Asian Journal of Surgery (2019) 42, 721–722

Available online at www.sciencedirect.com

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LETTER TO EDITOR

Primary urachal actinomycosis: A case report

KEYWORDS
Urachal actinomycosis;
Case report;
Urachal carcinoma

To the editor,

A 46 y woman, who found a subabdominal mass for 2 weeks and subabdominal pain for 2 days, was hospitalized. The pain was tolerable paroxysmal pricking, worse with activity or lateral position.

Ultrasound showed a hypoechoic subabdominal mass pressed on bladder, with heterogeneous echotexture and few venous blood flow signals. Enhanced CT showed a 4.9 cm × 5.4 cm × 13.2 cm heterogeneously enhanced mass located in region of median umbilical ligament. Boundaries among mass, tissues around and bladder were unclear. Primary diagnosis of CT was urachal malignant neoplasm invading surrounding peritoneum (Fig. 1). PET-CT showed a hypermetabolic mass located in region of median umbilical ligament with unclear boundaries. Several mesenteric and retroperitoneal lymph nodes were a little hypermetabolic, biggest size of which was 0.9 cm. Spleen and bone marrow were hypermetabolic. Primary diagnosis of PET-CT was also urachal malignant neoplasm (Fig. S1). Cystoscopy found a mass in vertex of bladder, pressing from outside. The urothelium was intact and biopsy from surface of mass revealed chronic inflammation.

Blood test: HGB 78 g/L (103 g/L one year ago), RBC 2.9 × 10^{12}/L, WBC 12.3 × 10^{9}/L, PLT 444.0 × 10^{9}/L; stomatocytosis found; serum ferritin, folate and vitamin B12 level normal; biochemical, coagulation test almost normal; preoperative immune test normal; FT3, FT4, TSH normal. Rheumatism test and immunity test were almost normal, except for CRP and IgG. Stool routine test: normal and OB (−). Urine routine test: RBC 23.4/μL, WBC 16.5/μL, SPC 124.7/μL, bacteria 1007.6/μL and NIT (−).

Hypertension, diabetes or heart disease were denied. Had chronic gastritis for years. Gastroscopy and antrum mucosa biopsy (18 months ago) indicated chronic non-atrophic gastritis with intestinal metaplasia. Two polyps (< 0.5 cm) were removed on colonoscopy and biopsy was villioustublar adenoma. Had surgical treatment for clavicle fracture years ago. GPAL was 1-0-0-1. Contraceptive device was denied.

Preoperative diagnosis tend to urachal malignant neoplasm. Subabdominal tumor resection and partial excision of bladder, rectus abdominis, rectus sheaths, peritoneum were operated. The mass adhered to part of bladder, rectus abdominis, peritoneum, intestinal tract and omentum majus. Postoperative pathology was deep urachal actinomycosis with chronic suppurative inflammation, and resection margins (left, right, dorsal) were chronic mucosal inflammation (Fig. S1). Postoperative diagnosis was primary urachal actinomycosis. Postoperative penicillin treatment was given intravenously for 6 weeks (320 × 10^{4}U, q8h), then orally for an additional 6–12 months (500 mg, q8h). 5 months after operation, contrast CT was reexamined and no recurrence was found (Fig. S2).

Actinomycetes, as normal flora, is a filamentous gram positive bacillus. Actinomycosis is a chronic purulent granulomatous disease mostly caused by actinomyces israelii.[1] Primary urachal actinomycosis is rarely reported and easily mistaken with malignancy, bowel tuberculosis, crohn disease, diverticular or rectus sheath pathologies.[2] Correct preoperative differential diagnosis is difficult. Several

https://doi.org/10.1016/j.asjsur.2019.02.010

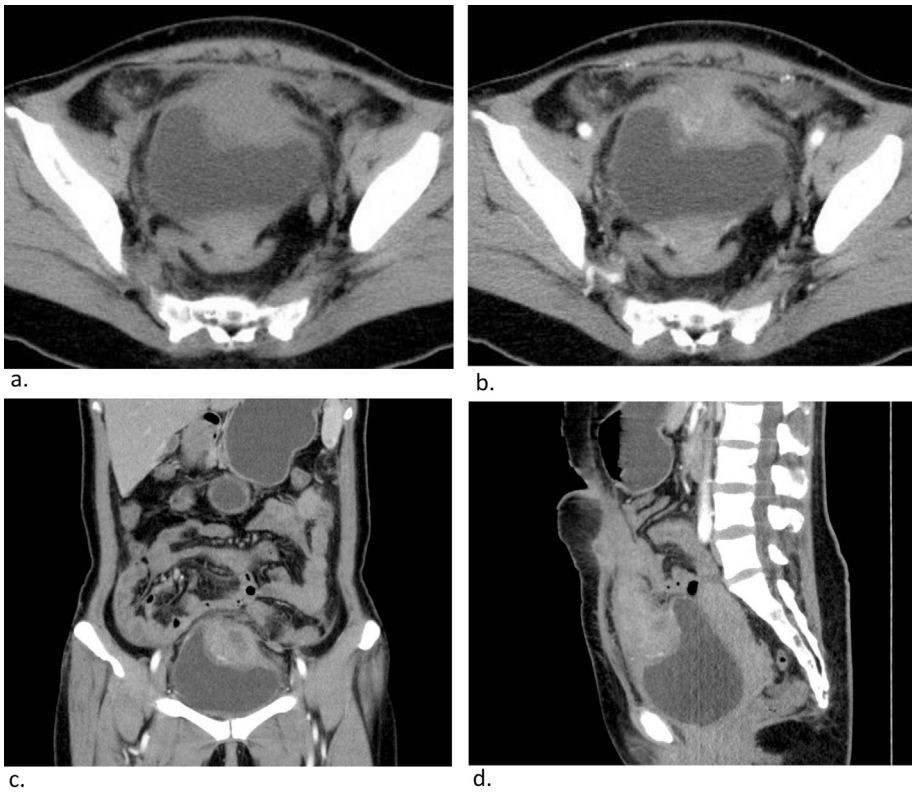

Figure 1 **(a—d)** Preoperative contrast material—enhanced CT images. **b.** arterial phase.

abdominal actinomycosis cases had anemia.[3] Our case had anemia for more than one year. Stomatocytosis, hypermetabolic spleen and bone marrow were also found. As a consumptive disease, urachal actinomycosis may cause anemia and related secondary affection. As conditional pathogen, anemia might provide appropriate conditions for actinomyces.

Funding

This study was funded by The Science Fund founded by the First Affiliated Hospital of Xiamen University for Young Scholars (Project Number: XYY2016011; Recipient: Jiaxuan Qin).

Conflicts of interest

All authors declare there is no conflict of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.asjsur.2019.02.010.

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7 February 2019