Original Article

Gynecological Encounters in Emergency Surgical Procedures

Surgical Emergency in Obst & Gynae

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ABSTRACT

Objective: To determine the incidence and management outcome in female patients who come to general surgeon with acute abdomen due to certain gynecological reason.

Study Design: Descriptive / randomized study

Place and Duration of Study: This study was conducted at the Emergency Department, K.M.C/Civil Hospital Khairpur (Mir's) from 1st August 2014 to 30 May 2016.

Materials and Methods: All those female cases were included in this study, who went through the process of exploratory laparotomywith accidental finding of underlying gynecological pathology. All described cases were documented in specific proforma, tabulated and statically classified and the final results were prepared.

Results: Over the period of two years, 314 female patients were received in A/E department of this hospital with acute abdomen and were managed. Among these 53 (17%) were those patients, where the cause of acute abdomen was certain gynecological pathology. The mean age was 37 years and most of them were married, 42 (79.24%) and multiparous, 35 (66%). Pain in Right lower quadrant was the commonest symptoms, pelvic inflammatory disease 13 (24.53%) was major cause, followed by ovarian torsion 10 (18.86%) and ruptured ovarian cyst 9 (17%). Clinical diagnosis and Ultrasonography were little helpful to reach at correct diagnosis in present series of cases. Here the reason of exploration was due to the clinical findings of appendicitis, it's complications or peritonitis.

Conclusion: Acute abdomen in females, requires full clinical, laboratory and radiological evaluation. If such situation arises where gynecological pathology is encountered after exploration, then the gynecological help and advice should be taken before doing any procedure.

Key Words: Acute abdomen in female, exploratory laparotomy, gynecological encounter/

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INTRODUCTION

As a general surgeon we often asked to evaluate acute abdominal pain, when reported in outdoor as well as in emergency room. The differential diagnosis of abdominal pain is broad, and includes disorders of the gastrointestinal, urogenital, gynecologic, vascular, and pulmonary system. During our daily practice sometimes the situation arises, when surgeon is confronted with an unexpected gynecological disorders while doing the exploratory laparotomy. These diseases mayor may not be related to pregnancy include torsion of normal ovary, ovarian cyst or mass, hemorrhage or rupture of an ovarian cyst, pyelonephritis pelvic inflammatory disease, acute salpingitis, tubo-ovarain abscess, ectopic pregnancy, pyosalpinx, torsion or degeneration of a uterine fibroid and endometriosis. In certain good hospitals where the departments are established, if such situation is faced then, help is sort out from concerned gynecological colleague. However in certain circumstances it becomes necessary for the surgeon to take over the role of gynecologist, to perform that required surgical procedure independently with satisfactory results. Up to 13% women, who present to general surgeon having symptoms of acute abdomen, have gynecological problems [1]. The commonest general surgical emergency dealt by surgeon all around the world is acute appendicitis [2]. and is also the most common cause of non-gynecological pelvic pain[3].Many gynecologic conditions can mimic acute appendicitis, making the diagnosis obscure and controversial between two working departments. Female pelvic pathology may also be confused with other intra-abdominal disease processes. In such situations, complete clinical and physical assessment should include abdomino-pelvic, rectal, vaginal and bimanual examination, in particular to careful inspection for vaginal discharge or bleeding. However, any disease process causing pelvic inflammation may result in cervical motion tenderness, but other diagnoses should not be excluded on the presence of this sign.[4] For example, diverticulitis may be mimicked by an ovarian cyst or tubo-ovarian abscess on either sides of lower abdomen, pelvic inflammatory disease may be misdiagnosed as generalized peritonitis secondary to a perforated viscera, acute appendicitis and cholecystitis may be confused with ovarian, or uterine pathology in

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the right upper quadrant during pregnancy. In such situations clinical examination becomes more reliable then the scoring method and investigations in diagnosing appendicitis. However even then sometime there is overlapping between acute appendicitis and a right side tubo-ovarian pathologies. Ninety five percent of ectopic pregnancies occur in the uterine tube, usually in the ampullary portion. This an emergency which can mimic the clinical scenario of other acute surgical disorders, like peritonitis secondary to gut perforation. The clinical signs and symptoms of ectopic pregnancy can be variable, if the patient present with hemodynamic instability, urgent laparotomy with simultaneous resuscitation is mandatory.

The purpose of this study is to discuss common obstetrical and gynecological abnormalities, which the general surgeon may encounter, while dealing the female patient with acute abdominal pain. In particular those cases where the diagnosis was unclear before exploration, but recognized per-operatively, have been discussed with their clinical presentation, ultrasound findings and surgical management.

MATERIALS AND METHODS

This randomized prospective study was conducted in 80 bedded, two surgical units of Khairpur Medical College/ Civil Hospital Khairpur Mir's, over the time of 02 years, from 1st August 2014 to 30 May 2016. This is our public sector, newly established Medical College and hospital, which provides health facilities to all sick peoples, without any territorial difference. Those patients who seek medical advice due to any reason, as well as referred from different primary and secondary health care units, come here and get admission to this hospital. In our present study all those pregnant and non-pregnant females patients are included, who presented with severe abdominal pain, in emergency department of KMC/Civil hospital khairpur. Over all we sort out 314 women over the period of two years, who were admitted in surgical wards for further workup, and full investigations. These reports include, basic blood tests, ultra sound of the abdomen and pelvis,x-rays of abdomen and chest in non-pregnant women, pregnancy test and human gonadotrophic hormone in urine, to rule out early pregnancy. All those haemodynamically unstable patients were resuscitated, prior to any surgical procedure. Among these 314 women, 53 were those, where the reason of abdominal pain was due to underlying gynecological pathology. These all cases were diagnosed per-operatively, earlier to that, diagnosis was not conclusive, even after all possible clinical and laboratory workup was fulfilled. The management of that group of cases, was not only exclusively handled, but also advice and help was seek from available senior gynecological colleague. Latter on those patients were excluded from this study, who were owned by gynecological department from emergency or after investigations. The data of each case was entered in specifically designed proforma, then tabulated, analyzed and final results were prepared with the help of SPSS.

RESULTS

Out of a total 314 patients in this study, 53 patients (17%) were found to have some gynecological cause of acute abdomen. Age ranges from 15-65 years, and mean age was 37 years, most of the patients were in the childbearing age, 42 patients were married and 11 patients were unmarried. Majority of the patients, 35 (66%) were multipara, 12 (22.64%) were primipara and 06(11.32%) were those, who did not have any past history of pregnancy (Table 1). In this study we also sort out the different gynecological diseases, which we faced while performing the emergency laparotomy. Majority among them was the category of those patients who have pelvic inflammatory disease, 13 (24.53%), after this adnexal torsion (ovarian torsion) 10 (18.86%), and ruptured ovarian cyst, 7 (13.20%) was third frequent cause (Table 2). Clinical features of various gynecological pathologies were mimic by acute abdominal pain in it's different regions, very similar to other surgical causes. Pelvic inflammatory disease (P.I.D) presented with pain in right lower abdominal quadrants, and also associated with nausea, vomiting and fever. Torsion of ovarian cyst also presented with severe right and left lower quadrant pain, and most of them also had nausea and vomiting. In certain number of cases, where the acute abdomen turned out to be secondary to ruptured ovarian cyst, presented clinically with pain all over the abdomen but more marked in both lower quadrants. In 07 cases of uterine perforation and 06 cases of ectopic pregnancy, clinical features were similar to gut perforation, like generalized abdominal pain, guarding and rigidity, which was more marked in lower abdomen and associated with fever, vomiting, raised w.b.c count, with unstable vitals and the state of shock (Table 3).

Table No.1: Age, marital status, and parity. Status of the patients (n=53).314

Characteristics		Number (%)*
Age Category	15-24 years	13 (24.52%)
	25-34 years	15 (28.30%)
	35-44 years	9 (16.98%)
	> 45 years	16(30.19%)
Marital Status	Married	42(79.24%)
	Unmarried	11(20.75%)
Parity	Multipara	35(66%)
	Primipara	12 (22.64%)
	Nullipara	6 (11.32%)

In all the cases ultrasonographic study was also added &performed soon after admission in the emergency department by a trained radiologist.13(24.53%) cases of P.I.D were misinterpreted clinically either with

appendicitis or perforated gut. That latter diagnosis was also supported by emergency ultrasound modality, except in 03 cases where it reported normal. In 10(18.86%) cases of adnexal torsion (ovarian torsion) findings of ultrasound, co-related with the clinical diagnosis of appendicitis, and in some cases described it's complications. In 09(17%) cases of ruptured ovarian cysts and 07(13.20%) cases of uterine perforations, ultrasound reported free fluid in peritoneal cavity, where clinical diagnosis of peritonitis due to gut perforation was boldly established, followed by exploratory laparotomy. Ruptured ectopic pregnancy was found in those 06 (11.32%) cases where the early ultrasound showed, moderate collection in peritoneal cavity and pelvis, describing these cases of gut perforation with peritonitis. 03 (5.66%) cases of complicated fibroid and 02(3.77%) cases of endometriosis were also misdiagnosed clinically, and here similarly ultrasound could not recognize actual underlying pathology.(Table 4).

Table No.2: Gynecological acute abdomen causes.

Pathology	n= 53 (%)
Pelvic Inflammatory Disease	13 (24.53%)
Adnexal torsion	10 (18.86%)
Ruptured Ovarian cyst	9 (17%)
Uterine perforation	7 (13.20%)
Ectopic pregnancy	6 (11.32%)
Tubo-ovarian abscess	3 (5.66%)
Complicated fibroids	3 (5.66%)
Endometriosis	2 (3.77%)

Table No.3: Symptoms and Signs at the time of Examination.

	R.L.Q pain	L.L.Q pain	B.L.Q pain	H.G pain	Gen:Abd: pain	Fever	Nausea/ vomiting
Pelvic Inflammatory Disease	+	+	+	+	+/-	+/-	+
Adnexal torsion (ovarian cyst)	+/-	+/-	-	-	-	-	+
Ruptured ovarian cyst	+	+	+	+	+/-	+/-	+
Uterine perforation	+	+	+	+	+/-	+	+
Ectopic pregnancy*	+/-	+/-	+/-	+	+	-	-
Tubo- ovarian abscess	+	-	-	+	-	+	+
Complicated fibroids	+/-	+/-	+	+	+	+/-	-
Endometriosis	+/-	+/-	+/-	+/-	+/-	-	-

Table No. 4: Ultra sound findings, clinical diagnosis, per operative diagnosis and procedure.

No. of Patient	Clinical Diagnosis	Ultrasound Findings / Diagnosis	Per Operative Diagnosis	Operative Procedure
13(10) (3)	Appendicitis Peritonitis (perforated appendix, gut perforation)	Probe Tenderness +ve dilated loops with collection in R.I.F & Pelvis Normal report	Pelvic Inflammatory Disease (PID)	Appendectomy Exploratory laparotomy Abdominal cavity toilet and placement of nelaton drain
10	Appendicitis / Appendicular abscess/ Mass	Appendicitis / Appendicular abscess/ Mass	Adnexal torsion	Ovariotomy / salpingoOvariatomy / salpingooopherectomy
9	Peritonitis (gut perforation)	Free fluid in peritoneal cavity/ pelvis	Ruptured Ovarian cyst	Partial Excision of cyst
7	Peritonitis (gut perforation)	Dilated loops of gut with pelvic collection	Uterine perforation	Repair of perforation/ hysterectomy
6	Peritonitis (gut perforation)	Moderate collection in peritoneal cavity/ pelvis	Ruptured Ectopic pregnancy	Salpingectomy salpingo / Oophorectomy
3	Appendicular/ pelvic abscess	Appendicular/ pelvic abscess/ psoas abscess	Tubo-ovarian abscess	Lower midline laparotomy Ovariotomy Salpingectomy peritoneal toilet Placement of nelaton drain
3	Peritonitis/ sub-acute intestinal obstruction	Degenerative changes in fibroid uterus/pelvic mass/collection	Complicated fibroids uterus	Myomectomy/ hysterectomy
2	S.A.I.O/ Mesenteric cyst	Dilated loops with Cystic lesion in bowel/ mesentery	Endometriotic cyst Endometriosis	Exploratory laparotomy Excision/ biopsy

DISCUSSION

Acute abdomen is broad term comprising group of surgical, medical and gynecological life threating conditions, requiring immediate hospitalization with close monitoring, andoften need surgery. There is a long a list of possible causes of acute abdomen varying from vascular pathology to psychogenic pain, their clinical features are also variable from patient to patient, with identical or totally different disease

entities. It requires careful history taking, thorough clinical examination and appropriate use of laboratory and radiological investigations to reach at correct diagnosis. It is also fact that, sometimes it becomes difficult to diagnose the underline disease in significant number of patients despite all possible measure. The general surgeon continue to face the various gynecological encounters, presenting with acute abdomen[5-6]. Lower abdominal pain remains challenging and conflict zone between general surgeon and gynecologist. In that respect, there are certain serious conditions in women which must be evaluated and managed properly, when they present in emergency. The commonly faced acute gynecological conditions are pelvic inflammatory disease, ectopic pregnancy, ruptured or twisted ovarian cyst with or without peritonitis, benign and malignant ovarian tumors and endometriosis. These gynecological diseases come in the differential diagnosis of different acute surgical emergencies, like acute appendicitis, perforated appendix, peritonitis, acute intestinal obstruction and haemo-peritoneum etc.[7.8.9] The correct management of these gynecological condition demands thorough knowledge of female pelvic anatomy and complete knowledge of disease process and their surgical treatment.[10.11.12] In our present study, we found significant number of patients, which were accidently encountered with gynecological pathologies while performing routine general surgical procedures. The incidence of these particular encounters remained 17%, which compares almost equally with another study in Pakistan, where it is reported 17.59%. [13] In another overseas center gynecological emergencies mistaken for other surgical emergencies were counted in 12% cases,[14] this is not a significant difference with our rate of mistakes in diagnosis. Another interesting observation was found in this series that emergency surgeon initially diagnosed gynecological cause only in, 07 patients (11.86%), out of 53 cases, in remaining cases diagnosis was made for rational general surgical conditions. Many of the signs and symptoms of acute appendicitis overlapped with those of the gynecologic disorders in this series of patients. In fact, acute appendicitis has been shown to occur simultaneously with a variety of gynecologic diseases, including endometriosis, ovarian cysts, uterine fibroids, and hydrosalpinx.[15] On physical examination majority of patients have abdominal tenderness localized to the right lower quadrant in over 90% of cases, the others have signs of peritoneal irritation. These features were also described by other peoples working abroad at certain well reputed centers.[16] P.I.D is found a common entity in our series which presented like appendicitis or peritonitis. Similarly pelvic inflammatory disease was the most common gynecological emergency in district hospital kasur, Pakistan.[17] It is thought to be ascending infection from lower genital tract and is a common complication sexual transmitted disease in women.[18] this is followed by adnexal torsion and ruptured ovarian cyst, which is slightly un matching with the results of other local and foreign studies where ruptured ovarian cyst, supersedes P.I.D.[13-14] Uterine perforation was present in 13% of our series, whereas septic abortion with uterine perforation accounted in 7% of the gynecological emergencies in a study in Nigeria.[19] Ectopic pregnancy can present with abdominal pain and hemodynamic instability and may be encountered by the general surgeon, and is typically discovered between 06th to 10th weeks of gestation. Ectopic pregnancy is currently the leading cause of death during the first and second trimesters of pregnancy, accounting for 10-15% of all deaths during this time.[20] we found ruptured ectopic pregnancy in 06 cases which were all implanted in fallopian tube, and there was moderate collection of blood and clots in peritoneal cavity. Pelvic endometriosis has been reported in 5-15 of all pelvic operations.[21]we also found 02 cases, where they were present in mesentery and on surface of small gut. We also faced some other rare pathologies which also were masked and misguided by both, clinical findings and ultrasound reports. Though these mentioned cases in this study are routinely dealt by gynecological team, but here they were handled and dealt by general surgeon, either because of unclear diagnosis or when the concerned department was reluctant to own these patients.

CONCLUSION

Whenever the acute abdominal emergency is faced in a female, then the underlying gynecological cause should always be kept in mind. Detail history, thorough clinical examination, utilization of possible diagnostic modalities and expert opinion from gynecological colleague, play important role to differentiate between gynecological and surgical causes of acute abdomen.

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Brown SB, Eckersley IRT, Dudley HA. The gynecological profile of acute general surgery JR. Coll Surg 1988;33:13-15.
2. Karam AR, Birjawi GA, Sidani CA, et al. Alternative diagnoses of acute appendicitis on helical CT with intravenous and rectal contrast. Clin Imaging 2007;31(2):77–86.
3. Vandermeer FQ, Wong-You-Cheong JJ. Imaging of acute pelvic pain. Clin Obstet Gynecol 2009; 52(1):2–20.
4. Silen W. Cope's Early Diagnosis of the Acute Abdomen. 21st ed. Oxford University Press; Oxford: 2005.

5. Shahid G, Dar HM, Javaid H. A study of gynecological emergencies presenting as acute appendicitis. Proceeding Shaikh Zayed Postgrad Med Inst 2005:19(1);13-17.
6. Parsad H, Rodrigues G, Shenoy R, Role of Ultrasonography in non-traumatic acute abdomen. Int J Radiol 2007; 5:2.
7. livingstone JRB. Gynecological encounters in general surgery Farquar-son's textbook of operative surgery-8th Edition chapter 29.
8. Principles of gynecology – Sir Norman Jeffcott.
9. The Gynecological aspects of emergency surgery: the female Genital organs –J.D.O Loudon Hamilton Bailey- emergency surgery- 11th Edition.
10. FJ. Montz, Jonathan S.Berek: Gynecological pelvic procedures - Mainrgot's Abdominal opeations – Volume II, 10th Edition.
11. Cameron MD.1976 : Gynecological problems and the general.
12. Surgeon – in Hadfield J. Hobsley M, editor. Current surgical practice. 1st ed. Arnold: London; Chapter 15th.
13. Ateeq M. Gynecological Acute Abdomen. Journal of Rawalpindi Medical College (JRMC) 2012;16(1):48-50.
14. Madhuri K, Devi et al. The Study of Gynecological Emergencies in Surgery. JMSCR 2016;4(12): 14857.
15. Song JY, Yordan E, Rotman C. Incidental appendectomy during endoscopic surgery. JSLS 2009;13(3):376–383.
16. Lewis FR, Holcroft JW, Boey J, et al. Appendicitis. A critical review of diagnosis and treatment in 1,000 cases. Arch Surg 1975;110(5):677–684.
17. All S. Shah STA, Gynecological Emergencies, Professional Med J 2007;14(1):43-9.
18. Sweet RL. Treatment strategies for pelvic inflammatory disease. Expert Opin Pharmacother 2009;10(5):823–837.
19. Ibrahim NA, Oludara FO, surgical and Gynecological abdominal emergencies in adult, the Experience of Lagos State University Teaching Hospital, Ikeja, Lagos State, Nigeria, Nigerian Hospital Practice 2010;5(3-4):31-5.
20. Murray H, Baakdah H, Bardell T, et al. Diagnosis and treatment of ectopic pregnancy. CMAJ 2005; 173(8):905–912.
21. Kisner RW: Gynecology. Principle and practice. Second edition Chicago, year book medical Publisher Inc; 1971.p.440–441.