Bordelek hernia causing right ureteric obstruction with pyelonephritis

Masatomo Kanno1, Fumihiro Oshita2*, Kuboi Yoriko1, Shinsuke Ueta1, Natsuki Kawata1, Yuichi Kurakami1, Mao Matsubayashi1, Keisuke Iwabuchi3, Yohsuke Kunishi1, Mitsuyasu Ohta1, Takeshi Watanabe1 and Kohichiro Yoshie1

1Department of General Medicine, Kanagawa Prefectural Ashigarakami-hospital, Matsudasouryo 866-1, Matsuda-machi, Kanagawa 258-0003, Japan
2Department of Pulmonary Medicine, Kanagawa Prefectural Ashigarakami-hospital, Matsudasouryo 866-1, Matsuda-machi, Kanagawa 258-0003, Japan
3Department of Urology, Kanagawa Prefectural Ashigarakami-hospital, Matsudasouryo 866-1, Matsuda-machi, Kanagawa 258-0003, Japan

Abstract

Bordelek hernia (BH) is a congenital hernia of the diaphragm and is most asymptomatic. Besides, adult symptomatic BH on the right side is rare. We herein report a case of BH that caused pyelonephritis due to the right ureter obstruction. We detained a ureteric stent to the renal pelvis and treated pyelonephritis with ceftriaxone. The patient was relief from pyelonephritis in 3 days. We should note that pyelonephritis is caused by BH containing the ureter obstruction in the rare.

Introduction

Bordelek hernia (BH) is a congenital hernia of the diaphragm with an overall prevalence in adults of between 0.17 to 10.5% [1-4], and is most asymptomatic. Besides, adult symptomatic BH on the right side is rare [5,6]. This is a first report that an elderly female complained pyelonephritis by obstruction of the right ureter due to BH.

Case report

An 85 years old female administered to the emergency department with moderate back pain and chilling on a background of a month history of intermittent hematuria. She had hypertension and required medication. On examination, she had fever with a temperature of 37.5°C. The blood pressure was 110/80 mmHg, the pulse 119 beats per minute. The respiratory rate 24 beats per minute. There was some mild flank tenderness on the right. Respiratory and abdominal examination was normal. There was no edema of the arms and legs. Laboratory data revealed that serum creatinine was elevated at 1.64 umol/L, eGFR was 23.3 mL/L. Inflammatory markers were elevated such as white cell counts at 10,900/μL (reference range 4,000 to 8,000/μL) and C-reactive protein at 5.1 mg/dL (reference range below 0.3 mg/dL). Urinalysis revealed mild hematuria by dipstick, and bacteria with mild leukocytes were detected in urinary sediment. There were no abnormal signs of the abdomen on plain radiographs. A computed tomography (CT) scan demonstrated a BH of the right diaphragm. Right ureter partially was into the thorax through the hernia. The ureter was obstructed at the neck of hernia and was then dilated in the thorax. The right kidney located in abdomen, however the right pelvis was also dilated (Figure 1). There was no ureter dilatation below the hernia in the abdomen. The presence of pyelonephritis is only in our case. The BH in adults was presented from an incidental finding on imaging to strangulation of intra-abdominal contents with significant morbidity and mortality. Symptoms are often non-specific such as abdominal pain, dyspnea, chest pain and nausea. There was an asymptomatic case to be discovered incidentally. Diagnosis is usually via imaging and CT provides the most accurate and reliable method [2,12]. Discontinuity of the posterior diaphragm is usually clearly identified protrusion of intra-abdominal contents including ureter is clear. Importantly, CT scan identified associated complications of ureteric herniation including hydro-nephrosis and hydro-ureter, which is evidenced by

Correspondence to: Fumihiro Oshita, MD, Department of Pulmonary Medicine, Kanagawa Prefectural Ashigarakami-hospital, Matsudasouryo 866-1, Matsuda-machi, Kanagawa 258-0003, Japan, Tel: +81-465-83-0351; Fax: +81-465-82-5377; E-mail: foshita@ashigarakami-hospital.jp

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not recommended because of minimal benefits as the risk of further herniation over their remaining lifetime. She is required regular CT imaging in order to check recurrence.

In conclusion, we described a case of an 85-year-old female presenting with a right-sided BH causing hydro-nephrosis and hydro-ureter with pyelonephritis. Symptomatic BH in adult patients is rare and there have been only four cases of BH containing ureter in the literature. Ureteric stent with antibiotics offers a safer alternative to surgical repair of the hernia with pyelonephritis and may be a more appropriate treatment in elderly patients. We should note that pyelonephritis is caused by BH containing the ureter obstruction in the rare.

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