URINARY INCONTINENCE DUE TO TRAUMA IN AN ADOLESCENT GIRL

(A Case Report)

by

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Introduction

A case of incontinence of urine in a 14 year old girl is presented as one of the rare causes of dribbling of urine following trauma. The case posed diagnostic and management problems which are discussed below.

Case Report

A young, 14 years old girl was admitted to surgical ward of civil hospital, Ahmedabad on 15th September, 1974 and was referred to Gynaecological department as she complained of dribbling of urine since last 12 months following a fall from a height. She was treated by local doctor by continuous catheterization for sometime but there was no improvement.

On general examination there was nothing abnormal. On local examination, there was small old tear on labia minora and both labia minora had fused, with dribling of urine from opening situated above this adherent portion (Fig. 1). Dribling was present from the vagina also. She was examined under general anaesthesia and methylene blue test was carried out which confirmed two urinary passages from bladder to exterior.

Cystoscopic examination revealed both normal ureteric orificies, normal bladder, normal urethra and fistulous tract connecting with bladder. (Fig. 2).

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Her plain x-ray abdomen and intravenous pyelography were normal. Micturating cystourethrogram also showed two passages from bladder to exterior.

Her blood pressure was 120/80 mm Hg, Hb was 9.5 gms%, Bl. gr. 0, Rh + ve, and Blood urea was 25.0 mg.% Urine culture sensitivity showed no organisms.

As there were adhesions, it was decided to examine her under anaesthesia and decide further line of treatment. Pre-operatively she was given a course of urinary antiseptic (Furadentin), 100 mg. 3 times a day for 7 days.

Operative Notes

On 21st January, 1975, she was taken for operation under general anaesthesia.

The external genital organs were reinspected and No. 5 size catheters were put through both the openings. Sterile milk was instilled through superior and inferior catheters in turn. The milk was seen coming through both the catheters. This gave an idea that both the passages are communicating to the exterior.

A small nick was made at the fusion of labia minora and the superior opening was then widened. Milk was reinstilled through the catheter from below. It was seen coming through an opening at the posterior end of the pubic arch. The lower catheter could be palpated and also seen entering into the bladder through this opening near the pubic arch.

Since the patient was an adolescent girl and as vaginal opening was hardly admitting one finger it was decided to make Schuhardt's incision. After Schuhardt's incision it was confirmed that the lower catheter was in the urethra and could be traced towards the bladder neck. The anterior vaginal wall did not

show any opening nor the milk could be seen anywhere coming through the anterior vaginal wall. After exposure following Schuhardt's incision it could be seen that the distal ¼th of urethra was avulsed below the clitoris as a whole. This confirmed that there was injury to proximal one-fourth of urethral roof near auterior part of bladder neck. It was therefore decided to mobilize the urethral roof along its opening and the dissection was carried out from the sides and encircling the opening towards the lower margin of pubic arch. The surrounding tissues were healthy. There was no fibrosis and a plane of cleavage could be easily obtained. After sufficient mobilization of the margins the opening was closed in transverse direction by interrupted 000 chromic catgut on atraumatic needle. The opening was closed by four such sutures. Milk was reinstilled and it was noticed that there was no leakage. Two more layers of interrupted sutures were inserted to strengthen the first line of sutures. The distal two-third of urethra which was sagging was then stitchtd by para-urethral stitches underneath the pubic arch by interrupted sutures with chromic No. 1 catgut. The margins of external urinary meatus were stitched back to its original position by interrupted sutures with No. 1 catgut. The bladder was drained by foley's catheter for 14 days. The drainage was by continuous suction method. Stitches of Schushard's incision were removed on 7th day. Wound was well healed.

On 15th day, the catheter was clamped for one hour on first day and then for two hours on second day. As there was no leakage during clamped period catheter was removed on 17th day. Patient started passing urine of her own. There was no stress incontinence. Patient was discharged on 19th post-operative day.

During postoperative period urine cultures were done on 2nd, 4th, 6th and 12th day. In first sample there were no organisms, while subsequent urine cultures showed presence of B. coli, sensitive to Furadentin, Kenamycin and slightly sensitive to chloromycetin. Post-operatively patient was kept on chloromycetin and Furadentin.

Discussion

Due to history of trauma, presence of any malformation of urethra could be ruled out.

The dribbing of urine occurred through an opening just underneath the pubic arch as the trauma had displaced the urethra from its position just below the clitoris. It appears that a sharp object must have caused a penetrating injury just above the superior margin of external urinary meatus and avulsed the urethra for nearly 35 mms. in length and injured the proximal anterior ¼th portion of urethra near bladder neck. Luckily the part of urethral tube distal to trauma was intact. The patient was unable to pass urine as the proximal opening provided an outlet for continuous urine dribbling simulating a vesico-vaginal fistula.

The investigation that helped the diagnosis was cystoscopic examination. The anterior situation of the opening could be seen easily. It was therefore decided to have surgical closure from below. The exposure was aided by Schushard's incision as the vaginal opening hardly admitted index finger. The exposure obtained at the time of operation further confirmed that there was no vesico-vaginal fistula. This was concluded by carrying out milk instillation in the bladder and absence of its leakage in the vagina during operation. The opening could be easily mobilised and had no fibrosis around. The healing was satisfactory as patient was cured of dribbling and was able to pass urine as before. The bladder was drained by continuous suction drainage described by one of the authors, earlier (Joshi *et al*, 1966).

Summary

An unusual case of urinary incontinence following trauma in an adolescent girl is reported. This case stimulated dribbling due to vesico-vaginal fistula and posed diagnostic problems. Its diagnosis and management is discussed.

Acknowledgement

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Reference

1. Joshi, S. K. et al: J. Obst & Gynec. **XVI**: 213, 1966.

See Figs on Art Paper XIV