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Short Communication

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Iatrogenic Urinary Tract Injuries during Obstetrics and Gynecology Surgeries

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ABSTRACT

Latrogenic urinary tract injury is not uncommon during obstetric and gynecological surgeries. We report our experiences in the principle of management, time of diagnosis and time of treatment (collaboration with result), incidence of urinary tract injuries (most common) and investigation of the risk factors and the prophylactic urological procedures to decrease the risk of injury.

From January 2000 to June 2014, 68 females recorded in the sheets prepared for all cases who underwent different gynecological and obstetric surgeries. 40 and 8 cases were diagnosed intraoperatively as urinary bladder and ureteric injury respectively and the urological management done at the same time which gave good results postoperatively, psychologically and during follow up.

Twenty patients transferred from other hospitals after third to 21 days post operatively with different urinary tract injuries and its complications. All patients were cured of their complication except 2 cases of VVF were failed first repair, they were managed successfully in the second surgery.

Urinary tract injuries have physical and psychological impacts for the patients and her family, therefore gynecologist and obstetricians should be careful for the anatomy of urinary tract especially in the risk patients.

Keywords- *Vesico-vaginal fistula; Uretero-vaginal fistula; Urinary tract injury; Gynecological and obstetric surgeries.*

INTRODUCTION

Injuries to the urinary bladder and ureter are not uncommon complication after obstetric or gynecological surgeries.[1,2] The incidence of iatrogenic injury to 0.4-3%.[1-3] depending on the experience of the surgeon and the difficulty of the procedures. Early diagnosis and the time of management of these injuries greatly affect the outcome.[1-4] The clinical presentation of a patient with vesico-vaginal fistula depends upon its size and location it usually appears 5 to 14 days postoperatively.[3]

MATERIALS AND METHODS

From January 2000 to June 2014, 68 females were recorded in case sheets prepared for all cases that underwent urinary tract injuries during obstetric or gynecological surgeries, with age range of 19 to 72 years (mean 45.5 years). The patients in our study underwent different gynecological and obstetric surgery such as caesarean section (C/S) and hysterectomy either Trans vaginal, laparoscopic or Trans abdominal approaches for benign or malignant disease.

40 patients (58.8%) and 8 patients (11.8%) were diagnosed as urinary bladder and ureteric injury respectively (Gynecology and Obstetrics Department, Tripoli Medical Center) and the management done at the same time intraoperatively either repair of urinary bladder, reimplantation of ureter and removal of ligature and placement of ureteric stent which gave good result.

20 patients (29.4%) transferred from other hospitals after third day post operatively with bad general condition, intra abdominal urinoma, abdominal distension, respiratory distress, acute renal failure and metabolic disturbances. There were 8 cases of vesico vaginal fistula (VVF) (40%) and 12 cases (60%) diagnosed as ureteric injury (8 cases unilateral, 4 cases bilateral). In those patients percutaneous nephrostomy (PCN) inserted for urinary diversion to avoid intra abdominal urinoma and intra abdominal drain tube inserted under guide of ultrasonography to drain the intra abdominal urinoma. Ureteric reimplantation done for these patient 6 weeks later (Boari flap and ureteroneocystostomy) and the results were good.

8 patients with VVF excision of fistula and repair were done 12 weeks later and the good result obtained after the first repair in 6 patients (75%) were 2 patients (25%) failed their first repair and they were repaired successfully in the second repair.

RESULTS

All cases of urinary tract injuries during gynecological and obstetric surgeries, the previous caesarean section (C/S) pelvic adhesion and intra operative bleeding were significant factors. Patients were followed up 3 to 6 months following definitive surgical correction of urinary tract injuries and showed good results.

All patients were managed at the same time of gynecological or obstetric operation gave good results postoperatively, psychologically and during follow up.

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Surgeries were all successful in all cases of ureteric injury and their postoperative IVU showed normal morphology and function of the upper tract. The patients of vesico-vaginal fistula repaired abdominally were dry postoperatively and during follow up period.

DISCUSSION

The optional treatment for the ureteric or urinary bladder injuries during surgery, immediate on –table repair[4-7], when diagnosed was delayed, some prefer immediate repair while others prefer repair to be delayed.[3,5,6] The classic procedure is to delay repair for 3 -6 months to attempt a definitive repair.[1,6,8] This policy adopted in our study to give damaged tissue a so called "maturation factor" edema subside, fibrosis to delineate and inflammatory elements to disappear.[1,6,7,9]

Repair of VVF in our study was done at least 12 weeks after diagnosis. Two failed first operation and they were managed by reoperation which was agreed with the other published reports.[1,2] We performed percutaneous nephrostomy (PCN) as initial treatment for pain, urinary diversion and to protect renal function before definitive surgery and this was suggested by almost authors.[1-5,10,11]

Prophylactic preoperative ureteric stent insertion assists visualization and palpation and should be used in high risk and complicated cases.[3,9]

CONCLUSION

Gynecologist and obstetricians should be careful for urinary tract anatomy during surgery especially in patient with pelvic adhesion, previous cesarean section (C/S) and operative bleeding. The successful treatment depends on the degree and the site of ureteric and urinary bladder injuries and the time of recognition, urologist should be contacted when suspected urinary tract injuries.

In those patients who undergone gynecological and obstetric surgeries with risk factors to urinary tract injuries, ureteric stents should be inserted preoperatively to avoid injury and identification of the ureter.

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