed pelvic inflammatory disease. Five patients had puerperal sepsis following delivery outside the hospital, and one patient (2.9%) developed symptoms two weeks after insertion of intrauterine contraceptive device.

Most of the patients (94.3%) presented with abdominal pain, while 77.1% had fever. Pelvic collection was identified clinically in 21 patients (60%). Of the 19 patients with induced abortion, 5 (26.3%) had uterine perforation. There were no bowel injuries. Samples were taken for bacteriological cultures at the time of surgery in only 10 cases. In 5 patients (50%) there were no growth; in the 5 patients that had positive culture, *Escherichia coli* was isolated in 3, *Klebsiella* in one while another patient had both *Klebsiella* and *Staphylococcus aureus* isolated.

All the patients had laparotomy, where draining of the abscesses and separation of adhesions were done. One patient that had uterine perforation with gangrene had total abdominal hysterectomy. Three patients (8.6%) had repeat laparotomies for drainage of residual abscesses.

The post operative complications were wound sepsis in 16 patients (45.7%), wound dehiscence in 4 patients (11.4%), while one patient had septicaemia. The duration of hospital stay ranged from 7 to 47 days. Only 11 (31.3%) came for follow up, of which 3 were being followed up for chronic pelvic pain and infertility. One patient got pregnant

and delivered two years after laparotomy.

No mortality was recorded in this study.

**TABLE I: AGE DISTRIBUTION OF PATIENTS**

AGE (YEARS)	NUMBER	PERCENTAGE (%)
< 15	0	0
15 – 19	7	20
20 – 24	13	37.1
25 – 29	9	25.7
30 -34	3	8.6
35 – 39	1	2.9
≥ 40	2	5.7
<b>Total</b>	<b>35</b>	<b>100</b>

**TABLE II  
PARITY DISTRUBUTION OF THE PATIENTS**

PARITY	NUMBER	PERCENTAGE (%)
0	17	48.0
1	10	28.0
2	3	8.6
3	1	2.9
4	1	2.9
≥ 5	3	8.6
<b>Total</b>	<b>35</b>	<b>100</b>

### Discussion

The incidence of pelvic abscess agrees with the findings of Ledger (1975). This study has further shown the preponderance of younger women of low parity in those with pelvic abscess. This has been documented previously in other studies.<sup>2, 11</sup> More than 80% of the patients were less than 30 years old and 60% were of parity 2 and below. Some studies have identified early sexual exposure, multiple sexual partners and the presence of an

intrauterine contraceptive device (IUCD) as predisposing to the development of pelvic abscess.<sup>8, 9, 12,13</sup> Only one patient had pelvic abscess following insertion of an IUCD in this study. Forty eight percent of the patients were single, and mainly school girls. It is possible that multiple sexual partners may play a role in this group.

The predominant role of induced abortion in the aetiology of this condition in our environment had been highlighted.<sup>2,10,11,12,13,14</sup> Twenty three of the

patients (65.7%) were Christians and this may merely reflect the population that utilized the services of the hospital in Jos and its environs.

Over 90% of the patients presented with abdominal pain and a fluctuant pelvic mass was detected in about 60% of the patients. This has also been documented in other studies.<sup>15,16</sup> with the availability of ultrasonography, more abscesses will be picked up as it has now achieved widespread acceptance in the work up of patients with pelvic mass.<sup>17, 18</sup>

Bacteriological studies did not yield much possibly because specimens were collected at the time of surgery when patients would have received antibiotics already. This might explain the low yield obtained in this study. Other studies have documented similar problems.<sup>2,18,19</sup> Anaerobic organisms were isolated in 92% of tubo-ovarian specimens that had previously been reported as sterile on culture.<sup>19,20</sup> *Neisseria gonorrhoea* was not isolated in any patient in this study. Landers and Sweet recovered the organism in only 3.8% of 53 abscess aspirates as compared to the overall recovery rate of 31% from the endocervix.<sup>2,10</sup> It is also worthy to note that a significant number of abscesses followed

termination of pregnancy, and not sexually transmitted diseases.

All patients in this study had laparotomy for drainage. Other studies advocated colpotomy<sup>2</sup> or ultrasound guided aspiration.<sup>20</sup> In selected cases, laparotomy is safest when the diagnosis is in doubt, injury to the viscera is suspected or when a ruptured tubo-ovarian abscess is suspected. Only one patient had hysterectomy. By conserving the uterus and its appendages the potential for fertility still exists.<sup>21</sup>

The long term morbidity of this condition on survivors has not been assessed. However, other studies<sup>18, 19</sup> have shown that post abscess tubal diseases are associated with about 5% of ectopic pregnancies. The inability to conceive after pelvic inflammatory disease depends on severity and the number of episodes of PID. Tubal and peri-tubular disease was studied by Westrom prospectively. The risk of tubal damage was about 8% after one episode and 40% or more after three or more episodes of pelvic inflammatory disease.<sup>21</sup> These patients were not followed up for a long time and only 31.4% reported for follow up. Post operative complications were mainly those of wound sepsis and dehiscence because surgery was clean contaminated.

## Conclusion

Pelvic abscess is a disease of the young and low parity women. There appears to be a strong relationship between induced abortion and pelvic abscess in our environment. Laparotomy and drainage as against colpotomy and drainage, is advocated after adequate pre-operative resuscitation because of the associated pelvic adhesions.

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