

# A Study on Aetiology of Abdominal Pain in Females of Reproductive Age Group in Rural Area of Srikakulam District, Andhra Pradesh

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## ABSTRACT

**Introduction:** Acute abdomen with pregnancy has many possibilities with clinical scenario which overlaps other specialities like surgery, Obstetrics /Gynaecology, and a specialist in maternal-foetal medicine. Study aimed to determine the etiological factors of patients with abdominal pain in reproductive age group who attended Gynaecology OPD and to study their socio- demographic profile.

**Material and methods:** A cross sectional study on 1000 women of reproductive age group who attended Gynaecology OPD at RIMS, Srikakulam. Data was collected using a predesigned and pretested proforma with appropriate diagnostic procedures for confirmation of diagnosis. Data was analysed by CHI square test, and was expressed in percentages.

**Results:** Age wise highest number of patients was in between 30-40 years 326 (32.6%), 40-50 years 242 (24.2%), 786 illiterates (78.6%), 214 literates (21.4%). 892 patients were of low income (89.2%), 118 patients were of middle income (11.8%). Aetiology wise patients who suffered with acute pain was 373 (37.3%), whereas chronic pain patients was 627 (62.7%), out of which the patients of functional pain include 343 (34.3%).

**Conclusion:** Abdominal pain in reproductive age group ranges from Inconsequential to life threatening, and also a diagnostic dilemma. A healthy mother a Healthy nation is an essential strategy for the society which needs early intervention by the Administration, NGO organisations, policy makers, last but not the least political desire to have healthy mother, a care for future society.

**Keywords:** Abdominal Pain, Dysfunctional Uterine Bleeding (DUB), Pelvic Inflammatory Disease (PID).

## INTRODUCTION

Abdominal pain is perhaps the most challenging because of many signs and symptoms are insensitive and non specific, who needs admission in Emergency department.<sup>1,2</sup> It is estimated that out of all hospital visits pain abdomen accounts for 5% to 10% of all hospital visits. Causes of abdominal pain ranges from the in-consequential to the life threatening which needs urgent Intervention.<sup>3</sup> In addition, wide spread experience of pain abdomen nearly always possesses a greater degree of diagnosis with uncertainty in women of reproductive age some times during pregnancy.<sup>4</sup> Such difficulty is more pronounced in pregnant women where the unwritten policy seems to be "If she is pregnant blame the pregnancy". This policy is justified by the favourable outcomes and non-obstetric surgical problems with high risk

of perinatal morbidity.<sup>5</sup> However in small and significant number of patients the policy has the potentials of creating delay and increasing the risk of unwarranted complications. Delay in management may lead to emotional trauma and the potential for serious liability.<sup>6</sup>

Just about every person at one point or other will experience abdominal pain, most of the causes are not serious and can be readily diagnosed and treated. However pain can also be a sign of a serious illness, which remain as challenge in clinical medicine, a fact by numerous studies, timely diagnosis will reduce the morbidity.<sup>7</sup> The common problem in the urban and rural areas who attend OPD with pain abdomen accounts for 70% which may be acute or chronic, needs emergency attention without any delay.

Abdominal pain is an extremely common complaint in emergency accounting for 10% of all visits to Emergency department. Although abdominal pain frequently occurs, it can be frustrating chief complaint, as it is a rather non specific problem that may not even directly represent the disease process, actually affecting the patient.<sup>8</sup> Because of the more complex anatomy of reproductive organs, females of reproductive age group require special consideration when they present with abdominal pain. Ultra sound may aid in diagnosis.<sup>9</sup> Diagnostic laparoscopy for the acute abdomen offers advantages of rapid and accurate assessment, can obviate the need for exploratory laparotomy.<sup>7,8</sup> If surgeons with appropriate training and skills are available, therapeutic Laparoscopy can be used to manage the condition with the benefits of less morbidity, shorter recovery, less pain and time, with short hospital stay, thereby saving money.

Study aimed to evaluate the aetiology of pain abdomen patients in reproductive age group who attended Gynaecology OPD and to study socio - demographic profile of these patients who attended Gynaecology OPD

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## MATERIAL AND METHODS

It was a cross-sectional study on 1000 women of reproductive age group who attended Gynaecology OPD at Rajiv Gandhi Institute of Medical Sciences, Srikakulam during March 2015 to April 2015. Data was collected using a predesigned and pretested proforma.

**Inclusion criteria:** All women of reproductive age group who attended Gynaecology OPD with abdominal pain.

**Exclusion criteria:** women who are not willing to participate in the study.

Information was collected from patients regarding age, locality, Socio Economic Status, occupation, detailed menstrual history, personal history and obstetric history. Base line Investigations like urine examination, urine culture, stool examination, blood examination is necessary for who presented with acute pain abdomen<sup>10</sup>, Ultrasonography which is unique effective tool for exploring the abdomen without laparotomy<sup>11</sup> performance of ultra sound prevents unnecessary delays and avoid laparotomies<sup>12</sup> were carried out to confirm the diagnosis except functional pain abdomen syndrome were no abnormality was found. Vaginal swab culture in PIDs and Laparoscopy in case of endometriosis, ovarian tumours, Ectopic pregnancies, DUB, Leiomyomas were also carried out which is less invasive and whole abdomen can be visualised.<sup>13-15</sup>

## STATISTICAL ANALYSIS

Data was analysed by using MS Excel 2010. Categorical data was expressed in percentages. CHI Square test was used to get P value and statistical significance.

## RESULTS

There was a strong statistical Association between aetiology of chronic PID and income. P value is 0.003 which is highly statistically significant.

A population-based cross sectional study of gynaecological and sexual diseases in rural women were studied, as cited in table 6 out of which (55%) had gynaecological complaints, and 45% were symptom-free. 92% of all women were found to have one or more gynaecological or sexual diseases, and the average number of these diseases per women was 3.6. Infection of the genital tract contributed half of this morbidity. Only 8% of the women had undergone gynaecological examination and treatment in the past. There was an association between presence of gynaecological diseases and use of female methods of contraception, but this could explain only a small fraction of the morbidity. In the rural areas of developing countries, gynaecological and sexual care should be part of the primary health care.

The evaluation of chronic pain requires a thorough attempt with open minds towards careful diagnostics otherwise the involvement of other organs may be possibility.<sup>17</sup> A strong emotional component may be taken into consideration while dealing with chronic pelvic pain.<sup>18</sup>

The present study revealed that the patients who have attended the gynaecology OPD, comprised of age wise as

cited in table -1 highest number in percentages are between 30-40 years (32.6%), 40-50 years (24.2%), As cited in table -2 Literacy wise, 786 illiterates (78.6%), 214 literates (21.4%) As cited in table-3, Economical wise, 892 patients was of low income (89.2%), 118 patients was middle income (11.8%).

In the present study as cited in table -4, the aetiology wise patients who suffered with acute pain was 373 (33.3%), and chronic pain patients was 627 (62.7%) out of which the patients of functional pain include 343 (34.3%) which

Age group (in years)	Number	Percentage
13-18	50	5%
19-20	110	21.4%
20-29	170	17%
30-40	326	32.6%
40-50	242	24.2%
50-70	102	10.2%

**Table-1:** Distribution of patients on the basis of age factor

Literacy status	Number	Percentage
Literate	214	21.4%
Illiterate	786	78.6%

**Table-2:** Distribution of patients based on literacy status

Socio-Economic	Number	Percentage
Low income	892	89.9%
Middle income	118	11.8%
High income	-	-

**Table-3:** Distribution of patients based on Socio Economic Status

Causes	Low income	Middle income	Total
missed abortions	9	4	13
acute gastritis	120	34	154
acute ruptured ectopic	30	16	46
chronic PID	48	20	68
total	207	74	281

**Table-4:** Distribution of patients based on aetiology and income

Aetiology of acute abdomen	Number	Percentage
Missed Abortion	13	13%
Acute Gastritis	154	15.4%
Acute Appendicitis	6	0.6%
Acute cholelithiasis	12	1.2%
Acute renal stones	28	2.8%
Acute ruptured Ectopic pregnancy	46	4.6%
Twisted ovarian tumour	36	3.6%
Corpus Luteal cyst rupture	14	1.4%
Un ruptured ovarian pregnancy	2	0.2%
Septic abortions	8	0.8%
Incomplete Abortions	22	2.2%
Spasmodic dysmenorrhoea	32	3.2%
Acute PID	3	0.3%

**Table-5:** Distribution of patients based on aetiology who presented with acute abdomen.

Aetiology of chronic abdominal pain	Number	Percentage
Chronic pelvic Inflammatory Disease	68	6.8%
Leo myomas	62	6.2%
Endometriosis	22	2.2%
DUB	24	2.4%
Dysmenorrhoea	32	3.2%
Menorrhagia	44	4.4%
Ovarian tumours	32	3.2%
Functional pain abdomen	343	34.3%

**Table-6:** Distribution of patients based on aetiology who attended with chronic abdominal pain.

needs only counselling, reassurance and placebo treatment. The distribution of acute pain as cited in table -5 was as follows, acute gastritis (15.4%), Missed abortion (13%), ectopic pregnancy (4.6%), twisted ovarian tumour (3.6%), spasmodic dysmenorrhoea (32%), acute renal stones (2.8%), incomplete abortions (2.2%), corpus luteal cyst rupture (1.4%), acute cholelithiasis (1.2%), septic abortions (0.8%), acute appendicitis (0.6%), acute PID (0.3%), un ruptured ovarian pregnancy (0.2%). The distribution of chronic abdominal pain as cited in table-6 was accounted as functional pain abdomen (34.3%), chronic PID (6.8%), Leo myomas (6.2%), Menorrhagia (4.4%), Dysmenorrhoea (3.2%), Ovarian tumours (3.2%), DUB (2.4%) and Endometriosis (2.2%)

## DISCUSSION

In a study conducted by<sup>19</sup> Morino et al the aetiology of acute abdominal pain accounted as follows appendicitis (18%), ectopic pregnancy (1%), endometriosis (2%), ovarian cyst (12%), PID (19%), and no diagnosis (37%). In a study by<sup>20</sup> Anteby et al the aetiology of acute abdominal pain accounted as follows appendicitis (3%), ectopic pregnancy (17%), endometriosis (3%), ovarian cyst (27%), ovarian torsion (10%), PID (21%) and No diagnosis (12%). In a study by Gaitan et al<sup>21</sup> the aetiology of acute abdominal pain accounted as follows. Appendicitis (2%), ectopic pregnancy (9%), endometriosis (7%), ovarian cyst (14%), PID (55%) and No diagnosis (8%). In a similar study by Kontoravdis et al<sup>22</sup> the aetiology of acute abdominal pain accounted as follows ectopic pregnancy (19%), endometriosis (16%), ovarian cyst (2%), PID (23%) and No diagnosis (8%). Pelvic inflammatory disease is an infection which induces inflammation of the female reproductive tract (like endometrium, fallopian tubes, ovaries and pelvic peritoneum). The hallmark of the disease is pelvic tenderness and inflammation of lower genital tract. The guidelines for treatment of sexually transmitted Diseases and the expanded diagnostic evaluation for cervicitis, trichomoniasis, bacterial vaginosis, genital warts was improved by new treatment modality and the incidence was drastically reduced by clinical efficacy of Azithromycin.<sup>23</sup> The subject of missed abortion has received scanty attention in British and American medical literature. The condition is usually regarded as very rare.<sup>24</sup> E.

Fraenkelin 1903 collected only 105 cases, but According to Litzenberg<sup>25</sup> the condition is more common, as he had 23 cases of missed abortion in his own practice.<sup>26</sup>

Brenner PF, Roys, Mischell DE Jr. Ectopic pregnancy A study of 300 hundred women were carried out, out of which 77 women had pelvic inflammatory disease, 46 had history of abdominal pelvic surgery; 32 had both PID and surgery. Forty three women had used an Intra- uterine device, and 32 had device in utero at the time of pregnancy but there is no definite relation- ship between use of the IUD and Ectopic pregnancy.

When compared to the above studies with present study there was reduced statistics due to change in life style, early reporting and early diagnosis. Ectopic pregnancy was a major cause of morbidity and mortality accounted for major number of deaths earlier, which has been reduced due to Improved diagnostics, In turn reduced tubal rupture and future complications like Infertility and also allows outpatient treatment. Any delay in diagnosis leads to rupture causing Intra abdominal bleeding, which needs emergency Laparotomy, blood transfusions, and delay in attending the patient by specialist may cause death. Abnormal uterine bleeding (AUB) Associated with pain abdomen is a condition that affects approximately 30% of women during their reproductive years.<sup>1</sup> It is a considerable health care burden for women and has a definite effect on quality of life.<sup>27</sup>

According to Hewitt GD, Brown RT, 18 acute and chronic pelvic pain in female adolescents are due to pelvic inflammatory disease in only 46%, and 37.8% of cases with adenexal torsion, and chronic pain. pelvic pain includes Endometriosis (15-38%), pelvic Inflammatory disease (16-25%), congenital anomalies (like imperforate hymen and transverse vaginal septum in 3-5%.

In the present study the patient statistics who attended with chronic pain abdomen including functional pain may be due to myofascial pain, or irritable bowel syndrome or psychogenic (eg, Depression, anxiety, somatisation).<sup>27</sup> Improvement in diagnostic procedures and change in life style and drawing attention towards stress and psychiatry management, definitely change the scenario.

## CONCLUSION

Abdominal pain in women of child bearing age, ranges from inconsequential to the life threatening, and also remains diagnostic dilemma. Judicious use of diagnostics tools, aids, and early surgical Intervention either minimally Invasive or exploratory, resulted in drastic reduction in morbidity, mortality, and also invites careful clinical approach by at least two disciplines. Most of the females of rural population need Health education by health talks regarding, good food habits, menstrual hygiene, eradication of false beliefs through mass media, Anganwadi centres, Accredited social health activist, (ASHA) and National rural health mission personnel. Rural population is mainly dependant on Registered practitioners and Private medical practitioners, some sort of training programmes and education should be conducted through primary health centres, Community health centres to the

above, so that correct guidance to the patients are provided and tertiary care facility shall not be overburdened. Tertiary care services shall be supported by Psychology clinics, and pain clinics. A healthy mother, is a Healthy nation which is essential for the society and needs early intervention by the Administration, Non-Governmental organisations, policy makers, last but not the least political desire to have healthy mother, a care for future society.

## REFERENCES

1. Stedman Medical dictionary 27 th edition
2. Evaluation of Acute Pelvic pain in women, American Family Physician Am Fam physician 2010 15;82:141-147.
3. Hawthorn IE. Abdominal pain in pregnancy as a cause of acute admission to hospital.JR coll surg Edinb 1992;37:389-93.
4. Setchell M. Abdominal pain in pregnancy. In: Studd J, editor. Progress in Obstetrics and Gynaecology Vol.6.London; Churchill Livingstone:1987 pp 87-99
5. Griffen WO, DiltsPV, Roddick JW.Chicago; Year book Medical Publishers; 1969. Current problems in Surgery; Non-obstetric surgery During Pregnancy.
6. Kammerer WA. Non-obstetric surgery during pregnancy. Med Clin N Am. 1979;63;1157-64.
7. Robertson C. Differential Diagnosis of lower abdominal pain in women of child bearing age Lippincotts Prim care Pract. 1998;2:210-229.
8. American college of Emergency physicians; Clinical policy for the Initial approach to patients presenting with chief complaint of non traumatic acute abdominal pain. Ann Emer Med. 1994;23:906-22.
9. Quan M. Diagnosis of acute pelvic pain. J Fam Pract 1992;35;422-432.
10. Marchant DJ. urinarytract infections in pregnancy. Clin Obstet Gynecol. 1978;21:922-9.
11. Julien B, Pulaert C. When in doubt, Sound it out. Radiology. 1994;191; 320-1.
12. Pullaet JBCM, Rutgers PH, Lalising RI. A prospective study of ultrasonography in the diagnosis of appendicitis. N Eng J Med. 1987;317:666-9.
13. Sportos NM, Eisenkop SM, Spirtos TW. Laproscopy: adiagnostic aid in cases of acute appendicitis Am j Obstet Gynaecol. 1987;156:90-4.
14. Taylor EW, Kennedy CA, DunhamRH, BlochJH. Diagnostic laproscopy as an adjunct to decision making in the acute abdominal pain. Surg lapar and endoscopy. 1996;5;125-8.
15. Paterson-brown S, Eckersley J, Sim AM, Dudley H. Laparoscopy as an adjunct to decision making in acute abdomen. Br J Surg 1986;73:1022-4.
16. Bogard F, Landers DV, Lewis F. Differetial diagnosis of Appedicitis and pelvic inflammatory disease. A prospective analysis. Am J Surg 1985;150:90-6.
17. Faro S, Macco M. Pelvic pain and Infections. Obstet Gynecol Clin North Am. 1990;17;441-455.
18. Hewitt GD, Brown RT. Acute and chronic pelvic pain in female adolescents. Med Clin North Am. 2000;84;1009-1025.
19. Acute Nonspecific Abdominal pain. Ann Surg 2006;244;881-888.
20. The acute abdomen: the role of laparoscopy. Baillière's Clinical Gastroenterology. 1991;5:691-703.
21. Laparoscopic diagnosis of acute lower abdominal pain in women of reproductive age. International Journal of Gynecology and Obstetrics. Volume 76, Issue 2:Pages 149-158
22. Kontoravdis A, Chryssikopoulos A, Hassiakos D, Liapis A, Zourlas PA. The diagnostic value of laparoscopy in 2365 patients with acute and chronic pelvic pain. Int J Gynaecol Obstet. 1996;52:243-8.
23. Centres for Disease control and prevention. Sexually Transmitted Diseases treatment Guidelines 2010. Morb mortal wklly Rep. 2010;59;1-110
24. Arnaud Fauconnier, Ali Mabrouk, Laurent J Salomon, Jean-Pierre Bernard and Yves Ville. Ultrasound assessment of haemoperitoneum in ectopic pregnancy: derivation of a prediction model. World Journal of Emergency Surgery 2007;2:23
25. Jennings C. Litzenberg. Missed abortion. 1921;1:475-484
26. Paul F. Brenner, Subir Roy, Daniel R. Mishell Jr. Ectopic Pregnancy A Study of 300 Consecutive Surgically Treated Cases JAMA. 1980;243:673-676.
27. Shailaja Chhetri. Laparoscopy as a Diagnostic Tool in the Evaluation of Chronic Pelvic Pain in Women. World Journal of Laparoscopic Surgery 2009;2:30-32

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