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SQUAMOUS CELL CARCINOMA OF THE URETER AS A LATE SEQUEL OF CUTANEOUS URETEROSTOMY: REPORT OF A CASE

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While cutaneous ureterostomy, as one of methods of urinary diversion, is a simple and convenient procedure, it has several kinds of disadvantages or complications such as urine leakage, necessity of catheter insertion, recurrent infection, stricture development, stone formation, or chronic renal failure. The authors are presenting here a case of squamous cell carcinoma of the ureter which occurred 17 years after cutaneous ureterostomy.

CASE REPORT

A 45-year-old official was admitted to the Department of Urology, Niigata University Hospital on Jan. 18, 1974, complaining of difficulty in catheter insertion from the ureterostomy stoma to the renal pelvis on the left. In 1952 a calculus was removed from the right ureter through ureterolithotomy. In September 1956 he had undergone bilateral cutaneous ureterostomies on account of contracted bladder of unknown origin. Since then management of catheters had been cared chiefly by the patient himself because of his unwillingness to visit the hospitals. Rubber catheters of 21~24 Charriere sizes had been passed and the renal pelves had been irrigated with 0.01% solution of Rivanol or Solution G. For 17 years the urine flow and renal function remained satisfactory in spite of occasional episodes of upper urinary tract infection.

On Jan. 13, 1974 the patient tried to exchange ureteral catheters without success on the left side. Immediately he visited the authors' department. Several attempts to pass catheters after preliminary gradual dilatation with metal bougies failed to get urine. Plain film of the abdomen on Jan. 16 (Fig. 1) showed calculous shadows in the both renal areas and suggested a false passage of the left indwelling ureteral catheter. Drip infusion urography on Jan. 18 (Fig. 2, A) and subsequent retrograde ureterography on the left side (Fig. 2, B) confirmed a false passage of the catheter and extravasation of the contrast medium. Admission on that day with a purpose of immediate nephrostomy on the left.

Physical examination revealed a thin and
tall man. The heart and lungs were normal. Both kidneys were not palpated, though there was some tenderness on the left renal region. Blood pressure measured 120/80 mm Hg. Hematological examinations were within normal limits except a slight acceleration of erythrocyte sedimentation rate. Cloudy urine from each kidney contained many pus cells and bacilli. Blood urea nitrogen measured 23 mg/dl and other blood chemical findings were within normal limits.

Under intubation anesthesia the left ureter was exposed through cicatric tissue with some difficulty. The ureteral catheter took a false course, running laterally along with the lower pole of the left kidney. In the true course of the left ureter a tumor of hen's egg size was met in its abdominal portion, which was adherent to the descending colon. Releasing it from the colon, the tumor was removed together with the entire course of the remaining left ureter and the false passage (Fig. 3). A nephrostomy catheter was passed into the renal

Fig. 2. A. Drip infusion urography.
   B. Retrograde ureterography: extravasation of contrast medium.

Fig. 3. Gross appearance of specimen with schematic illustration.

Fig. 4. Microscopic section of tumor: squamous cell carcinoma.

Fig. 5. Microscopic section of ureteral mucosa: squamous cell metaplasia.
pelvis through the renal parenchyma and
the wall of the renal pelvis was closed.
The calculus, the shadow of which was
shown on the plain film, was not found in
the renal pelvis.

The tumor measured 7.6 x 3.3 x 1.7 cm,
weighing 30 g. Pathological finding was
squamous cell carcinoma (Fig. 4). On care­
ful examination of the specimen there was
found also squamous cell metaplasia of the
mucosa in the upper portion of the left ure­
ter (Fig. 5). In the thickend ureteral wall
fibrosis and round cell infiltration of the
submucosa and muscularis were evident.

Postoperative course was uneventful.
Drainage of urine through left nephrostomy
tube was satisfactory. Because of pathologi­
cal diagnosis of squamous cell carcinoma,
treatment with bleomycin was given from
Feb. 1 to March 5 with a total dose of 150
mg. He was discharged on March 16. On
June 14, 1974 a fecal fistula from the
descending colon developed in the surgical
scar of the left flank. As general malaise
and emaciation progressed, the patient was
admitted again to the authors' department.
In spite of medical treatment the general
condition deteriorated gradually, and the
patient expired on Sep. 4, 1974. Autopsy
was not obtained.

DISCUSSION

Cutaneous ureterostomy is not a satisfac­
tory method of urinary diversion because
of its inconvenience and complications.
Comparing nephrostomy with cutaneous
ureterostomy, Wosnitzer and Lattimer
(1960)\textsuperscript{1} stated that they had experienced
troubles concerning tube replacement such
as difficulty in reinserion, plugging, per­
foration or severe bleeding in case of
nephrostomy, while in case of ureterostomy
stricture or calculus formation. And they
regarded ureterostomy as slightly less trou­
blesome and relatively safe. In a follow-up
study of urinary diversion, Sato (1971)\textsuperscript{2},
one of the authors, verified a longevity of
twenty years or more in cases of cutaneous
ureterostomy, although most of the patients
often suffering from pyelonephritis, cal­
culus and/or stricture formation. Tumor
development in the ureterostomized ureter,
however, has not been recorded in the
literature.

As to tumor occurrence following urinary
diversion, it is known that ureterosigmoido­
dostomy was rarely accompanied with
colonic tumor. Whitaker et al. (1971)\textsuperscript{3} and
Rivard et al. (1975)\textsuperscript{4} reviewed such cases
in the literature, respectively. The former
collected 28 cases and the latter 32 cases.
But, of these cases, the tumors were situat­
ed mainly at the site of ureterocolonic ana­
ostomosis and were chiefly of glandular type,
which suggested that the tumors might be
of colonic origin. In the present case the
tumor was situated in the upper portion of
the ureter causing ureteric obstruction.
Though it was adherent to the descending
colon, it may be of ureteral origin, because
the pathology was squamous cell carcinoma
and there was also squamous cell metapla­
sia of the ureteral mucosa. Chronic infec­
tion and irritation due to indwelling catheters
may be causative.

SUMMARY

A case of squamous cell carcinoma of
the ureter, where cutaneous ureterostomy
had been performed 17 years previously,
was presented, in which chronic infection
and irritation due to indwelling catheters
might be causative.

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和文抄録

尿管皮膚瘜術の進行合併症としてみられた尿管扁平上皮癌の1例

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尿路変向の1つである尿管皮膚瘜術後17年を経て、左尿管から扁平上皮癌が発生した症例を経験したので報告した。

患者は45歳の公務員で、28歳のときに原因不明の腰痛で新潟大学病院で両側尿管皮膚瘜術が施行された。術後の経過は比較的順調であったが、17年後の1974年1月13日に左尿管にカテーテルがはいらなかったため、18日腫瘜を施行した。このとき尿管下端は皮膚口より約5cmの場所で一塊の灰白色、球形の腫瘜の中に埋まり、腫瘜は一部下行結腸と隣接していたが、剝離して腫瘜と尿管の摘除をおこない、腫瘜は縦合閉鎖して腫瘜を設けた。腫瘜は尿管から発生した扁平上皮癌で、他の尿管粘膜に扁平上皮癌がみられた。同年6月創部に結腸瘜を形成し、満次全身状態が悪化して、同9月4日死亡した。

カテーテル留置による慢性炎症と刺激が腫瘜発生の原因と考えられた。

* 教授 ** 助手