

A STUDY OF PELVIC PAIN IN WOMEN

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ABSTRACT

BACKGROUND

Pelvic pain is not an uncommon complaint in women and its diagnosis and management can be taxing at times. Acute pelvic pain is an emergency and requires prompt and selective investigations to deal with the condition. Treatment is either medical or surgical. Chronic pelvic pain can be very debilitating. In some rare cases, even after extensive investigations, the diagnosis may not be arrived at and the treatment remains empirical. While chronic pelvic pain mainly affects women in the reproductive age group, acute pain can occur at all ages.

MATERIALS AND METHODS

This study was done in 120 women who attended the clinics in the Department of OBG in Kanachur Institute of Medical Sciences, Mangalore.

RESULTS

Majority of the patients belonged to the 15-25 years age group.

CONCLUSION

A lot of our national resource has been spent on these problems and also a lot of national work hours are lost. The pathologies involved are also many. So, this study tries to shed in some light.

KEYWORDS

Pelvic Pain, Women, Acute, Chronic, Investigations, Management.

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BACKGROUND

Acute pelvic pain causes can be horizontally integrated depending on the age of the patient. Premenarche causes include congenital causes like hematocolpos and hematometra. Sometimes, an ovarian cyst and its complications like torsion, rupture, haemorrhage and malignancy can be the cause.¹ In our country, abdominal tuberculosis is also quite common for which thorough investigations need to be carried out. In young adolescents, most acute pains are of non-gynaecological origin. They may be related to urinary tract, gastrointestinal tract or abdominal tuberculosis. Ovarian tumour may sometimes be encountered. The commonest ovarian tumours encountered in children and adolescents are dermoid cysts, teratoma, dysgerminomas and germ cell tumours. Acute pain in a dermoid cyst occurs with infection, distension or torsion.² The diagnosis is easy and laparotomy is required. In reproductive age group, acute pain maybe due to obstetrical or gynaecological and non-

gynaecological conditions. Abortion pain occurs in inevitable and septic abortion. Inevitable abortion is associated with severe vaginal bleeding and the diagnosis is obvious. In septic abortion, the woman suffers from high fever, severe abdominal pain and vomiting. Foul-smelling vaginal discharge maybe present. Acute ectopic pregnancy is associated with severe abdominal pain and short period of amenorrhoea with or without vaginal bleeding. Ultrasound reveals free fluid in the abdominal cavity and a pelvic mass. It requires emergency surgery. Red degeneration of fibroid is also quite common. A woman in early pregnancy develops acute abdominal pain and sometimes vomiting. The uterus is more enlarged than the duration of pregnancy and is tender. Ultrasound reveals the presence of a fibroid. Treatment is conservative. Twisted ovarian cyst is one more possibility. This requires immediate surgery. Acute hydramnios is one another cause, which is more common in a multiple pregnancies.³ Acute hydramnios presents with unduly enlarged uterus in mid-pregnancy and abdominal pain. In molar pregnancy, pain is due to sudden enlargement of the uterus, haemorrhage and perforation. Evacuation of the mole is required. Retention of urine may also lead to acute pain. Retention occurs due to retroverted gravid uterus, haematocele of ectopic pregnancy, fibroid or ovarian cyst impacted in the pelvis. It requires temporary catheterisation in the retroverted gravid uterus and surgery for the other conditions. Abruptio placentae usually occurs after 20 weeks of pregnancy and associated with severe

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abdominal pain and vaginal bleeding. Dysmenorrhoea is cyclical and related to menstruation in early menarchal period, a young girl maybe brought with acute abdominal pain. Pain is located in the lower abdomen and is often spasmodic. Antispasmodics relieve pain is the treatment of choice and no investigation is required. Mittelschmerz is a mid-cycle pain, not lasting more than 12-24 hours, around ovulation. Pain is located in one of the iliac fossa and maybe accompanied with slight vaginal bleeding. Analgesic maybe required for severe pain. In Pelvic Inflammatory Disease (PID), an acute pain is felt in the lower abdomen, but may spread upwards if generalised peritonitis ensues. Pain is mostly bilateral and abdomen is tender in acute PID. In endometriosis, acute pain is either due to rupture of a chocolate cyst or due to leakage of blood into the peritoneal cavity. Ultrasound detects the cause. Laparoscopy or laparotomy is required. In hyperstimulation of induction of ovulation, the cause of acute pain is obvious and its severity is related to endogenous or exogenous hCG. It is more severe if pregnancy (more so multiple pregnancy) results from IVF programme. It occurs 8-10 days following hCG hormone injection or early pregnancy. Severe case requires hospitalisation, intravenous fluid and sedation. Normally, a fibroid does not cause acute pain, unless a pedunculated fibroid undergoes torsion or the capsule vessel ruptures with intraperitoneal haemorrhage. Treatment is surgical. Ovarian tumour like torsion, infection of a dermoid cyst and rupture cause acute pain in the abdomen. A malignant tumour is mostly 'silent' until in an advanced stage.

Non-gynaecological causes maybe due to retention of urine in gynaecology cases or in malignancy as it occurs when a tumour gets impacted in the pouch of Douglas. Acute cystitis and bladder stone cause severe pain in the suprapubic region. An ureteric colic is felt along the ureter on one side. Gastrointestinal pain is often colicky and associated with gastrointestinal symptoms. Appendicitis can confuse the diagnosis, but the pain is localised in the right iliac fossa.⁴

In menopausal and postmenopausal women, pyometra occurs in endometrial cancer following radiotherapy, when the cervix gets stenosed or due to tubercular and senile endometritis. The pain is localised in the central portion of the lower abdomen and may or may not be accompanied with fever. Ultrasound shows an enlarged uterus with fluid. Treatment is cervical dilation and drainage. Endometrial curettage later will reveal tuberculosis or cancer. Ovarian tumour is invariably malignant in an old woman and is of late occurrence. Sarcoma in a fibroid is diagnosed when the fibroid starts growing rapidly with pain and sometimes postmenopausal bleeding. Retention of urine occurs in a menopausal woman due to bladder neck obstruction and requires drainage and appropriate management.

Chronic Pelvic Pain (CPP) refers to a cyclical pelvic pain of more than 6 months duration. This type of pain has been a recognised symptom of organic lesions such as endometriosis, PIDs, adhesions and uterine fibroids. It is dealt with appropriate medical and surgical management.

It has been observed that some women suffer from chronic pelvic pain without any clinical evidence of pelvic pathology. It is easy to attribute this to neurosis, as many of these women present with neurotic personality. However, it is now confirmed that neurosis is the result and not the cause of this protracted pain and Chronic Pelvic Pain Syndrome (CPPS) does exist. It is important therefore to elucidate the cause of CPPS by investigations such as ultrasound and diagnostic laparoscopy. Laparoscopy reveals minute areas of endometriosis and pelvic adhesions, which are invariably missed on pelvic examination. The absence of pelvic pathology and findings of normal pelvic organs is assuring to the woman as well as the doctor that no serious disease such as cancer exists. At times, the congestion and dilatation of pelvic veins is the only abnormal finding and this is hard to treat. In incidence about 15% of women complain of chronic pelvic pain, 10% women visit the gynaecologists in some centres as many as 30-40% diagnostic laparoscopies are performed.⁵

Aims and Objectives- To study the pelvic pain in women.

MATERIALS AND METHODS

This study was done in 120 women who attended the clinics in the Department of OBG in Kanachur Institute of Medical Sciences, Mangalore.

History and clinical examination of the patient was thoroughly taken.

Age, parity and menstrual history were recorded. The mode of onset of pain, its location, severity, duration and radiation to other areas were inquired into. The relation to menstrual history is important. History of fever, vomiting, diarrhoea as well as urinary symptoms are also relevant, while making a clinical diagnosis. Clinical examination and relevant investigations were done.

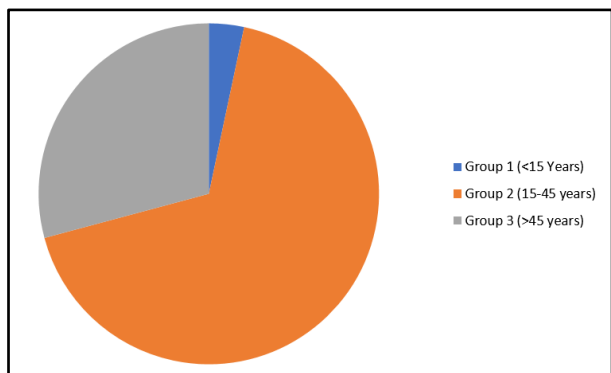
The most common symptoms and signs were noted. The investigations that were carried were noted. The management was noted and the patient were asked to come back at specific intervals for follow up and the findings were noted.

Inclusion Criteria- The patients were divided into three groups <15 years, 15-45 years and more than 45 years.

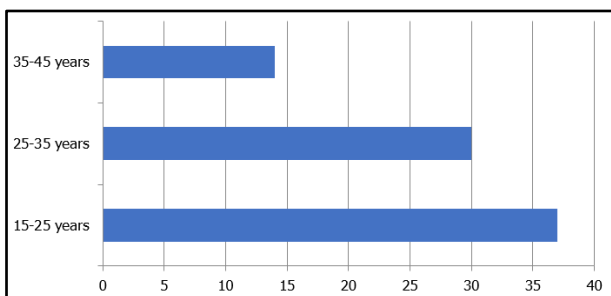
Exclusion Criteria- Patients below 10 years and above 60 years were not included in the study to reduce the age-related bias. Patients with neurological problems were not included in the study. The patients who were undergoing chemotherapy were not included in the study. Patients with connective tissue disorders were not included in the study.

All the statistical analysis were done using the SPSS (2015), California.

RESULTS



Graph 1. Age Distribution (Group 1 = 4, Group 2 = 81 and Group 3 = 35)



Graph 2. Intragroup 2 Age Distribution (35-45 Years = 14; 25 to 35 Years = 30; and 15 to 25 Years = 37)

Pain	Group 1	Group 2	Group 3
Dull	-	19	26
Sharp	3	32	1
Throbbing	1	30	8
Acute	4	70	31
Chronic	-	11	4
Referred pain	-	9	17
Tenderness	2	38	12

Table 1. Pain Chart (Total Number of Patients, n=120)

Acuteness in Group 2	X-Value	Significance (p=<0.05)
70	0.623	Significant

Table 2. Test for Significance

PCOD was the most common diagnosis in the females in group 2 and malignancy was more seen as the age of the patients advanced.

Group	Inflammatory (Organs of Reproduction)	Benign (Organs of Reproduction)	Malignant (Organs of Reproduction)	Other GI and Renal Pathologies
Group - 1	1			3
Group - 2	8	59	6	8
Group - 3	20	2	11	2

Table 3. Most Common Diagnosis in Each Group (n=120)

PCOD	X-Value	Significance (p=<0.05)
59	0.561	Significant

Table 4. Test for Significance

Treatment	Group 1	Group 2	Group 3
Anti-inflammatory	4	8	20
Hormonal therapy		59	11
Adjuvant therapy		8	2
Surgical therapy		6	11
Chemo/radiotherapy		8	11

Table 5. Treatment of Choice (n=120)

Follow Up	Group 1	Group 2	Group 3
1 week	All 4 patients were not having any signs of the disease	- Patients having PCOD, the symptoms in 41% worsened. - In malignant cases, 4 patients were discharged and were ordered for further chemotherapy. - Two patients were in ICU for extensive surgical resection.	- In malignant cases, 7 patients were discharged and were ordered for further chemotherapy. - 4 patients were in ICU for extensive surgical resection.
1 month	1 patient complained of relapse of the symptom	- PCOD patients better tolerated the hormones. However, 2% of patients, the symptoms worsened. - The patients with malignancy were put on chemo/radiotherapy.	The patients with malignancy were put on chemo/radiotherapy
3 months	All 4 patients were not having any signs of the disease	PCOD patients better tolerated the hormones. Malignancy patients did not show any relapse	Malignancy patients did not show any relapse.
6 months	All 4 patients were not having any signs of the disease	PCOD patients better tolerated the hormones. Malignancy patients did not show any relapse.	One patient died due to MI.

Table 6. Follow Up

DISCUSSION

In this study, group 1 included 4 patients, group 2 included 81 patients and group 3 included 35 patients.

Majority of the patients belonged to the age group of 15 years to 45 years.

Majority of the patients belonged to the 15-25 years age group.

When compared with that of the other studies, prevalence rates for dyspareunia, dysmenorrhoea and abdominal pain found in UK community-based studies were 8%, 45% to 97% and 23% to 29%, respectively, but definitions used varied greatly.⁶

According to another study, women with chronic pelvic pain and variable degrees of endometriosis demonstrate altered pain sensitivity relative to pain-free healthy women in a control group and whether such differences are related to the presence or severity of endometriosis or comorbid pain syndromes.⁷

In a study conducted in Canada in 4 years, there were 34,346 cases of surgery or inpatient admission for chronic pelvic pain amounting to \$100.5 million with an average cost of \$25 million per year. Pelvic and perineal pain accounted for 61.5% (n=21, 127) of the cases, while dysmenorrhea accounted for 31.8% (n=10, 936), and dyspareunia accounted for 6.6% (n=2283). The vast majority of the cases 92.9% (n=31, 923) were associated with surgical interventions with the most common surgeries being hysterectomy 47.1% (n=16, 189), followed by laparoscopy 25.8% (n=8, 850), adnexal surgery (6.8%, n=2, 349) and other procedures (11.6%, n=3, 968).⁸

The causes of pelvic pain are diverse. They maybe gynaecological and nongynaecological such as gastrointestinal tract, renal tract, skeletomuscular and peritoneal. Gynaecological causes are often organic, but can be functional. The organic lesions are- Pelvic endometriosis, chocolate cyst of the ovary (30-35%), ovarian adhesions, polycystic ovarian disease, residual ovarian syndrome, ovarian tumours (benign and malignant), chronic PID, tubal adhesions, postoperative adhesions, parametritis due to infection or malignancy (24%), pelvic tuberculosis and adhesions, uterine fibroids, adenomyosis, pyometra in menopausal women and fixed retroverted uterus.

Functional causes include congestive dysmenorrhoea, Mittelschmerz and post-coital pain, pelvic varicose or dilated veins (30%).

Non-gynaecological causes are- Intestinal- Tuberculosis; diverticulitis; colitis; appendicitis; irritable bowel syndrome, which account for 20% cases; carcinoma rectum like in intestinal obstruction; renal- Ureteric colic; bladder stone; urinary tract infection; cystitis; chronic retention of urine; skeletal- Muscular joint pains (referred pain); hernias; sickle cell disease; porphyria; neurological- Herpes zoster; nerve entrapment; nerve compression; referred pain; Scar- scar pain; nerve entrapment in Pfannenstiel incision can cause chronic pain, which sometimes last as long as 2 years. In rare cases, no cause of CPP are found. In quite a few cases, no cause of CPP

can be detected (35%). Even laparoscopic findings appear normal and extensive investigations undertaken do not reveal a definite cause. It is also observed that even when a lesion is detected, it may not be the cause of the pelvic pain, i.e. loose peritoneal adhesions, mainly postoperative adhesions do not cause chronic pain and adhesiolysis does not cure the symptom.

History taking almost in majority of the cases pinpoints the diagnosis. Pelvic pain is common in reproductive years. The onset, type, duration and location of pain will provide guidance to the probable cause of the pain. Radiation of pain and its relation to menstruation is important. Obstetric and sexual history are significant. History of intrauterine contraceptive device suggests pelvic infection. Associated urinary and bowel symptoms should be inquired into. Some women with chronic pelvic pain also complain of dysmenorrhoea and dyspareunia. Past history of tuberculosis and psychiatric problem will help. History of cancer in the family will suggest probable cancer phobia in the woman. General examination will reveal lymphadenopathy (tuberculosis), anaemia and swelling of feet. Abdominal mass, ascites and tenderness suggest organic lesion. Vaginal discharge is seen in PB. Bimanual pelvic examination is necessary to rule out organic pelvic lesion. A full bladder is felt anterior to the uterus and is tender on palpation. Rectal examination may reveal a mass or stricture. Pain and restriction of joint movements suggest referred pain to the pelvis. Tenderness in the pelvis is caused by endometriosis, adenomyosis, pelvic adhesion, PID, diverticulitis and urinary infection. Ovarian pain is located at the junction of the middle and inner two-third of a line between the anterior superior iliac spine to the umbilicus and tenderness can be elicited here.

A firm diagnosis and cause of pain cannot always be elicited clinically. Ultrasound, diagnostic laparoscopy, Doppler ultrasound for pelvic congestion, urine tests, barium enema, colonoscopy, sigmoidoscopy, radiography of joints and Intravenous Pyelography (IVP) will be needed in accordance with the patient's history and examination. CT and MRI maybe helpful in some cases. MRI can miss a small nodule, but it picks rectovaginal endometriosis. Laparoscopy detects small nodules of endometriosis, which are undetected clinically. It can detect pelvic adhesions and small inflammatory masses apart from obvious pelvic pathology. Therapeutic treatment can be applied in the same sitting such as adhesiolysis and cauterisation of endometriosis. Pelvic venous congestion and dilated vessels are not always revealed because of head low position and pressure of pneumoperitoneum.

A poor correlation between macroscopic view and histological evidence exists at laparoscopy and the diagnosis can be missed, if peritoneal biopsies are not taken. The burnt-out healed areas of endometriosis can also cause chronic pelvic pain due to fibrosis and entrapment of nerve fibres. Even if a pelvic pathology is detected at laparoscopy, i.e. fibroid or a small ovarian cyst adhesions, it may not be the real cause of chronic pelvic pain. It could be just a coincidental finding. 'Conscious pain

mapping' at diagnostic laparoscopy under local anaesthesia is useful in deciding the cause and location of chronic pain. When laparoscopy fails to reveal any pathology and pelvic venous congestion is suspected to be the cause of pelvic pain. Transuterine pelvic venography is performed by injecting the dye myometrially or pelvic venography using contrast medium. In pelvic congestion syndrome, dilated ovarian and uterine vessels with delayed clearance of dye are observed. Hysteroscopy picks up intrauterine lesions.

Management include the detection of pelvic pathology or cause for pain determines the therapy appropriate to the cause. Negative investigations at least assure the woman that no serious condition prevails and cancer phobia can be eliminated. Diagnostic laparoscopy remains the gold standard when a woman fails to respond to hormones. The problem however remains when no cause is found. Doppler ultrasound or pelvic venography will demonstrate the dilated veins. Treatment comprises progestogen therapy or hysterectomy. NSAIDs (nonsteroidal anti-inflammatory drugs) are effective in mild cases. GnRH can shrink the endometriosis and the pelvic veins. The rationale behind progestogen treatment is that oestrogen causes dilatation of pelvic vessels and progestogens by their anti-oestrogenic effect, constrict the veins, reduce the blood flow and suppress ovulation. Medroxyprogesterone Acetate (MDPA) up to 30 mg daily (Provera) given for 9-12 months relieves pelvic pain. Unfortunately, pain may recur after stoppage of the drug and prolonged therapy can produce side effects such as increase in body weight, pain, bloating and menstrual irregularity; thus, it is not desirable. Breast cancer may be related to prolonged progestogen therapy. Micronised progesterone is a natural progesterone available in India as Utrogestan 100 mg oral and vaginal tablet. Oral tablets are toxic to the liver and in a woman with liver damage, vaginal tablets are preferred. Because, it causes dizziness in a few cases, one tablet daily is advocated at bedtime for 10 days in the premenstrual phase. For premenstrual tension, one tablet twice daily is recommended for 10 days premenstrually. Mirena IUCD can be inserted. Mirena is very effective in relieving pain and effective over 5 years if needed. Besides, it acts as a contraceptive when the woman is not desirous of pregnancy. Selective serotonin reuptake inhibitor like fluoxetine 10-60 mg daily or sertraline 50-200 mg daily are drugs useful in some cases.

The diameter of pelvic veins was reduced and pain relieved for 48 hours after intravenous injection of diethyl ergotamine. Further trials are necessary to find out whether oral tablets will lead to permanent cure. Diethyl ergotamine causes vasoconstriction of veins and reduces pelvic congestion. Ligation of ovarian veins has been attempted with variable results. Hysterectomy and bilateral salpingo-oophorectomy maybe resorted to, if drug therapy fails in elderly women. Psychotherapy alone or combined

with drugs will be useful in pelvic pain syndrome and irritable bowel syndrome. Acupuncture and shortwave diathermy are adjuvants and are effective in some women. Presacral neurectomy and Laparoscopic Uterosacral Nerve Ablation (LUNA) are recommended in intractable pain in young women. LUNA is sometimes associated with prolapse and bladder dysfunction. Ureteric damage can also occur. Presacral neurectomy causes bleeding and haematoma. Static magnetic therapy for 4 weeks or transcutaneous nerve stimulation helps in some cases. Varicosity of pelvic veins have been treated with embolisation of ovarian vessels or laparoscopic injection of sclerosing agents (sclerotherapy) using 5% ethanolamine maleate. Gel foams and coils are also used. Conscious pain mapping involves laparoscopy under local anaesthesia and interaction with the woman on touching individual organs to localise the organ of pain. This will improve diagnostic accuracy. Backache is one of the accompanying symptoms in the following gynaecological diseases.

CONCLUSION

There are a plethora of pathologies that can cause a pelvic pain in the female patient. Prompt management, which include the correct diagnosis and treatment for the cause is the need of the hour.

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