

A RARE CASE OF ADENOCARCINOMA OF BLADDER FOLLOWING AUGMENTATION ENTEROCYSTOPLASTY

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This is a report of a case of poorly differentiated adenocarcinoma found 20 years after bladder augmentation ileoplasty. The origin of this tumor was proved to be the ileal part of bladder augmentation. Autopsy revealed metastatic lesions in the stoma (sigmoid conduit), lungs, liver, left femur, adrenal glands and lymph nodes. A review of the literature revealed only one other such case. This is a rare case of adenocarcinoma in the ileal part of bladder augmentation.

Key words: Adenocarcinoma of bladder, Augmentation enterocystoplasty

INTRODUCTION

Augmentation cystoplasty using a segment of ileum, sigmoid colon or caecum is performed often to increase the functional capacity of a contracted bladder. Several reports on late complications of enterocystoplasty have been made, but tumor growth is very rare. Only one case of signet ring adenocarcinoma in the ileal segment of an ileocystoplasty has been reported¹⁾. We report a case of poorly differentiated adenocarcinoma of bladder found 20 years after bladder augmentation ileoplasty.

CASE REPORT

A 47-year-old male patient, who had undergone right nephrectomy and augmentation ileocystoplasty (cystography and superior mesenteric arteriography demonstrated part of the ileal segment anastomosed to the bladder, Fig. 1) caused by genitourinary tuberculosis 20 years

previously, was admitted to the Kobe University Hospital on March 3, 1981, with a 3-month history of asymptomatic gross hematuria. Urinalysis showed hematuria

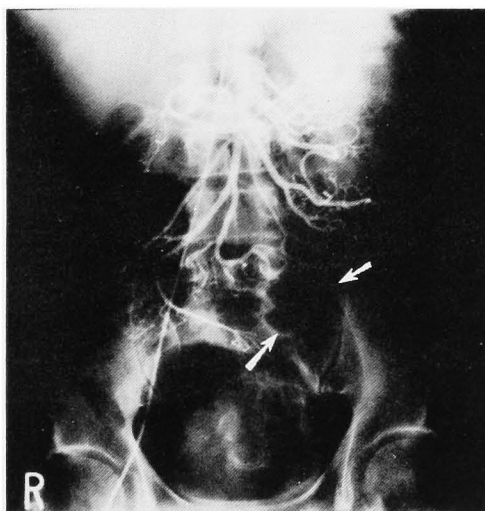


Fig. 1. Cystogram by air and superior mesenteric arteriogram show bladder and portion of U-shaped ileal tube (→).

and pyuria. *S. epidermidis* ($>10^5$ colony-forming units per ml) was isolated from urine. Urine cytology showed class IV.

Blood studies were normal. SMAC was within normal limit. By endoscopic examination, a tumor larger than a thumb head was noted on the posterior wall of the bladder. A cold punch biopsy revealed poorly differentiated adenocarcinoma suggestive of origin from intestinal epithelium.

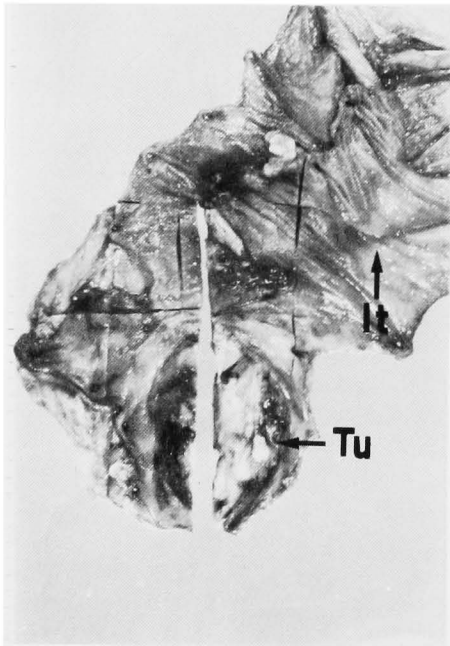


Fig. 2. Specimen of partial cystectomy: opened ileal tube (It) and tumor (Tu)

Partial cystectomy (Fig. 2) was performed on April 14, 1981.

Histologic examination showed an undifferentiated adenocarcinoma of intestine (Fig. 3). Carcinomatous elements could not be found within the wall of the bladder.

On July 30, cystoscopy showed recurrence of tumor. Undifferentiated adenocarcinoma was confirmed by biopsy. Total cystectomy and urinary diversion (sigmoid conduit) were performed on Oct. 19, 1981. The adenocarcinoma was confirmed on permanent histologic section (Fig. 4). No abnormal lymph node was noted.

A chest X-ray showed multiple metastatic lesions in the lung field on March 24, 1982 (Fig. 5).

Chemotherapy (CDDP, VCR, ACNU ...) was performed but in vain. The patient died on Jan. 11, 1983. Autopsy revealed metastatic lesions in the stoma (Fig. 6, 7), lungs, liver, left femur, adrenal glands and lymph nodes.

DISCUSSION

Augmentation enterocystoplasty has been performed for a long time to treat the contracted bladder caused by various diseases (e.g. tuberculosis, inflammation, carcinoma). Von Mikulicz²⁾ (1899) carried out the first enterocystoplasty using the ileum section of a man.

Since then the colon and the caecum

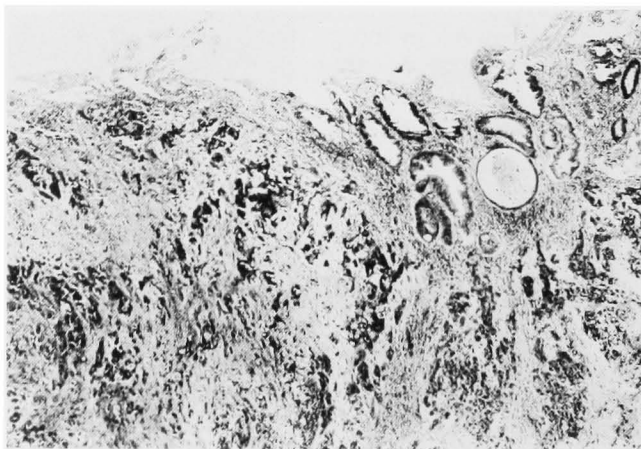


Fig. 3. Photomicrograph of tumor shows undifferentiated adenocarcinoma of intestine. H & E stain



Fig. 4. Only one slice of total-resected bladder wall proved to contain adenocarcinoma microscopically. H & E stain

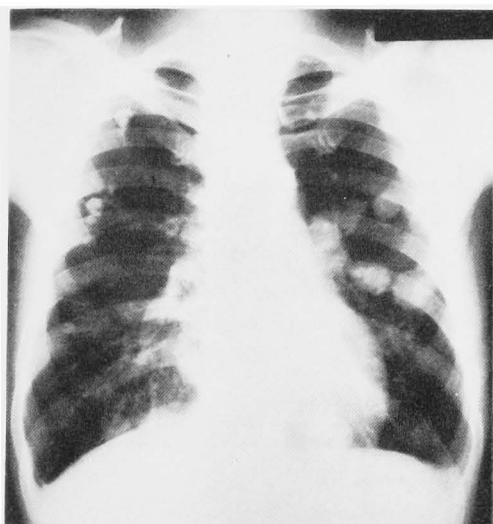


Fig. 5. Chest X-ray shows multiple coin lesions (metastatic recurrence of tumor).

have also been used for augmentation. Dounis³⁾ et al. reported that squamous cell carcinoma was found 5 years after bladder augmentation for the contracted bladder caused by tuberculosis. But this report did not describe the origin of the tumor. Malignancy originating from the ileum is extremely rare. Takasaki¹⁾ described signet ring adenocarcinoma in the ileal segment of bladder augmentation. In our case the tumor was found in the ileal

portion at the time of partial cystectomy. The tumor invaded the subserosa and lymph vessels on permanent section. This is why the recurrence following total cystectomy came so soon.

Total cystectomy should have been performed earlier. No invasive lesions had developed into the bladder wall when partial cystectomy was done.

Leadbetter et al.⁴⁾ reported that about 20 years was needed for the development of carcinoma of the colon after ureterosigmoidostomy. In the 1950s and the 1960s, augmentation enterocystoplasties were performed many times all over the world. Thus it is possible that the same case may be treated after enterocystoplasty.

REFERENCES

- 1) Takasaki E, Murahashi I, Toyoda M, Honda, M and Waku S: Signet ring adenocarcinoma of ileal segment following ileocystoplasty. *J Urol* **130**: 562~563, 1983
- 2) Von Mikulicz J: Zur Operation der angeborenen Blasenspalte. *Zentralblatt für Chirurgie* **26**: 641~643, 1899
- 3) Dounis A and Gow JG: Bladder augmentation—a long term review. *Brit J Urol* **51**: 264~268, 1979
- 4) Leadbetter GW Jr, Zickerman P and Pierce E: Ureterosigmoidostomy and carcinoma of the colon. *J Urol* **121**: 732~735, 1979

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和文抄録

遊離回腸を利用した膀胱拡張術後に発生した膀胱腺癌の1例

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前 田 盛

47歳男子にみられた，結核性萎縮膀胱に対するU字型遊離回腸移植膀胱拡張術後20年目に同移植回腸上皮

より発生したと考えられる膀胱低分化腺癌の1例を報告し，若干の文献的考察を加えた．