

Iatrogenic Genitourinary Fistulae: A Survey in Khulna Medical College

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Summary:

It was a retrospective study done in Khulna Medical College, Khulna, Bangladesh from January 2001 to July 2004. Within this time 44 cases of genito-urinary fistulae (GUF) were treated, 15 vesico-vaginal fistulae were obstetric in origin and rest 29 were iatrogenic fistulae. Highest incidence was vesico-vault and vesico-vaginal fistulae, next was uretero-vault fistula which was the sequelae of surgery mostly done by non-gynaecologist and

non-specialist (about 90%) and by obstetrician and gynaecologist (about 10%). Ninety three percent fistulae developed in rural and urban clinics and 6.80% in hospitals. The results of the treatment were excellent. Technical improvement of the surgery and referral to specialized centre for fistula management certainly improves the success and diminishes the suffering of the patients.

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Introduction:

Genitourinary fistula (GUF) is a major problem in many developing countries, specially the vesico-vaginal fistula (VVF) commonly caused by prolonged obstructed labor is one of the worst complications of child birth. Urogenital fistulae are not uncommon consequences of gynecological surgery. Iatrogenic fistulae due to gynecological surgery generally appear from three days to six weeks after surgery and the communication tracts are uretero-vault, vesico-vault and vesico-uterine. Most authors quote an incidence rate for VVF after total abdominal hysterectomy (TAH) to be 0.5-2%, others suggest only a 0.05% incidence rate of injury to either the bladder or ureter.¹ Lee, in a series of 35,000 hysterectomies, found that more than 80% of genitourinary fistula were due to gynecological surgery for benign diseases². Uncomplicated TAH accounted for more than 70% of these surgeries. The indications of these are pelvic inflammatory disease (PID), endometriosis, dysfunctional uterine bleeding (DUB), fibroid and prolapse. The purpose of this study was to know the aetiological background of iatrogenic fistula, its prevention and management in Khulna Medical College, Khulna, Bangladesh.

Materials and method:

This was a retrospective study done in Khulna Medical College (KMC) during January 2001 to July 2004. The patients presented with symptoms of continuous dribbling of urine per vagina or continuous dribbling of urine with normal urge of micturation following abdominal or vaginal surgery. The nature of the previous surgery was explored to know whether it was caesarean section or caesarean subtotal or total hysterectomy, total time required to the development of fistula, the place of surgery i.e clinic or hospital and the qualification of surgeons. Clinical examination was done under general anaesthesia to know the position, size, and number of fistulae, associated fibrosis and vaginal stenosis. Dye test was done for confirmation in few cases. Special investigations like intravenous urography (IVU) and cystoscopy were done for confirmation of GUF when needed. Local repair, reimplantation of ureter into bladder or repair by transvesical route under general anaesthesia was done. All cases were followed upto three months.

Results:

Retrospective analyses of 44 cases of genito-urinary fistula were done in KMC during the period of January 2001 to July 2004. The age range of the patients was 15 - 50 years. Fifteen cases were having obstetric fistulae due to pressure necrosis from obstructed labor and iatrogenic fistulae were found in 29 cases (Fig-1). Table-I presented the characteristics of study patients. Among patients having iatrogenic

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fistulae 16 were having vesico-vault fistula and vesico vaginal fistula 12 uretero-vault fistulae and one vesico-uterine fistula. Three fistulae resulted from surgery by obstetric specialist, seven cases were done by general surgeon and 19 cases were by unskilled non-specialist hand. More than 93% surgery was performed in clinic and 6.8% in hospitals. Local repair was done in 15 cases (51.70%), ureter

reimplantation in 10 (34.40%) and transvesical repair in one (3.40%) case. In recently developed three cases each has uretero-vault fistula, VVF and vesico-uterine fistula. In uretero-vault fistula and VVF fistula the track was closed within 90 days and 45 days respectively but in vesicouterine fistula, whose complaint was menouria, the patient refused further surgical intervention.

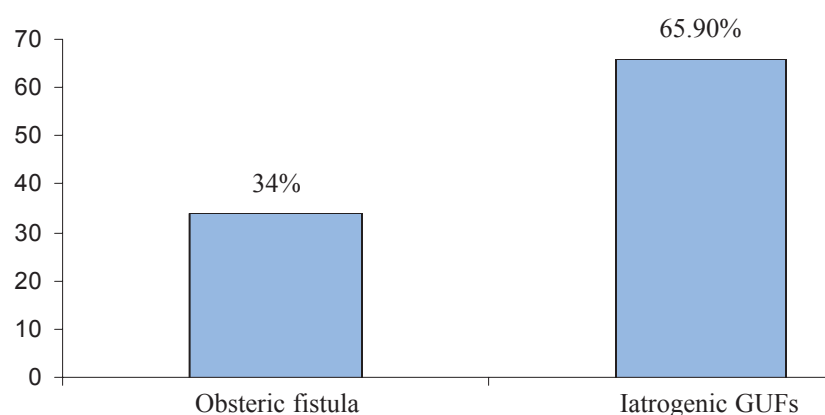


Figure -1: Presented the obstetric and iatrogenic GUFs.

Table-I

<i>The types, nature of surgery, qualification of surgeons and place of surgery</i>			
Types of fistula (n – 29)	Causes of IGUF	Qualification of the surgeon	Place of operation
Vesico-vault and vesico-vaginal fistula (n-16)	Gynaecological surgery: TAH – 8 Vaginal hysterectomy - 1. Obstetric surgery, Caesarean subtotal / total hysterectomy – 7.	Unkilled or non specialist – 11 Specialist in General Surgery – 4 Specialist in Obs. & Gynae – 1	Clinic (n – 14) Hospital (n – 2)
Utetero-vault fistula (n-12)	Gynaecological surgery total abdominal hysterectomy (n-12)	Non specialist – 8 Specialist in general surgery – 3 Specialist in Obs. and Gynae – 1	Clinic (n – 12)
Vesico-uterine fistula (n – 1)	Third Caesarean section	Specialist in Obs. and Gynae – 1	Clinic (n – 1)

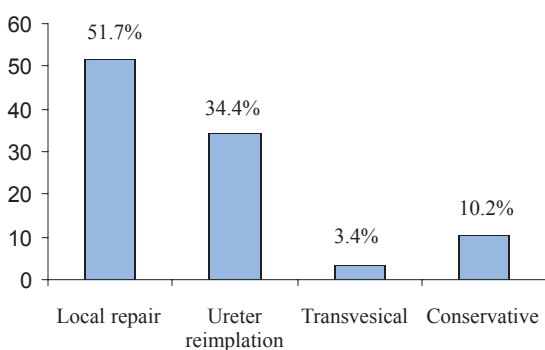


Figure-2: Presents the management of IGUF

Discussion:

Urogenital fistula is uncommon consequence of gynaecological surgery. Vesico-vaginal fistula due to gynaecological surgery generally appears 1 - 6 weeks after surgery and recurrent fistula within three months of repair³.

This retrospective analysis of GUFs cases in Khulna Medical College it was found that in recent few years the iatrogenic fistula is more common than the obstetric fistula. A UNFPA survey estimates that over two million women in Bangladesh suffer from obstetric fistula. Over 88% of deliveries in the country still take place in inexperienced hands. Actually there is no report of development of iatrogenic fistula in our country which was the sequelae of gynaecological surgery by untrained and inexperienced hands. In this series 65.50% of fistulae were developed by unskilled practitioners, general surgeon in 24% and by obstetrician and gynecologist in 10.30%; 93% of operations were performed in clinics and 6.80% were in hospitals. Recently, the obstetric fistulae are gradually declining in number due to development of trained personnel by the activities of comprehensive emergency obstetric care (EOC), improvement of spinal anaesthesia and blood transfusion facilities. On the other hand, iatrogenic fistulae are gradually increasing in its incidence. Most patients live in rural areas and illiterate, and they have little basic knowledge of the disease. They have no idea who is the right person for consultation. In obstetric fistula, more than 50% of the women were deserted by their husbands after the fistula developed and about iatrogenic fistula, the family were worried and seek for medical advice in 100% cases.

Treatment started within six months of fistula development. Controversy surrounds the length of delay between diagnosis and surgical repair of GUFs. Analysis of the data showed that no definition has been established for early and late intervals. Traditionally, operation time was in the range of 8 to 12 weeks interval between index surgery and repair. O'conor agrees that the exact timing for repair depends on the tissue health. Most of his patients were brought to surgery approximately three months after index surgery.⁴ All cases were repaired after three months from the index surgery. GUF in developing countries are attributed to inadvertent bladder injury during pelvic surgery (90%)^{5,6}. It involves relatively limited focal bladder injury leading to smaller VVFs than those are observed in obstetric fistulae. Numerous authors highlighted the risk of various types of bladder trauma during pelvic surgery. Such injuries include unrecognized intraoperative laceration of the bladder, bladder wall injury from electrocautery or mechanical crushing and the dissection of the bladder into an incorrect plane, causing avascular necrosis.^{7,8,9} Suture placement through the bladder wall itself may not play a significant role in VVF development. However, the risk of formation of a haematoma or avascular necrosis after a suture is placed through the bladder wall can lead to infection and abscess of bladder wall. This wall defect permits the escape of urine into vagina and may be followed by an eventual epithelization of the track. Symmonds evaluated 800 GUFs over a 30 year period at the Mayo clinic, 85% of the VVFs were related to pelvic operation and 75% were related to hysterectomy, and 50% being secondary to simple uncomplicated total hysterectomy or vaginal hysterectomy.¹⁰ The patients in this study are operated by local repair, ureter reimplantation into bladder and transvaginal repair in 92% cases and the success rate was 100%, and among conservatively managed three cases one developed VVF after vaginal hysterectomy and one uretero-vault fistula; the fistula tract spontaneously closed within three months. One case of menouria had previous three caesarean section and she refused to further surgery. She was advised to use continuous oral contraceptive pill. Oral oestrogen tablet was used to improve the tissue vascularization and healing in two postmenopausal patients.

GUFs are hidden tragedy for the patient and her family and for the treating surgeons. To reduce the incidence of GUFs medical ethics should be followed by all physicians. Government should take initiatives for improving the training facilities both for government and non-government doctors. Periodic follow up of the service quality of private clinics will reduce the incidence of iatrogenic genitourinary fistulae.

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