ADENOCARCINOMA OF THE FEMALE URETHRA

(A case report)

by

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Urethra is an uncommon site for malignant neoplasms in women. Hämman and Gobel (Clayton, 1945) reported an incidence of 0.16 per cent of all gynaecological cancers. In our own records, there were only 2 cases of urethral carcinoma out of 4,816 cases of genital malignancies who attended the cancer clinic of Hospital for Women, Patna Medical College Hospital from 1955 to 1966. During the same period, 4,498 gynaecological cases were admitted in Unit II, Hospital for Women, out of which only 2 were cases of urethral carcinoma (including the case reported here). Thus, the incidence of carcinoma of urethra in our series is 0.041 per cent of all gynaecological malignancies and 0.048 per cent of all types of gynaecological cases admitted as indoor patients.

Adenocarcinoma is rarer among the different types of malignant neoplasms of the urethra. Youssef (1960) stated that there were only 49 such cases out of 582 urethral malignancies collected from the literature. The case reported here was one of adenocarcinoma of the urethra.

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Case Report

S. D., aged 45 years, para 7 + 0, was admitted on 17-7-65 with complaints of frequency and burning during micturition for 20-25 days. Her menstrual function was normal. On physical examination, she was found to be in good health. Gynaecological examination showed the presence of an oblong, firm, suburethral vaginal swelling, 5 cms. x 2.5 cms., extending upwards from a point 4-5 mm. from the introitus, of which the patient was unaware. On pressure the mass did not disappear and there was no associated urethral discharge. Catheterisation was easy. The uterus was normal in size, cervix was healthy and adnexae were not palpable. Laboratory investigations were normal.

On 22-7-65 excision of the suburethral swelling was done. There was a non-capsulated, fibrous, solid tumour about 2.5 cms. in diameter, lying between urethral and vaginal walls. On cut section, the tumour had a central, multilocular, cystic degenerated area containing myxomatous material. During excision which was incomplete, the urethra was opened into and after its repair the wound margins were not apposed to prevent tension on urethral sutures. Post-operative period was uneventful and she was discharged on the twelfth post-operative day.

Histological diagnosis of the tumour was "endometriosis". The patient returned after 20 days with the complaint of dysuria and

having expelled a small fleshy mass per urethra. On examination, there was a slight elevation of the vaginal wall in the suburethral region without ulceration. Cystoscopy was normal. Urine on culture was sterile. Repeat biopsy was done on 16-4-66 from the old site of the tumour which on histological examination showed presence of "fibrous tissue" only. She was again examined after 5 months and there was an overgrowth of granulation at the external urinary meatus with diffuse swelling near the submeatal region. Biopsy from the granulation at the external meatus was done and its microscopic appearance was that of a granulomatous "Caruncle". Eight months later she was re-admitted with a friable ulcer in the suburethral region. The external urinary meatus could be localised with difficulty by passing a catheter due to proliferation of friable tissue around the external meatus (Fig. 1). The whole anterior vaginal wall was infiltrated and hard. The inguinal lymph nodes were enlarged and hard. The patient was in agony due to retention of urine. Biopsy from the ulcerated site in the anterior vaginal wall presented the microscopic appearance of "adenocarcinoma". Patient was severely anaemic and her blood urea was 82 mg. per cent. Deep x-rays were given without any effect and she expired on 16-8-67.

TABLE I

Analysis of the cases admitted to the indoor from 1955-1966

Total no. of cases.	Carcinoma urethra.	Caruncle	Polyp.	Stricture.
4,498	2	13	1	1

Comments

Carcinoma of the urethra is seen in elderly parous women. Its age incidence is 38.28 years for transitional cell carcinoma, 46.88 years for squamous cell carcinoma and 42.75 years for adenocarcinoma (Youssef, 1960). Although strictures and fistulae are believed to be predisposing causes in males, it is not so in females. During the period from 1955 to 1966 in our unit there was only one case of stricture urethra seen in a woman aged 60 years who was admitted for chronic retention, the cause of stricture being postmenopausal atrophy and infection.

Among other lesions of the urethra predisposing to carcinoma, urethral caruncle has been blamed to be malignant in 44.5 per cent by Hess (1945) and 14.9 per cent by Walther (1943). In our series there were 13 cases of caruncle and one case of mucous polyp of urethra, none of which were found to be malignant (Table I). Clayton (1945), Malpas (1945), Palmer *et al* (1948) and Youssef (1960) could not find any relation of urethral caruncle with carcinoma. Marshal *et al* (1960) stated that 1 in 40 of the patients diagnosed as urethral caruncle was found to have malignant neoplasm of the urethra and stressed the importance of subjecting all urethral caruncles to biopsy. As previously mentioned the histological diagnosis given to the third biopsy of the case reported was "caruncle". That was so because the biopsy material contained the granulation tissue that appeared at the submeatal region following excision of the tumour. It explains the difficulty in differentiating a urethral caruncle from chronic granulation tissue.

The symptoms of painful and difficult micturition was complained of by the patient from the time she presented for treatment, but she never complained of bleeding per urethra or dyspareunia. Retention of urine was the complaint only at the terminal stage. Emaciation and cachexia were never present except when she became uraemic.

Adenocarcinoma of the urethra arises from the paraurethral and suburethral glands (Willis 1960, Youssef 1960, Haines 1962, Novak 1967). The case reported here was followed up to the end from the time the tumour was first detected at the suburethral region and observed through the period when it had spread and involved the whole anterior vaginal wall. The first histological report of the tumour was "endometriosis" which showed proliferation of apparently benign looking glands (Fig. 2); but on retrospective examination early malignant changes were noticed. Probably the rarity of adenocarcinoma of the urethra and inflammatory changes in the epithelium were misleading factors in the early detection of the lesion. When the tumour had advanced beyond its primary site, the histological diagnosis of "adenocarcinoma" was established from the glandular proliferation which invaded the vaginal bed with bizarre shaped glands at places several layers thick, basement membrane being broken in many of the glands and their lumina filled with hyperchromatic cells (Fig. 3).

The management of carcinoma of urethra is made difficult because our experience is limited to few cases. The methods advocated are (i) radical excision of the urethra including a portion of vesical neck, (ii) excision of urethra leaving the vesical neck, (iii) total cystectomy and removal of urethral and vaginal septum, (iv) electro-surgical excision of the growth and irradiation, (v) irradiation. Taussig (1935) suggested excision of the growth and Basset gland dissection. Out of his 14 cases, 3 were treated thus and all of them survived 5 years; 8 were treated by irradiation with only 1 survival; 2 were advanced cases and 1 was treated unsuccessfully by local excision. But there are equally strong advocates of irradiation alone. Counseller and Patterson (1933) concluded that the highest percentage of 5 year cure can be obtained by irradiation. Fagan and Hertig (1955) reported 50 per cent 10 year cure rate by treating with radium and radon seeds. Brack and Dickson (1958) reported 54 per cent survival for more than 5 years by treatment with irradiation or a combination of irradiation and surgery. Clayton (1945) suggested individualisation of cases for treatment and Youssef (1960) stated that results of treatment of malignancy of female urethra by any one method are not exceptional.

Unfortunately, the correct diagnosis in the case reported here was reached only at the terminal stage when none of the above methods of treatment could be adequately applied. She was given a course of deep x-ray therapy which was palliative; and obviously the course of the disease remained unaffected and the patient died of uraemia within 25

months from the date the lesion was first detected.

Summary

A case of adenocarcinoma of urethra is presented and the difficulties in its diagnosis and treatment are discussed.

References

1. Brack, C. B. and Dickson, R. J.: Am. J. Roentgenol. **79:** 472, 1958.
2. Clayton, S. G.: J. Obst. & Gynec. Brit. Emp. **52:** 508, 1945.
3. Counseller, V. S. and Patterson, S. J.: J. Urol. **29:** 587, 1933.
4. Fagan, G. E. and Hertig, A. T.: Obst. & Gynec. **6:** 1, 1955.
5. Haines, M. and Taylor, C. W.: Gynaecological Pathology, London, 1962, J. & A. Churchill Ltd., p. 62.
6. Hamann, A. and Gobel, A.: Zentralb. Gynak. **61:** 2526, 1937.
7. Hess, E.: Pennsylvania M. J. **48:** 1150, 1945.
8. Malpas, P.: J. Obst. & Gynec. Brit. Emp. **52:** 367, 1945.
9. Marshal, F. C., Uson, A. C. and Melicow, M. M.: Surg. Gynec. & Obst. **110:** 723, 1960.
10. Novak, E. R. and Woodruff, J. D.: Novak's Gynaecologic and Obstetric Pathology, ed. 3, Philadelphia and London, 1967, W. B. Saunders Co., p. 37.
11. Palmer, J. K., Emmett, J. L. and McDonald, J. R.: Surg. Gynec. & Obst. **87:** 611, 1948.
12. Taussig, F. J.: Surg. Gynec. & Obst. **60:** 477, 1935.
13. Youssef, A. F.: Gynaecological Urology, Springfield, Illinois 1960, Charles C. Thomas, p. 598.
14. Walther, H. W. E.: J. Urol. **50:** 380, 1943.
15. Willis, R. A.: Pathology of Tumours, ed. 3, London, 1960, Butterworths, p. 480.

Figs. on Art Paper V