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Presentation and Management of Patients With Obstetrical and Gynecological Complications in the Department of Surgery

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ABSTRACT

Objective — *To find out the type of obstetrical and gynecological complications and their subsequent treatment in the department of general surgery.*

Study design — *Descriptive case series.*

Place & Duration of study — *Department of Surgery, Hayatabad Medical Complex (HMC) Peshawar, from July 2017 to June 2020.*

Methodology — *Patients who presented either in emergency room within 24-48 hours following surgery or those referred to outpatient department after 48 hours of the procedure were included. Emergency cases included postoperative complications during obstetrical and gynecological procedures performed in the department of Obstetrics and Gynecology at HMC and those referred from peripheral hospitals. These emergencies were managed immediately while other patients underwent surgery on elective operation list. Patients were followed up in the OPD. Data were analyzed through SPSS version 16.*

Results — *A total of 56 patients with the mean age of 28±3.5 year were managed. Thirty-five (62.5%) patients were referred from hospitals in periphery and 21 (37.5%) from HMC. Twenty-four (42.8%) patients presented to accident and emergency department while 32 (57.2%) were referred to outdoor department. The initial surgeries, during which complications occurred, included total abdominal hysterectomy (n=34 - 64.3%), pelvic mass excision (n=8 - 14.3%), cesarean section (n=8 - 10.7%), vaginal hysterectomy (n=3 - 5.4%), myomectomy (n=2 - 3.6%) and dilatation and curettage (n=1 - 1.8%). The most common complication was wound infection (n=13 - 23.2%) followed by hemorrhage (n=9 - 16.1%). Patients underwent debridement and dressing (n=13 - 23.2%), hemostasis (n=9 - 16.1%) and mesh repair (n=8 - 14.3%) for incisional hernia. There was no mortality in emergency as well as cold cases.*

Conclusion — *Total abdominal hysterectomy, cesarean section and vaginal hysterectomy were the commonly performed procedures that resulted in number of complications for which treatment in general surgery department was needed.*

Key words — *Rectovaginal fistula, Total abdominal hysterectomy, Uterine myomectomy, Vesicovaginal fistula.*

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INTRODUCTION:

In the modern age, the life expectancy of women has been increased due to the availability of better health facilities and timely recognition of health problems. However, there is a parallel increase in the obstetrical and gynecological surgeries.[1] According to a survey, 234 million surgeries are performed worldwide.[2] The commonly performed

obstetrical and gynecological procedures are total abdominal hysterectomy (TAH), vaginal hysterectomy (VH), myomectomy for fibroids and dysfunctional uterine bleeding. Approximately 20% women undergo hysterectomy by the age of 60 years and 40% of these surgeries are performed in patients having no gynecological diseases.[3] A surgical procedure is undertaken to improve the quality of life but sometimes complications may occur. Different factors which, affect the outcome of the procedure are surgeons experience, nature and technique of surgical procedure, operative environment and availability of facilities.[4]

In the modern era the risk at surgery decreased because of better understanding of disease processes, new investigations for diagnosis, technological advances and availability of broad spectrum antibiotics, safe blood transfusion, safe anesthesia and ICU facilities.[4] Even then, every surgical procedure is potentially associated with risks. In gynecological and obstetrical pathologies there is an increased risk of injuries to bowel, urinary bladder, ureters and blood vessels due to their close proximity. Identification of such injuries and their timely repair is important. Complications are more common in less equipped hospitals and in the hands of less experienced surgeons.[4,5] The aim of this study was to document various presentations of patients and subsequent management of different postoperative complications following obstetrical and gynecological procedures.

METHODOLOGY:

This descriptive study was conducted at the Department of Surgery, Hayatabad Medical Complex Peshawar, from July 2017 to June 2020 after taking permission from the hospital ethical committee. Patients who presented with obstetrical and gynecological complications were included. Patients who were not willing for ileostomy or colostomy in cases of bowel injury, rectovaginal and vesicovaginal fistulae, were excluded.

The patients were divided in two groups. Group I comprising of patients who presented to outdoor department, referred either by the Department of Gynaecology HMC or from Tehsil Head Quarter (THQ) and Distric: Headquarter (DHQ) hospitals after 48 hours of initial surgery. Group II comprised of emergency cases that were referred either within 24 hours - 48 hours or those sustaining intraoperative iatrogenic injuries for which emergency calls were sent to surgical unit. In these patients complications were dealt within the same setting.

Emergency cases referred from periphery were optimized in the department of accident and emergency and then operated. Patients who presented to the outpatient department were admitted and detailed history was taken. Baseline investigations were requested. Abdominal ultrasound was done in all cases. In cases of fistulae, Magnetic resonance imaging (MRI) was performed. Intravenous urogram (IVU) was performed in patients with urinary tract injuries.

Operative procedures were explained to the patients and written informed consent taken. Preoperative antibiotics were given at the time of induction of anesthesia. Surgeries were performed under general anesthesia. Postoperatively, patients were monitored in ward and high dependency unit (HDU) as per requirement. Intraoperative and postoperative findings were noted on a pre designed form. Majority of the patients were sent home between 4-7 days after surgery. Patients were followed up in the outpatient department for six months. Data were analyzed through SPSS version 16 and descriptive statistics were used to analyze the data.

RESULTS:

In this study a total of 56 patients with complications following different obstetrical and gynecological procedures were included. The age of the patients was from 18 years to 45 years with the mean age of 28±3.5 year. Twenty-one (37.5%) patients were received from the Department of Obstetrics and Gynecology HMC while 35 (62.5%) were referred from different hospitals in the periphery. Patients were divided into two groups; Group I comprised of 32 (57.2%) patients, presented to outdoor department (OPD), referred either by the Department of Obstetrics & Gynaecology HMC (n=8) or from THQ and DHQ hospitals in peripheral areas (n=24) after 48 hours or more of initial surgery. Group II comprised of 24 (42.8) emergency cases referred either from within hospital in 24-48 hours or those sustaining intraoperative iatrogenic injuries for which emergency calls were sent to the surgical unit on duty, by the Department of Obstetrics and Gynecology (n=13). The obstetrical and gynecological surgeries which caused these complications and their division into groups is given in table I. The procedures performed were cesarean section (C/S), dilatation and curettage (D/C), total abdominal hysterectomy (TAH), vaginal hysterectomy (VH), myomectomy and excision of pelvic mass.

Table I: Postoperative Complications (n=56)

Complication	Presentation	Group I elective cases n=32		Group II emergency cases n=24		Initial surgery with number of patients (n)	Total number of patients (n)
		HMC n=8	Periphery n=24	HMC n=13	Periphery n=11		
Hemorrhage	Early	0	0	5	4	TAH=5 Myomectomy=2 Pelvic mass= 2	9 (16.1%)
Bowel injury		0	0	3	4	TAH=4 V H = 2 D/C=1	7 (12.5%)
Bladder injury	Early	0	0	2	3	TAH=3 V H = 1 C/S=1	5 (8.8%)
Ureteric injury/ligation	Early=3 Late =4	0	4	3	0	TAH=7	7 (12.5%)
Wound infection	Late	4	9	0	0	TAH=6 C/S=7	13 (23.2%)
Incisional hernia	Late	2	6	0	0	TAH=3 Pelvic mass=5	8 (14.2%)
VVF	Late	1	2	0	0	TAH=3	3 (5.4%)
RVF	Late	0	2	0	0	TAH=2	2 (3.6%)
Foreign body	Late	1	1	0	0	TAH=1 Pelvic mass=1	2 (3.6%)
Total		08 (14.3%)	24 (42.8%)	13 (23.2%)	11 (19.7%)	56 (100%)	56 (100%)

Different operative procedures performed to deal with these complications are listed in table II. Four (7.1%) patients had injury to the sigmoid colon and rectum. In sigmoid colon injury, resection and anastomosis with a covering stoma was performed while rectal injuries were repaired with a defunctioning colostomy. Three (5.4%) patients having small bowel injury underwent end to end anastomosis (EEA - n=2) and ileostomy (n=1). Five (8.9%) patients had urinary bladder injury which was repaired and a urethral catheter kept for 7-10 days. There were 5 (8.9%) patients of ureteric injury and in 2 (3.6%) ureters were ligated during primary surgery. Repair and anastomosis was performed over a DJ stent in all cases.

DISCUSSION:

Recognizing a high risk procedure, timely recognition of a complication and its appropriate management is important to minimize the immediate and long term complications.[1] The most common complication encountered was hemorrhage (16.1%). It included both peroperative bleeding and those referred from periphery after packing the pelvic cavity. This is comparable to 11.9% reported by Chan et al, but low than 25.44% by Das et al.[4,7] Vaginal hysterectomy is associated with more intraoperative bleeding (89%) as compared to abdominal hysterectomy.[8]

Recently performed studies have shown that the rate of bladder injury is increasing with an overall rate of 1-2%.[9] In our series bladder injury was reported in 8.9%. In literature the reported complications varied from 0.77% to 46.45%.[10,11] A study recommended routine use of cystoscopy following hysterectomy to identify any missed bladder injury.[12] Early diagnosis of postoperative ureteric injury usually occurs 7-10 days following surgery.[13] We had 12.5 % patients with ureteric injury which is higher than reported figures.[8,14] Patients having potential risk for ureteric injuries should undergo

Table II: Surgical Procedures Performed (n=56)

Complications	Procedures	No. of patients (n %)
Wound infection	Desloughing and debridement	13 (23.2%)
Hemorrhage	Ligation - 6 Packing - 3	9 (16.1%)
Incisional hernia	Mesh repair	8 (14.3%)
Ureteric injury Injury-5 Ligation-2	Ureteric repair/ anastomosis over DJ stent	7 (12.5%)
Bladder injury	Bladder repair	5 (8.9%)
Large bowel injury Sigmoid colon-1 Rectum- 3	Repair/ anastomosis with defunction stoma	4 (7.2%)
Small bowel injury	EEA-2 Ileostomy-1	3 (5.4%)
VVF	Laparotomy-repair of bladder and anterior vaginal wall	3 (5.4%)
RVF	Laparotomy repair of rectum and posterior vaginal wall	2 (3.5%)
Foreign body	Laparotomy and removal of pack	2 (3.5%)
Total		56 (100%)

pre-hysterectomy catheterization. Such high risk individuals have dense adhesions due to pelvic endometriosis, chronic pelvic inflammatory disease and with uterine leiomyoma. This results in distorted anatomy in the cervical and broad ligament region of pelvis.[7] Seven (12.5%) patients presented with bowel injury. This figure is higher than that reported in literature.[14,15]

In Pakistan, 80-90% vesicovaginal fistulae develop as a complication of obstetrical surgeries.[4] Patients having VVF will have normal cystoscopy at the time of surgery because VVF may develop secondary to tissue ischemia and necrosis.[9] In our study, the frequency of rectovaginal fistula (RVF) was 3.5% which is comparable to 4.73% by Das et al.[4] Foreign body in the form of abdominal packs, was recorded in 2 (3.5%) cases as reported in other study.[15] In the current series there was no mortality which is reported in other srtudy.[16] In the current study we noted difference in the complication rate between a tertiary care hospital HMC and hospitals in the remote areas (37.5% Vs 62.5%). The reasons for this difference in complication rate include improper sterilization, unavailability of experienced and skilled surgeons and anesthetists. This study is from a one tertiary care hospital. A multicentre study is warranted to highlight actual burden of these complications so that appropriate measures are adopted to address them.

CONCLUSION:

Total abdominal hysterectomy followed by cesarean section and vaginal hysterectomy were the common operative procedures that were associated with high rate of operative complications.

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