Original Article

Uterovesical Fistula: A Rare Obstetrical Complication, An Emerging Challenge

Nabila Hassan, Pushpa Srichand, SabreenaTalpur, Sabreena Abbas

ABSTRACT

OBJECTIVE: To determine the frequency of uterovesical fistula, its etiology, clinical presentation and management.

METHODOLOGY: This retrospective study was carried out at department of Obstetrics and Gynecology from January 2007 to June 2018. Secondary data collected from hospital records of all patients who are diagnosed as a case of uterovesical fistula. Details regarding age, parity, duration, etiological factor, clinical presentation and management of uterovesical fistulae were recorded. Data analysis performed on SPSS version 20 and results were analyzed for mean, frequency and percentage.

RESULTS: During the study, there were 545 patients registered with urogenital fistula. Among them 36 patients having uterovesical fistula were included in the study, giving a frequency of 6.6%. Mean age 26±8 while mean parity 3±2.4. Major etiological factor was caesarean section for obstructed labour (n=25, 69%) followed by repeat caesarean section. Major symptoms were urinary incontinence and cyclical menouria. Most of the patients (n=34, 94%) had surgical repair. All patients had complete cure.

CONCLUSION: Uterovesical fistula is not an infrequent gynecological morbidity in our area with diagnostic challenge, however meticulous clinical evaluation keeping the possibility of this disease can give clue to the diagnosis. Though surgical approach can cure most of the cases, attention should be given towards preventive strategies such as provision of quality obstetric care with improvements of surgical skills.

KEY WORDS: Uterovesical fistula, caesarean section, Urinary incontinence.

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INTRODUCTION

Uterovesical fistula is uncommon pathological communication between uterus or cervix and urinary bladder[1]. It accounts for 1-4% of genitourinary fistula[2]. Majority of the cases have been related to iatrogenic injury during caesarean while obstructed labour is the leading cause of uterovesical fistula in developing countries[3]. Nevertheless, global rising trend of caesarean section has led an increase number of iatrogenic bladder injuries with resultant uterovesical fistula in patients with scarred uterus[4].

The risk of iatrogenic urinary bladder injury at caesarean section has been reported un common(0.1 -0.3) but certain factors such as delivery in late first or 2nd stage of labour, repeated attempts to suture bleeders, placenta percreta and dense adhesions at lower uterine segment predispose to bladder or ureteric injury[5,6]. A judicious approach to anticipate likely complications in high risk patients with identification of anatomic land marks, early identification and management may help to reduce the incidence of these disastrous complications.

Clinical presentation of uterovesical fistula may vary from classic triad of amenorrhea, menouria and complete continence (Youssef's syndrome) to normal periods, menouria or urinary incontinence[7]. Majority of the patients can be diagnosed clinically followed with examination under anesthesia, cystourehrography, intravenous pyelography, sonohystero salpingography, however cystourethroscopy with hysteroscopy is most definite diagnostic aid[8]. Timely identification and treatment can prevent the terrible consequences of this morbidity.

Most of the literature available is in form of case reports with lack of case series review in particular to Pakistan[9]. Keeping the paucity of detailed research in this regard in our country; this study was conducted to find out the frequency, etiology clinical presentation and management. This study would help to understand the spectrum of the illness in the area and suggest preventive strategies.

METHODOLOGY

This is retrospective study conducted in the department of Obstetrics and gynecology department, Isra University hospital Hyderabad Sindh. The hospital is private sector university hospital with welfare department. The department is working in collaboration with International fistula project by

United Nations Population Fund (UNFPA), Pakistan National Forum women Health (PNFWH), and Fistula foundation for filtering out the cases of urogenital fistula and providing treatment services

All confirmed cases of uterovesical fistula were included in the study. The diagnosis was made according to history, clinical examination and investigations. All other cases of urinary incontinence were excluded. Secondary data collected from hospital records for demographic details, clinical presentation, duration, etiology and management. Data was analyzed by SPSS version 20 for descriptive statistics to calculate the frequency and percentage.

RESULTS

During the study, there were total 545 registered cases of urogenital fistula with 36 patients with uterovesical fistula giving a frequency of 6.6%. Mean age of patients 26±8 and mean parity was 3±2.4. Most of the patients were in age group of 20-30 years (**Table I**). Majority of the patients (n=25,69.4%)had fistula as a result of primary caesarean section for obstructed labour, followed by repeat caesarean section, adherent placenta, dilatation and evacuation (D&E) (**Figure I**). Most of the patients (n=19, 53%) presented within 6 months of symptoms (**Table II**). Major symptoms were urinary incontinence and cyclical menouria (**Table III**). Surgical repair was performed in 94% (34) of cases with majority (97%) repaired by extra vesical transabdominal route. (**Table IV**). All patients had complete cure (n=36,100%).

TABLE I: AGE DISTRIBUTION (n=36)

Age Group	No of cases	Percentage
<20 years	03	8.3%
>20 years-30 years	17	47.57%
>30 years-40 years	11	30.5%
>40 years-50 years	02	5.5%
>50 years	03	8.3%

FIGURE I: ETIOLOGY OF FISTULA

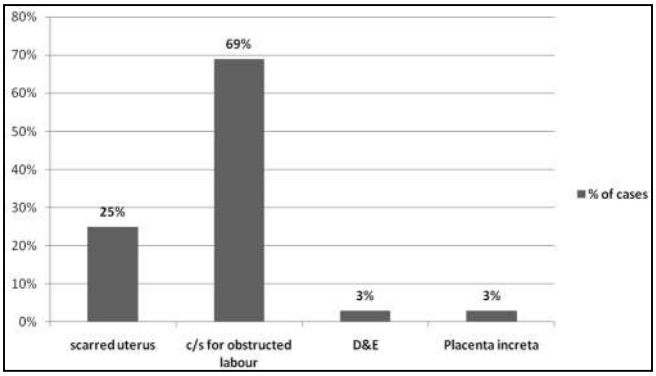

TABLE II: DURATION OF FISTULA (n=36)

Duration	No of cases	%
<6 months	19	52.7%
>6 months - 1 year	05	13.8%
>1 year - 5 years	04	11%
>5 years	08	22.2%

TABLE III: CLINICAL PRESENTATION (n=36)

Clinical presentation	No of cases	%
Cyclical Menouria+ Urinary incontinence	21	58.3%
Urinary incontinence	07	19.4%
Cyclical Menouria	05	13.8%
Amenorrhea+Menouria +continence (youssefe syndrome)	03	8.3%

TABLE IV: MANAGEMENT (n=36)

Management	No of cases	Percentage
Layered closure	31	86%
Layered closure with omental graft	03	8.3%
Conservative	02	5.5%

DISCUSSION

In current study the frequency of uterovesical fistula was 6.6% of all genito urinary fistulas. Worldwide the reported frequency varies from 1-4%, and most units report 1-5 cases/5-15 years[5]. Since 1908 to 1947; 92 cases were reported in literature, with increasing number of more cases due to caesarean deliveries[10]. A review from Nigeria reported the frequency of 2.1% [11]. The higher frequency in comparison to other studies may be related to recent rise of caesarean section, lack of surgical expertise as well as persistence of obstructed labour in our area. The frequency was found lower than reported by Singh (9.5%) in his 5 years study of genito urinary fistula[12].

The most common cause of uterovesical fistula in our study was primary caesarean section for obstructed labour. This is found in contrast to reports from other countries where it is found as a result of iatrogenic insult to bladder in previous scarred uterus[5]. Obstructed labour is yet a persistent tragedy in our area and caesarean section after full blown obstructed labour poses increased risks to bladder. Risk to bladder injury may be related to edematous bladder,

difficulty or poor reflection of bladder or excessive suturing to arrest bleeding while in patients with scarred uterus higher attachment of bladder is common and this along with dense adhesions may lead to un recognized bladder injury and uterovesical fistula. Adherence to basic principles at caesarean section at obstructed labour or while dealing previous scarred uterus with help of skilled surgeon may minimize this morbid complication. The use of intra operative transvaginal/trans rectal sonography in suspected cases of bladder injury may help to timely recognize the injury and repair[13].

Majority of the cases reported in young age group of 20-30 years. This is found in agreement to reported literature[1]. However; we had higher number of cases in patients with obstetric etiology at young age while the reported studies found fistula in young age having iatrogenic origin. The trend of early marriage coupled with mal nutrition poses the young age women prone to obstructed labour and all related complication[15]. Efforts are needed not only to create awareness about improving nutrition of young girls, reducing teen age marriages, improving care during labour but also trend of caesarean section for trivial reasons must be condemned.

Main symptoms at presentation were cyclical menouria and urinary incontinence. Classic Youseffe's syndrome reported only in 8.3% of cases. Cook RJ 2004 found 1/3rd of patients with typical symptoms[16]. Clinical presentation of uterovesical fistula vary, depending upon site of injury and duration. An immediate presentation is usually with hematuria, with or without urinary leakage and low-grade pyrexia or the patients can have an asymptomatic course. The patients can have a late presentation with urinary leakage from vagina if cervix incompetent, cyclic hematuria, amenorrhea, infertility or first trimester abortions[17]. Awareness about diverse clinical presentation may help in early identification of patients and can avoid delay in management.

Most of the patients required surgical repair while 5.5% of patients had complete recovery with conservative treatment with antibiotic and continuous urinary drainage. The proposed conservative techniques besides urinary drainage and antibiotic are amenorrhea induced by oral contraceptive pills or Luteinizing hormone releasing hormone due to presence of sex hormone receptors in epithelial and stromal cells however such strategies may be less successful with a mature tract and complex fistula[16]. Most of the patients required transabdominal extravesical approach. The decision to management approach depends upon, site, size, duration, associated scarring of the fistula as well as familiarity with the route. Majority of our patients presented after duration of one month and had complex fistula so conservative approach was not feasible in most of cases. Literature found reports transvesical transperitoneal route as the most effective approach with low relapse rate however we consider it as more invasive owing to our experience with 100% success and no relapse by transcervical approach[18].

CONCLUSION

Uterovesical fistula is not an infrequent gynecological morbidity in our area. Most of the patients reported in reproductive age group. The diagnosis can be challenging due to rarity of this complication however meticulous clinical evaluation keeping the possibility of this disease can give clue to the diagnosis. Though surgical approach can cure most of the cases, attention should be given towards preventive strategies such as provision of quality obstetric care with strict maintenance of labour events using partograph is a simple tool to make decisions about abnormal labour and arranging timely referrals. On the other hand, iatrogenic etiology resulting from surgical insults during repeat caesarean section demands improvement in training related to difficult caesarean cases.

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REFERENCES

1. Bhattcharjee S, Kohli AU, Sood A, Tripathy S, Gupta M. Vesicouterine fistula: Youssef's syndrome. Med J Armed Forces India. 2015; 71 (Suppl 1): S175-S177. doi:10.1016/j.mjafi.2013. 11.006
2. Bhutta SZ. 'Menouria' - A presentation of vesicoutrerine fistula. J Pak Med Assoc. 1996; 46 (7): 159-61.
3. Nath PK, Samal M, Pradhan k, Mohanta C, Mahapatra S. Youssef's syndrome. J South Asian Feder Menopause Soc. 2014; 2(2): 113-14.
4. Mahamoud S, Arunkalaivanan AS, Devarajan R, Kaur H. Vesicouterine fistula-A rare complication secondary to caesarean section. Int Urogynecol J. 2004; 15: 434-41.
5. Alkatib M, Franco AV, Fyness MM. Vesicouterine fistula following caesarean delivery--Ultrasound diagnosis and surgical management. Ultrasound Obstet Gynecol. 2005; 26(2): 183-5.
6. Sahbi N, Braiek S, Kamel RE. Laparoscopic Repair of Vesico uterine Fistula: A case report and Mini-Review of the Literature. J Curr Surg.

2016; 6: 75-77.
7. Birge O, Ozbey EG, Erkan MM, Arslan D, Kayar I. Youssef's Syndrome following Cesarean Section. Case Rep Obstet Gynecol. 2015; 2015: 605325. doi:10.1155/2015/605325.
8. Symeonidis EN, Sdralis E, Symeonidis A, Georgiadis C, Kalyvas V, Malioris A, Papathanasiou M. Vesico uterine Fistula (VUF) as a rare urogenital complication managed with delayed surgical repair: A case report and review of the literature. Case Rep Obstet Gynecol. 2018; 2018: 2394896.
9. Okafor II, Amu CO, Ogbodo SC. Utero vesical fistula: A case report. Gynecol Obstet (Sunnyvale). 2014; 4(6): 228.
10. Ugurlucan FG, Bastu E, Bakir B, Yalcin O. Vesico uterine fistula presenting with urinary incontinence 30 years after primary cesarean: Case report and review of the literature. Can Urol Assoc J. 2014; 8 (1-2): E48-E50.
11. Daniyan B, Sunday-Adeoye I, Ekwedigwe K, Dantani D, Eliboh M. Review of vesicouterine fistula at the National Obstetric Fistula Centre Abakaliki Nigeria. Gynecol Obstet(Sunnyvale). 2016; 6: 380. doi:10.4172/2161-0932.1000380.
12. Singh O, Gupta SS, Mathur RK. Urogenital fistulas in women: 5-year experience at a single centre. Urol J. 2010; 7(1): 35-9.
13. Porcaro AB, Zicari M, Antoniolli SZ, Pianon R, Monaco C, Migliorini F, et al. Vesico uterine fistulas following cesarean section: Report on a Case, Review and Update of the Literature. Int Urol Nephrol. 2002: 34(3): 335-44.
14. Khisa W, Mutiso S, Mwangi J, Qureshi Z, Beard J, Venkat P. Depression among women with obstetric fistula in Kenya. Int J Gynaecol Obstet. 2011; 115(1): 31-3.
15. Bettez M, Breault G, Carr L, Mai Tu L. Early versus delayed repair of vesicouterine fistula. Can Urol Assoc J. 2011; 5(4): E52-E55.
16. Cook RJ, Dickens B, Syed S. Obstetric Fistula: The Challenge to Human Rights. Int J Gynaecol Obstet. 2004; 87(1): 72-7.
17. Al-Rafaei M, El-Salmy S, Al-Rafaei A, Salama A. Vesicouterine Fistula--Variable Clinical Presentation. Scand J Urol Nephrol. 1996; 30(4): 287-89.
18. Niaz WA, Alvi S. Uterovesical Fistulas: A rare complication of caesarean section. Pak Armed Forces Med J. 2008; 58(4): 470-72.

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