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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 types of obstetrical and gynecological complications and their subsequent treatment in the department of general surgery.

Methodology: This cross sectional study was conducted on 56 patients who presented to department of surgery, Hayatabad Medical Complex, Peshawar from July 2016 to June 2019. Patients presented either as emergency cases with 24-48 hours following surgery or those who were referred to OPD 48 hours after the procedure. Emergency cases included postoperative complications during obstetrical and gynaecological procedures performed in the department of Obstetrics and Gynaecology of the same hospital, and those referred from peripheral hospitals. These emergencies were managed immediately while cold cases were operated on elective operation list. Patients were followed up in the OPD. Data was analyzed with SPSS version 20.

Results: Out of 56, 24 (42.8%) cases presented to accident and emergency department while 32 (57.2%) were referred to outdoor department (OPD). The initial surgeries, during which complications occurred, included total abdominal hysterectomy (n=34, 64.3%) followed by, pelvic mass excision (n=8, 14.3%) and cesarean section (n=8, 10.7%). The most common complication was wound infection (n=13, 23.2%) followed by haemorrhage (n=9, 16.1%) and incisional hernia (n=8, 14%). Debridement and dressing (n=13, 23.2%), haemostasis (n=9, 16.1%) and mesh repair (n=8, 14.3%) for incision hernia were the common operative procedures. There was no mortality in emergency as well as cold cases.

Conclusion: Total abdominal hysterectomy, cesarean section and vaginal hysterectomy, being commonly performed procedures, are associated with high percentage of post operative complications.

Key Words: Gynecologic surgical procedures; Obstetrics; Complications; General surgery.

INTRODUCTION

In modern age, the life expectancy of women has increased due to the availability of better health facilities and timely recognition of health problems.¹ But there is a parallel increase in the obstetrical and gynecological surgeries. 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 disease.³

A surgical procedure is undertaken to improve the quality of life but sometimes it may be associated with

associated complications. 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, surgery is more safe due to availability of broad spectrum antibiotics, safe blood transfusion, safe anesthesia and ICU facilities.⁴ Even then, every surgical procedure is potentially associated with some anticipated risks like bleeding, infection and problems related to anaesthesia.¹ Apart from these, there is also 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 but it prolongs anesthesia time and patient's recovery.¹ Complications are more common in less equipped hospitals and less experienced surgeons to deal the emergency in time.^{4,5} The aim of the study

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was to evaluate presentations and subsequent management of different postoperative complications following obstetrical and gynecological procedures.

METHODOLOGY

This cross sectional study was conducted on 56 patients at the department of surgery, Hayatabad Medical Complex Peshawar, from July 2016 to June 2019 after taking permission from the hospital ethics committee. Sampling technique was convenience method. Inclusion criteria were patients with complications of obstetrical and gynecological procedures who presented to general surgery department for management. Exclusion criteria were patients unwilling for ileostomy or colostomy in cases of bowel injury and patients with rectovaginal and vesicovaginal fistulae.

Most of the patients had history of cesarean section (C/S), dilatation and curettage (D & C), total abdominal hysterectomy (TAH), vaginal hysterectomy (VH), myomectomy and excision of pelvic mass. These 56 patients were divided in two groups. Group 1 (late complications) comprising of 32 (57.2%) patients, who presented to OPD, referred either from the department of gynaecology of HMC or from tehsil head quarters (THQ) and district headquarters (DHQ) hospitals in peripheral areas, after 48 hours or more after the initial surgery. Group 2 (early) comprised of 24 (42.8%) emergency cases referred either within 24-48 hours or those sustaining intra operative iatrogenic injuries for which emergency calls were sent to surgical unit on call by the department of obstetrics and gynaecology and complications were dealt with in the same setting. Emergency cases referred from periphery were optimized in the department of accident and emergency. They were operated by an experienced surgeon. Patients presented to OPD were admitted. Detailed history especially about the previous surgery was taken. Relevant

investigations were done. In cases of fistulae, magnetic resonance imaging (MRI) was performed. Similarly Intravenous Urogram (IVU) was performed in patients having urinary tract injuries. Diabetic and hypertensive patients were sent to concerned specialties for opinion and their fitness for general anesthesia. Operative procedures were explained to the patients and written consent was taken especially in cases of vesicovaginal fistula (VVF), rectovaginal fistula (RVF) and bowel surgery. Pre operative antibiotics were given at the time of induction of anesthesia. Surgery was performed under general anesthesia. Post operatively, patients were monitored in ward and high dependency unit (HDU), as required, and their vitals were monitored. Intra operative and post operative findings were noted on a preformed performa.

Majority of the patients were sent home between 4 and 7 days after surgery. Patients were followed up in the OPD for six months. Follow up visits were scheduled at 10 days, one month, three months and six months after surgery. At 1st visit, skin stitches were removed and wounds were examined for infection. Patients operated for fistula were inquired, examined and investigated for recurrence during follow up. Data was analyzed with SPSS version 16. Descriptive statistics were calculated.

RESULTS

The age of the patients ranged 18-45 years with mean age of 28 year (SD \pm 3.5 years). The obstetrical and gynecological surgeries which caused these complications are shown in table 1.

The different operative procedures performed to deal these complications are listed in table 2. Four (7.1%) patients had injury to the sigmoid colon and rectum. In sigmoid colon, resection and anastomosis with a covering stoma was performed while rectal injuries were repaired with a defunc-

tion colostomy. Three (5.4%) patients having small bowel injury underwent end to end anastomosis (2 cases) and an ileostomy (one case). Five (8.9%) patients had urinary bladder injury which was repaired and a urethral catheter was kept for 7-10 days. There were 5 (8.9%) cases of ureteric injury and in 2 (3.6%) cases the ureters were ligated. Repair/ anastomosis was performed over a double J stent in all cases. Wound infection (23.2%) was the most common complication for which debridement and dressing was done multiple times till a clean wound was achieved with granulation tissue.

Eight (14.3%) patients had developed incisional hernia following total abdominal hysterectomy and exploration for pelvic mass. Hernias were repaired using prolene mesh according to the size of the defect. Vesicovaginal fistula developed in 3 (5.4%) cases and rectovaginal fistula in 2 (3.5%) cases. These patients were laprotomised for the repair of fistulae. Two (3.5%) females underwent laparotomy for foreign body (abdominal pack) which were left in pelvic cavity during initial surgery.

In table 4 the value of R² shows that 40% of the total variability in psychological distress is explained by body image. Body image plays a significant role in predicting the psychological distress.

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 In this series, we managed per operative and immediate complications (presenting within 24-48 hours). Per operative complications occurred during surgery and our surgical team was called by the department of gynaecology. The most common complication encountered was haemorrhage (16.1%). It included both per operative bleeding and

Table 1: Post-operative complications (n=56)

Complication	Presentation	Referred from		Initial surgery with no of patients	Total no. of patients
		Gynae department HMC	Periphery		
Haemorrhage	Early	5 (8.8%)	4 (7.1%)	TAH=5 Myomectomy=2 Pelvic mass= 2	9 (16.1%)
Bowel injury	Early	3 (5.4%)	4 (7.1%)	TAH=4 V H=2 D/C=1	7 (12.5%)
Bladder injury	Early	2 (3.6%)	3 (5.4%)	TAH=3 V H=1 C/S=1	5 (8.8%)
Ureteric injury/ ligation	Early=3 Late =4	3 (5.4%)	4 (7.2%)	TAH=7	7 (12.5%)
Wound infection	Late	4 (7.2%)	9 (16.1%)	TAH=6 C/S=7	13(23.2%)
Incisional hernia	Late	2 (3.6%)	6 (10.7%)	TAH=3 Pelvic mass=5	8 (14.2%)
VVF	Late	1 (1.8%)	2 (3.6%)	TAH=3	3 (5.4%)
RVF	Late	0 (00%)	2 (3.6%)	TAH=2	2 (3.6%)
Foreign body	Late	1 (1.8%)	1 (1.8%)	TAH=1 Pelvic mass=1	2 (3.6%)
Total		21 (37.5%)	35(62.5%)	56 (100%)	56 (100%)

Table 2: Surgical procedures performed (n=56)

Complications	Procedures	No. of patients
Wound infection	Debridement and dressing	13 (23.2%)
Haemorrhage	Ligation-6 Packing-3	9 (16.1%)
Incisional hernia	Mesh repair	8 (14.3%)
Ureteric injury-5 Ligation-2	Ureteric repair/ anastomosis over DJ stent	7 (12.5%)
Bladder injury	Bladder repair in two layers	5 (8.9%)
Large bowel injury Sigmoid colon-1 Rectum- 3	Repair/ anastomosis with de functioning stoma	4 (7.2%)
Small bowel injury	End-to-end anastomosis -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%)

those referred from periphery after packing the pelvic cavity. This is comparable to 11.9 % reported by Chan YGS et al. but lower than 25.44% reported by Das CM et al.^{4,6,7} Vaginal hysterectomy was associated with more intra operative 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 8.9%. In literature, the reported complications rate is as low as 0.77% and as high as 46.45% respectively.^{1,10,11} A study

recom-mended routine use of cystoscopy following hysterec-tomy to identify any missed bladder injury. Cystoscopy detects urethral injury in 100 % and bladder injury in 94 % cases.¹²

Early diagnosis of post operative ureteric injury usually occurs 7-10 days following surgery.¹³ We encountered 12.5% ureteric injury. This figure is higher than 1.04% and 0.15% reported in various studies.^{8,14} Patients having potential risk for ureteric injuries should undergo pre hysterectomy cath-

eterization. Such high risk individuals have sever adhesions due to pelvic endo-metrio-sis and chronic pelvic inflammatory disease and those with uterine leiomyoma which distort anatomy in the cervical and broad ligament region of pelvis.⁷ Seven (12.5%) patients presented with bowl injury. This figure is higher than 0.8%, 0.62% and 1.04% mentioned in the literature.^{1,14,15} Erekson et al. has reported an overall complication rate of 9% and overall mortality of 0.06 %¹⁶. We had 23.2 % wound infection. The reported values in different studies are 2%, 4.11%,

6.8%, 8.3%, 12% and 47%.^{7,89,15,17,18}

Eight (14.3%) cases were received with incisional hernia. This figure is much higher than 1.1% as reported by Chan YGS et al.⁷ Three (5.4%) patients had developed WF. This is comparable to 2% and 15.38% reported by Das CM et al. and Geetha K et al. respectively.^{4,8} In Pa-kistan, 80-90%, WF develop as a complication of obstetrical surgeries.⁴ Patients having WF will have normal cystoscopy at the time of surgery because WF 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 CM et al.⁴ Foreign body in the form of abdominal packs, was recorded in 2 (3.5%) cases. This is almost similar to 4.2 % reported by Bashir R et al.¹⁵ In the current Study, there was no mortality. Amin A et al. has also reported zero mortality in his study of 123 cases. In other studies, mortality rates of 1.5 % and 20 % have been reported.^{4,15,19}

In the current study, we noted a significant difference in the complication rate between a tertiary care hospital and hospitals in the remote areas (37.5% Vs 62.5%). The reasons for this difference in complication rate includes improper sterilization, unavailability of experienced and skilled surgeons and anaesthetists, lack of proper post operative care and lack of ICU facilities for critical patients.^{20,21,22}

CONCLUSION

Total abdominal hysterectomy followed by cesarean section and vaginal hysterectomy were the most common procedures associated with high rate of per and post operative complications. Experience and skill of a surgeon is very important to minimize these complication rates.

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Author's Contribution

AH conceived the idea, wrote initial manuscript, collected and interpreted data and finalized the draft. SF and FOS helped correction of the proposal, literature search, data collection, interpretation and overall supervision of the project. TAR, MS, RA provided technical support, helped in data interpretation and provided expert guidance where needed. SA supervised the whole project and provided guidance where needed. Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Conflict of Interest

Authors declared no conflict of interest

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None

Data Sharing Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.