Urachal adenocarcinoma masquerading as an urachal cyst

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Abstract Urachal adenocarcinoma arising in the dome of the bladder or at the pre-existing urachal remnant is rare. An early case of urachal cyst harboring adenocarcinoma, clinically diagnosed as ovarian tumor, which was surgically removed with a good prognosis is reported.

Keywords Adenocarcinoma · Urachal cyst

Introduction

Due to rarity of this entity, it is difficult to make a proper pre-operative diagnosis. The diagnosis is usually late because of long clinical latency and carries a poor prognosis. Here we report a case of incidental urachal carcinoma in an urachal cyst. A review of literature helps us to demonstrate the rarity of this tumor and to manage the case on its various clinical presentations, diagnostic workup and therapeutic guidelines.

Case report

A 32-year-old lady presented with a slow growing lower abdominal lump for last one year. She denied any pain, fever, dysuria, frequency or change in bowel habits. Her menstrual period was regular. On physical examination the patient appeared healthy. Abdominal examination showed a rounded, smooth, nontender, infraumbilical, intra-abdominal mobile lump of 8 cm diameter. She was normoglycaemic with normal renal biochemical parameters. Urine examination was normal. USG of abdomen suggested a cystic lump with a solid component inferiorly with foci of calcification, which was separated from the urinary bladder (Fig. 1), with a normal upper urinary tract. CT scan confirmed the same findings with a normal left ovary but the right ovary was not clearly visualized due to the overlapping mass without any pelvic lymphadenopathy. Cystoscopy showed no mucosal abnormality. On opening the abdomen, there was a cystic tumor attached to the dome of urinary bladder, which compressed the right ovary. The whole tumor was removed along with partial cystectomy, and bladder drained with a Foleys' catheter. Histopathological examination suggested

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Fig. 1 USG of abdomen showing a cystic lump with a solid component inferiorly with foci of calcification, which was separated from the urinary bladder

adenocarcinoma in an urachal cyst (Fig. 2). She is on regular follow up for last three years without any local or distant metastasis.

Discussion

Urachal carcinoma is extremely uncommon [1–4]. It constitutes up to 0.34% bladder carcinoma and arises from the pre-existing urachal remnant at the junction between urachus and bladder [2]. Carcinoma in an urachal cyst is very rare and only few cases have been reported [2, 3]. Most cases of urachal adenocarcinoma occur in the fifth or sixth decade of life; which is about 10 years less than for bladder adenocarcinoma and were more in females than those with nonurachal tumours [5]. Anatomically, though primary bladder adenocarcinoma may arise from any portion of the urothelium, urachal tumours originate from a remnant of the urogenital sinus that extends from the bladder to the umbilicus [5]. The normal urachus and bladder are lined with transitional epithelium with a high potency for glandular metaplasia. The histogenesis of urachal adenocarcinoma is through metaplasia of potent transitional epithelium due to chronic irritation by low-grade infection [2]. The most common presentation of urachal carcinoma is palpable suprapubic mass or haematuria [2, 3]. But pri-

Fig. 2 Histopathological examination showing adenocarcinoma in an urachal cyst

mary adenocarcinoma of the bladder usually presents only with haematuria or features of metastasis but never with suprapubic mass. Ultrasonographic demonstration of a tumor in the bladder dome contiguous with a superior mass is diagnostic of urachal ca [2]. CT scan helps to identify any adjacent organ involvement or pelvic nodes. Cystoscopic demonstration of a tumor near the bladder dome with a suprapubic mass on bimanual palpation confirms the

diagnosis of urachal ca [2]. Sometimes cystoscopy may not show any abnormality in a case of urachal cyst unless it involves the bladder dome as in this case. The recommended surgical treatment for urachal carcinoma is partial cystectomy with en block resection of the urachal mass, posterior rectus fascia, part of peritoneum and umbilicus with pelvic nodes [2–4] as it arises from the urachus which is attached from the bladder dome to the umbilicus. But management in primary bladder adenocarcinoma is only radical cystectomy. In this case, as the preoperative diagnosis was not confirmed only excision of the tumor with partial cystectomy was done with a strict follow up. Urachal carcinoma carries a poor prognosis with 5-year survival rate of 6.5–10% [2–4] whereas reported 5 years survival rate for primary bladder adenocarcinoma is 11–55% [5]. But the carcinoma in a urachal cyst carries a better prognosis due to earlier detection of palpable lump as in our case which is disease free till 3-years of follow up.

References

1. Rubin JP, Kasznica JM, Davis CA 3rd, Carpinito GA, Hirsch EF (1999) Transitional cell carcinoma in an urachal cyst. *J Urol* 162:1687–1688
2. Rave R, Shrivastava BR, Chandrasekhar GM, Prahalad S, Balasubramanian KV, Mallikarjuna VS (1992) Adenocarcinoma of the urachus. *J Surg Oncol* 50:201–203
3. Tokinaga K, Inoue K, Yamasaki I, Yamashita A, Yamashita M, Shuin T, Kamei Y (1997) Microscopic foci of urachal carcinoma in an incidentally detected urachal cyst: a case report. *Hinyokika Kiyo* 43:731–733
4. Ashley RA, Inman BA, Sebo TJ, Leibovich BC, Blute ML, Kwon ED, Zincke H (2006) Urachal carcinoma: clinicopathologic features and long-term outcomes of an aggressive malignancy. *Cancer* 107:712–720
5. Wright JL, Porter MP, Christopher IL, Lange PH, Daniel WL (2006) Differences in survival among patients with urachal and nonurachal adenocarcinomas of the bladder. *Cancer* 107: 721–728