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Research Article

**EFFECT OF ACUTE PELVIC INFLAMMATORY DISEASE ON
FERTILITY**¹Dr. Lubna Hafeez, ²Dr. kiran Hafeez, ³Dr. Saqib Shahzad¹Ex WMO, BHU 4DB, Mianwali.²WMO, BHU Kundian Rural, Mianwali.³MO, DHQ Hospital, Kasur**Abstract:**

Diagnostic laparoscopy implemented during an infertility evaluation recognized eighty patients (12% of all laparoscopic investigations implemented for infertility) with hydrosalpinges. Besides these discoveries, only 25% (20) of these patients described a prior episode of PID (Pelvic Inflammatory Disease), moreover only 22.5% (18 patients) had pelvic pain complaints.

As a comparison of infertility patients' matched group with no endoscopic evidence regarding previous pelvic infection, the patients specifically with hydrosalpinges were highly expected to utilize an intrauterine device and were fewer likely to utilized an oral contraceptive.

Though "silent" Pelvic Inflammatory Disease is the infertility probable reason, visualization of endoscopic about reproductive organs of a female should be cogitated in the period of the infertility evaluation. Furthermore, in the account of its sinister nature, the analysis of Pelvic Inflammatory Disease must be pondered in a young sexually active patient with the complaints of gynecology.

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1.0 INTRODUCTION:

The general happening of asymptomatic (PID) Pelvic Inflammatory Disease and its sequel have recently been analyzed. Physicians appraising an infertile woman often perform investigative endoscopy on the account of previous pelvic pain or previous infection. This retrospective research was based on the PubMed Database and undertaken to assess previous gynecology history in Pelvic Inflammatory Disease patients stated at the laparoscopic time (Janson, 2016).

2.0 METHODS:

All patients' record experiencing diagnostic laparoscopy accomplished between Jan 2011 to Jan 2015. All patients had a previous analysis of ovulatory and insemination factors. Pelvic pain history, age at primary coitus, previous gynecologic

infections, pregnancy history, previous contraceptive usage, and different other pelvic surgery were obtained from the PubMed Database (Kessel, 2016).

Females with unilateral or bilateral hydrosalpinges and infertility were assessed with a specific and randomly chosen group of infertility patients who basically had no indication of previous pelvic infection, stated at the laparoscopic time. In the time period of contraceptive use and sexual partners' number could not be analyzed from the database. The outputs were assessed statistically by X^2 assessment. Laparoscopy was staged in those patients who have more than one year's infertility and who had normal ovulatory and impregnation factors or who unsuccessful to conceive after sufficient treatment of such conditions (Punnonen, Terho and Klemi, 2016).

Table 1. Characteristics of Control and Study Populations^a

	Infertility patients with hydrosalpinges (study group)	Infertility patients without hydrosalpinges (controls)
No. of patients	80	80
Mean age	29 (20–39)	30 (24–46)
Mean duration of infertility (months)	40 (2–144)	38.5 (6–120)
Primary infertility	45	53
Secondary infertility	35	27
Age at first coitus	18 (16–30)	21 (16–36)

^aDifferences not statistically significant.

Source: (Punnonen, Terho and Klemi, 2016)

3.0 RESULTS:

From 663 laparoscopy diagnostic patients as a factor of assessment for infertility from Jan 2011 to Jan 2015, 80 (12%) patients had hydrosalpinges (due to infertility all laparoscopic analysis performed). In this research, according to the PubMed Database, all patients were residents of a prosperous community. In the time period of infertility, the age of the patients and prior reproductive histories were identical in control and study population as mentioned in Table 1. The group of the study was found to have a fresher age at initial coitus; therefore, this assessment was not significant statistically (Savaris, 2017). In below-mentioned Table 2, the laparoscopic assessments of the control group are established.

Table 2. Clinical Diagnosis in Control Population^a

Endometriosis	36
Pelvic adhesions ^b	7
Myomata	8
Normal pelvic organ	22
Asherman's syndrome ^c	6
Ovarian cyst	1

^aEighty patients.

^bPostsurgical.

^cHysteroscopic diagnosis.

Source: (Punnonen, Terho and Klemi, 2016)

80 patients medical histories with hydrosalpinges are associated to control group as mentioned below in Table 3.

Table 3. Comparison of Prior Medical, Surgical, and Contraceptive History and Pelvic Symptoms in Infertility Patients with Proven Chronic Pelvic Inflammatory Disease and Controls

	Study group (80 patients)	Control group (80 patients)	Relative risk	P value
History acute PID	20	0	54.6	0.001
Therapeutic abortion	13	9	1.8	NS ^c
Incomplete abortion	10	11	0.9	NS
Ectopic pregnancy	4	1	4.2	NS
Puerperal infection	5	2	2.6	NS
Appendicitis	9	11	0.8	NS
Prior pelvic surgery	19 ^a	14 ^b	1.5	NS
Contraceptive use				
Oral	29	46	0.4	0.025
IUD	22	4	7.2	0.001
Mechanical	6	19	0.03	0.01
Symptom of pelvic pain	18	16	1.2	NS

^aIncludes six patients with laparotomy for removal of a tuboovarian abscess and four patients with salpingectomy for ectopic pregnancy.

^bIncludes one patient with a salpingectomy for an ectopic pregnancy.

^cNot significant.

Source: (Punnonen, Terho and Klemi, 2016)

Only 25% (20) patients with laparoscopy recognized chronic Pelvic Inflammatory Disease reminisced a previous Pelvic Inflammatory Disease acute episode. Basically, there were no particular divergences between two groups in the history of prior pregnancy, pelvic surgery, appendicitis or therapeutic abortion. In the study group, 5% (4) patients, therefore, had a previous ectopic pregnancy. This divergence, however, though evocative, was not important (Savaris, 2017).

The study group have to use IUD (an intrauterine device) five time more likely as compared with other group; (27.5% versus 5%; $P < 0.001$) and less prospective to have utilization an OC (an oral contraceptive) (36% versus 57.5%; $P < 0.025$) or contraception mechanical method (7.5% versus 24%; $P < 0.01$). The time period of contraceptive utilization may not be determined from this research (Savaris, 2017).

The twenty research patients with previous acute Pelvic Inflammatory Disease were associated with the persisting sixty patients in the study group with no previous infection history and the outputs are represented in Table 4.

Table 4. Comparison of Prior Medical, Surgical, and Contraceptive History and Pelvic Symptoms in Infertility Patients with Proven Chronic Pelvic Inflammatory Disease Both With and Without a Prior History of Acute Pelvic Inflammatory Disease

	History of acute PID	No history of acute PID	P value
No. of patients	20	60	NS ^d
Therapeutic abortion	1	12	NS
Incomplete abortion	2	8	NS
Ectopic pregnancy	1	3	NS
Puerperal infection	2	3	NS
Appendicitis	2	7	NS
Prior pelvic surgery	7 ^a	12 ^b	NS
Contraceptive use ^c			
Oral	7	22	NS
IUD	10	12	0.05
Mechanical	4	2	0.05
Symptom of pelvic pain	7	11	NS

^aIncludes six patients with laparotomies for unilateral tuboovarian abscesses and one patient with an ectopic pregnancy.

^bIncludes three patients with ectopic pregnancies.

^cIncludes one patient who had used both an oral contraceptive and a diaphragm.

^dNot significant.

Source: (Punnonen, Terho and Klemi, 2016)

Those patients who have previous acute Pelvic Inflammatory Disease more probable to have been the IUD users (50%, 10 out of 20 as compared to 12 out of 60) with chronic pelvic pain symptoms of (35%, 7 of 20 as compared to 18% 11 of 60). While the patients who have chronic Pelvic Inflammatory Disease and no previous history of Acute Pelvic Inflammatory Disease were more probable to have had a termination pregnancy voluntary (20%, 12 of 60 as compared with 5% 1 of 20), but this divergence was not significant statistically. From eighty patients with recognized chronic Pelvic Inflammatory Disease, there was no prior history of 20 patients of pelvic infection, using IUD, previous puerperal sepsis, pregnancy termination, appendicitis or pelvic surgery, all features which may recommend a probable cause. Besides the hydrosalpinges presence, on 22.5% (18) patients had pelvic pain (Sharma, 2016).

4.0 DISCUSSION:

Hydrosalpinges demonstration at the laparoscopic examination time for infertility in 12% of all these kinds of examination in the patient's group from a prosperous community underpin current estimates of diseases which transmitted sexually and accentuates the hazardous Pelvic Inflammatory Disease of insidious nature. The current widespread transmitted disease has had lasting to have a widespread and far-reaching effect on the future, even on the present, younger member's health in the society (Sharma, 2016).

Current estimates advise that in between 500,000 to 1 million women will suffer from acute salpingitis or sequelae every year (according to the PubMed Database records). These sequelae comprise not only desolation but also ectopic pregnancy and chronic pelvic pain. The inclusive effect on public health is extensive and it was previously estimated that 20% of patients recognized to have acute salpingitis which afterward becomes infertile. The estimated 60,000 women will be considered infertile only in the United States every year due to Pelvic Inflammatory Disease (Punnonen, Terho and Klemi, 2016).

Additionally, there is almost a fourfold elevation in the subsequent ectopic pregnancy risk in these mentioned patients. The figure of ectopic pregnancies has three times more from 2006 to 2010 in the United States, parallel with elevation in sexually transmitted diseases. According to an estimated 50% of overall ectopic pregnancies are secondary to prevailing Pelvic Inflammatory Disease. Four out of 80 (5%) patients with chronic Pelvic Inflammatory Disease in

the research formerly had an ectopic pregnancy (Savaris, 2017).

Meanwhile, non-tuberculous Pelvic Inflammatory Disease does not happen in the nonexistence of sexual revelation; the alteration in adolescent sexual patterns may generate more social and medical implications. This issue is proposed by the former age at initial coitus in the study population with Chronic Pelvic Inflammatory Disease.

The figure of sexual partners, unfortunately, or the coitus frequency, a variable which might be relevant as this research, could not be resolute in the retrospective research. Accordingly, it also estimated that if the sexually transmitted disease rate, as based on current rates, may continue by the year 2025 more than 15% of overall young women who achieved the age of reproduction, will have been sanitized by Pelvic Inflammatory Disease alone, a doubling of this estimate of non-surgical sterility prevalence (Songer et al., 2016).

In this research, 22 out of 80 (27.5%) infertile patients who have chronic Pelvic Inflammatory Disease had formerly utilized an IUD, more than an increase of fivefold over the usage of IUD in the controlled populace. Of those patients, 20 have a prior history of Acute Pelvic Inflammatory Disease, (50%) 10 were formerly the user of IUD, in those there were infertile patients without having laparoscopic indication of pelvic infection, 57.5 (46 patients) were OC user as the comparison with 35% (29) of the overall 80 patients in the group of study (Yudin and Landers, 2016).

The contraceptive usage has been represented to pelvic infection risk influence. While there was no long-term potential study has showed an infertility increase in females who had used the IUDs, accordingly the IUD has been showed the pelvic infection risk elevation, 1.5 to 9.2 fold, as comparison with contraception nonusers risk and on the other hand 10, 11 OCs, decline the pelvic infection risk to 0.6, as compared to the risk of women handling no contraception. Furthermore, OC use may lower the acute Pelvic Inflammatory Disease risk in females who have gonococcal positive cervical culture (Songer et al., 2016).

Those females who have never been experiencing pregnancy and utilized and IUD are at higher risk of developing Pelvic Inflammatory Disease as compared with those who formerly have pregnant. This virtual risk must be recognized previously to the insertion of

an IUD in female craving futuristic pregnancies. There is another risk component for pelvic infection and that is the termination of pregnancy. Nearly one million lawful abortions are accomplished every year (according to PubMed Database reports for this specific research) in the United State of America and 0.5% approximately of these are very complicated due to acute salpingitis within three weeks operation (WESTRÖM, 2015).

In this research, nevertheless, there was no particular divergence in the pregnancy number of termination among the patients of study (16%) and (11%) in the control group. Notwithstanding an awareness of the hazardous sequelae of Pelvic Inflammatory Disease and the appreciation which prompt judgment and treatment may diminish the subsequent effect of the acute infection, several patients are represented for the infertility treatment having no history which may suggest a prior pelvic infection (Yudin and Landers, 2016).

Seventy-five percent from overall 80 patients in this research enduring diagnostic laparoscopy for infertility which was recognized to have “silent Pelvic Inflammatory Disease” or chronic Pelvic Inflammatory Disease had no prior history of an episode regarding acute pelvic infection. 20% of this group had nothing with their histories of medical (IUD use, acute Pelvic Inflammatory Disease, termination of pregnancy, puerperal sepsis, pelvic surgery, and appendicitis while suggesting a proper cause for the chronic Pelvic Inflammatory Disease (WESTRÖM, 2015).

Laparoscopy liberal use for analysis of the acute pelvic pain accepted the complication of the diagnosing Pelvic Inflammatory Disease on clinical factor basis. Old investigators have shown a limited level of accuracy in the analysis based exclusively on clinical criteria like physical examination, history and laboratory tests. Laparoscopy has shown that 1/3 patients approximately with the clinical diagnosis of acute Pelvic Inflammatory Disease had either no disease or had other issues also. There is frequently a limited correlation in between the laparoscopic diagnosis and the clinical picture of patients with acute suspected salpingitis, which may impact the medical judgment and interrupt treatment accordingly with the possibility of worsening the prognosis of long-term. Signs and symptoms are often atypical and variable; most of the patient who has tubal infections is afebrile and have benevolent clinical courses (Punnonen, Terho and Klemi, 2016).

Accordingly, some of the patients with tubal

infection also have no symptoms whatsoever. Therefore, a high pregnancy rate beyond the infections with only insignificant tubal inflammatory variations (at the rate of 97.4%), there is still no documentation which considers the early diagnosis of laparoscopy of acute salpingitis may enhance the treatment and decline the long-term disability. Pelvic Inflammatory Disease may be originated by any of multiple organisms; researchers have shown that the symptoms intensity in addition to the tubal inflammation severity may represent a considerable change for different microbiologic organisms (Kessel, 2016).

5.0 CONCLUSION:

At the conclusion, the often happening of unanticipated “silent” chronic Pelvic Inflammatory Disease in unproductive patients stresses the requirement for overall evaluation based on more than clinical and historic criteria alone. The copious laparoscopy use is highly encouraged in patients who have infertility, besides the absence of any historic components which might advise tubal disease. Furthermore, Pelvic Inflammatory Disease of silent nature, as well as the elevated prevalence inside the society, makes new struggles at investigation and mandatory treatment. The impact of contraception on the futuristic reproduction must be measured by those individuals who are utilizing different family planning methods.

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