

Oncology

Villous adenoma of the urachus obscuring urachal adenocarcinoma: A case report

Yuri Nishikawa^{*}, Kuniyasu Muraoka, Tadahiro Isoyama

Department of Urology, Tottori Prefectural Central Hospital, 730 Ezu, Tottori, 680-0901, Japan



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ABSTRACT

We report a case of a 78-year-old woman with a urachal tumor of the bladder wall. We performed a biopsy and revealed the tumor as a villous adenoma. We excised the tumor by partial cystectomy together with the umbilical ligament, because it was possible there was a co-existing malignancy. The tumor turned out to be villous adenoma and a urachal adenocarcinoma. Because the superficial section of the tumor consisted only of adenoma, a biopsy could not identify the malignant component. Villous adenoma of the urinary tract or the urachus is very rare, and it is considered as an intestinal premalignancy.

Introduction

Urachal carcinoma is a rare, non-uroepithelial carcinoma that accounts for 0.01% of all malignant tumors and 0.35% of bladder carcinomas.¹ Villous adenoma is an uncommon neoplasm of the bladder. Here, we present a case of urachal adenocarcinoma in a patient first diagnosed with villous adenoma by biopsy.

Case presentation

A 78-year-old woman reported to the cardiovascular surgery department of our hospital for a Stanford type B aortic dissection. On a follow-up CT scan, a well-contrasted urachal tumor was found. CT scans showed it was located on the dome of the bladder, continuous to the umbilical ligament, and had grown in diameter from 15.88mm to 24.16mm over two years. This was observed as a papillary tumor at the vesicourachal diverticulum on MRI examination. By cystoscopy, the tumor was located at the dome of the bladder (Fig. 1). We performed a transurethral biopsy and the result was villous adenoma.

We resected the urachal tumor as follows: Firstly, we marked around the tumor with a transurethral resectoscope, made an abdominal incision to reach the bladder and identified the tumor continuous to the bladder and the urachal remnant. Subsequently, we opened the bladder wall and excised the tumor along the marking, removing it with the urachal remnant as a single mass. The patient recovered well and left the hospital nine days after surgery.

Our final pathological diagnosis was villous adenoma with muscle-

invasive urachal adenocarcinoma (Fig. 2A). The superficial part of the tumor was almost all villous adenoma, but the inner region contained mucinous adenocarcinoma (Fig. 2A). The patient refused further treatment, after our proposal of an additional excision of the umbilicus, so we continue to follow-up by monitoring.

Discussion

Villous adenoma is a benign tumor most commonly originating from intestinal epithelium. Villous adenoma of the bladder and urachus is very rare and there are only a few case reports. This phenomenon occurs in adults, of whom most are over 50 years old. Patients present with hematuria and irritated abdominal symptoms². Villous adenoma alone has a good prognosis and does not recur or progress after surgery.^{2,3} However, some case reports have showed the concurrence of villous adenoma and adenocarcinoma in the urinary tract. Kato et al. have summarized cases of villous adenoma in the urinary tract, with and without carcinomas.³ In this report, 34 of 62 cases were solitary villous adenoma cases, 24 coexisted with adenocarcinoma, two with urothelial carcinoma and two contained both of these carcinomas. Cheng et al. have also presented 23 cases of villous adenoma of the urinary tract, of which eight had coexisting adenocarcinoma.⁴ About one third of villous adenoma cases of the urinary tract are thought to have concurrent adenocarcinoma and/or another malignancy. These reports include cases in all regions of the urinary tract, not only the urachus. In the described cases, villous adenoma in the urachus is very rare.

In this case, we couldn't exclude the coexistence of a malignancy

^{*} Corresponding author.

E-mail addresses: nishiiruka@gmail.com (Y. Nishikawa), muraokak@tp-ch.jp (K. Muraoka), isoyamat@tp-ch.jp (T. Isoyama).

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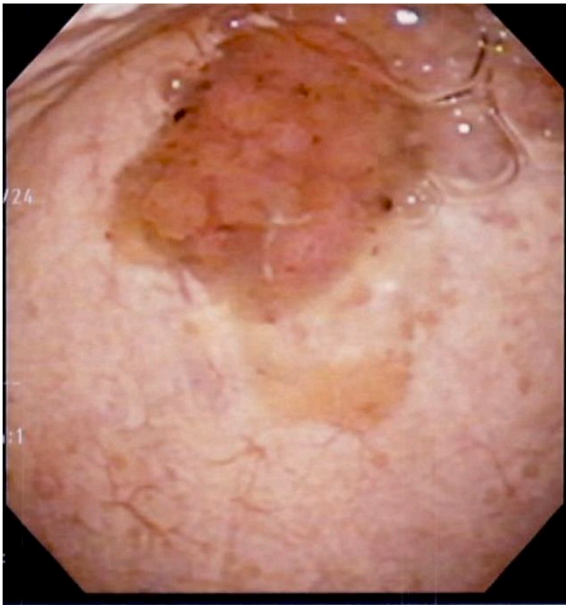


Fig. 1. Gross specimen showing the papillary urachal tumor of the bladder dome by cystoscopy.

(after reviewing the literature) we excised the bladder tumor together with the urachal remnant. Considering previous reports, we strongly considered resecting the umbilicus. However, pure villous adenoma has a good prognosis and doesn't require invasive surgery. Therefore, we considered partial cystectomy with excision of the umbilicus an excessive treatment for such a tumor. We performed a careful examination, using image investigation and biopsy, to avoid excessive surgery. In this case, following this process, we could not find the malignant component because of the localization of the adenocarcinoma. The case reported by Joniau et al. is very similar to ours⁵: Initial transurethral biopsies of the larger tumor showed only a villous adenoma of the urachus. However, this obscured urachal adenocarcinoma underneath the villous adenoma.

When villous adenoma is found by biopsy, we suggest performing a transurethral resection of the tumor and examining its internal components. If there is only villous adenoma in the transurethral resection samples, no further aggressive treatment is necessary.

The prognosis of urachal adenocarcinoma is poor and umbilical resection should be performed, in addition to partial cystectomy, for patients with urachal carcinoma.¹ We offered to additionally resect the patient's umbilicus, however this was refused. We continue to carefully monitor the patient for recurrence.

Conclusion

We have observed a villous adenoma occurring simultaneously with adenocarcinoma of the urachus. We could not discover the adenocarcinoma with a superficial biopsy. Villous adenoma is very uncommon, particularly in the urachus. However, it can exist concurrently with malignant components, according to some case reports. As such, these premalignancies may require more aggressive treatment.

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Authors' contributions

KM and TI, YN performed the surgery. YN drafted manuscript. KM and TI finalized the manuscript. All authors have read and approved the final manuscript.

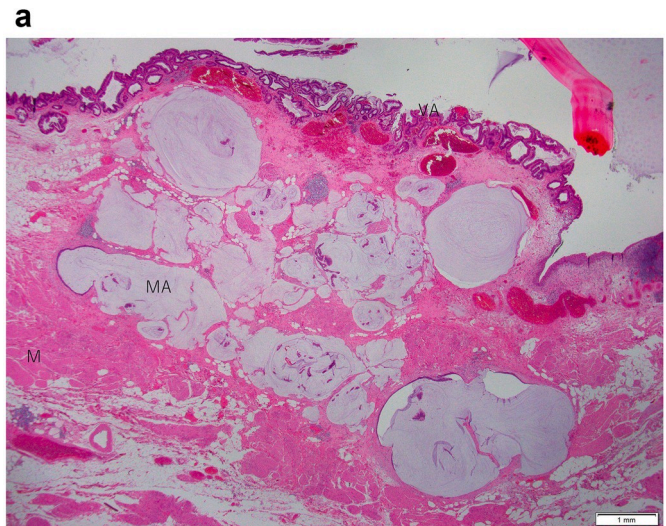


Fig. 2. A) Hematoxylin-eosin staining of a surgical specimen showing superficial villous adenoma (VA) and a deeper layer of mucinous adenocarcinoma (MA) infiltrating the muscle (M). B) An enlarged image of A.

Consent for publication

Not applicable.

Ethics approval

We secured the patient's consent for the presentation of their case, and approval by the Ethics Committee of Tottori Prefectural Central Hospital (the reference number 2019-77).

Declaration of competing interest

The authors declare that they have no competing interests.

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