

Imaging diagnosis

Case 375

2. Urachal cancer or 3. Urachal abscess

【Progress】

He got a transvenous infusion of red blood cells of 4 packs. Laboratory data revealed elevation of hemoglobin from 4.6g/dL to 10.4g/dL. He was scheduled to be introduced to move stem hospital where both urologists and surgeon could serve together.

【Discussion】

Urachal duct plays a role of functioning nitrogen excretion from placenta in terms of fetus. At four months after gestation, as urinary tract develops, urachal duct begins to occlude, inducing to become like a string (1, 2). When its occlusion is incomplete, urachal remnants remain. There are four types-remnants: normal complete occlusion, urachal sinus, urachal cyst, urachal diverticulum, and patent urachus (3). Of the incomplete occlusions, it is reported that urachal sinus occurs most, followed by urachal diverticulum, urachal cyst and patent urachal duct (3-5). The incomplete urachal duct can cause urachal abscess and urachal cancer.

Urachal abscess is reported that urachal sinus abscess occurs most 68.4% in Kyusyu and Okinawa, the southern area of Japan (6). In our hospital situated in south Osaka, we often encounter patients with umbilical abscess or paraumbilical infection, some of them come from urachal abscess. Meanwhile, umbilical cyst or patent umbilical duct has never been encountered. For imaging diagnosis of urachal lesion, either urachal sinus or urachal diverticulum, sagittal CT view is useful to detect.

Urachal cancer arisen from urachal remnants occurs at the upper anterior part of urinary bladder. It is reported that adenocarcinoma is the most for urachal cancer. Adenocarcinoma for urinary bladder cancer can arise from urinary bladder epithelium. Adenocarcinoma originated from urachal duct can be judged from that cancer invades more predominantly in muscular layer or deeper than in superficial layer. Of all bladder cancer, urachal adenocarcinoma occurs in 0.3% (6,7). Of all bladder cancer with adenocarcinoma, urachal adenocarcinoma occurs in 30% (6). Urachal cancer occurs in 50ies to 60ties most, predominantly in male versus female (2 :1)(6). Main chief complaints are nothing or hematuria.

The images of urachal abscess mimic urachal cancer. It is reported that the differentiations on ages, location, sizes and image findings between them are difficult. Meanwhile, symptoms of hematuria and abdominal pain are useful; hematuria urachal cancer 11/13, urachal abscess 1/14: abdominal pain 0/13, urinary abscess 5/14 (8, 9).

Swollen sigmoid murals are often encountered from intrinsic and extrinsic factors. As intrinsic factors, carcinoma, diverticulitis, ulcerative colitis, feces rupture are listed, while appendicitis, tumor dissemination and others (urachal abscess or cancer in this case) are listed.

In our case, urinary tumor arisen from anterior and upper portion of urinary bladder mural grows to extra-urinary and infiltrate to sigmoid colon making fluid retention covered with capsule mimicking abscess formation. The patient experienced no abdominal pain and no hematuria. Though final results are not clarified, either urachal abscess or urachal cancer is suspected for this patient.

【Summary】

We presented a fifty-nine-year-old male with appetite loss and fragile slender. Laboratory test revealed marked anemia and mild inflammatory change of CRP 0.4mg/dL. Abdominal CT depicted urachal mass with infiltration to the surrounding sigmoid colon with abscess formation. It is borne in mind that urachal tract plays roles of excretion of waste from placenta until urinary bladder development. Four months after gestation, urachal tract occlude and become string as time progresses. When incomplete occlusion occurs, urachal remnant remains as sinusoid type, diverticular type, cyst type, and patent type. Although image differentiation between them is sometimes difficult, presence or absence of symptoms such as hematuria and abdominal might be useful for their differentiation.

【References】

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