A Psoas Abscess After Percutaneous Ethanol Sclerotherapy of Simple Renal Cyst

Basit Böbrek Kisti Perkütan Etanol Skleroterapisi Sonrası Gelişen Psoas Absesi

Skleroterapi Komplikasyonu: Psoas Absesi / Psoas Abscess as a Sclerotherapy Complication

Tarık Yonguc, Volkan Sen, Ibrahim Halil Bozkurt, Ozgu Aydogdu, Ismail Basmacı
Department of Urology, Izmir Bozyaka Training and Research Hospital, Izmir, Türkiye

Özet

Özet: Basit böbrek kistleri erişkinlerde sık görülmekle birlikte genellikle asemptomatiktirler. Ancak bazı hastalarda yan ağrısı, hematüri, kist rüptürü, hemoperitoneum ya da hipertansiyon gibi semptomlar gelişebilmektedir. Semptomatik böbrek kistleri çeşitli cerrahi ve perkütan yollarla tedavi edilebilirler. Perkütan skleroterapi tedavisi diğer yöntemlerle karşılaştırıldığında; daha az ağrı, kanama ve yatış süreleri nedeniyle daha sık kullanılan bir yöntem olmasına rağmen nadir de olsa lokal ya da sistemik komplikasyonlar meydana gelebilir. Bildiğimiz kadarıyla perkütan skleroterapi sonrası psoas absesi gelişen olgumuz literatürde ilk vakadır. Bu nedenle sunmaya değer bulduk.

Anahtar Kelimeler

Basit Böbrek Kisti; Etanol Skleroterapisi; Perkütan Skleroterapi; Perkütan Skleroterapi Komplikasyonları; Psoas Absesi

Abstract

Simple renal cysts are common and usually asymptomatic in adults. However some patients may experience symptoms and signs as; flank pain, hematuria, cyst rupture, hemoperitoneum or hypertension. Symptomatic renal cysts can be managed by the variety of surgical and percutaneous methods. Percutaneous sclerotherapy is more widely used compared to the other treatment methods, because of less pain, less bleeding and shorter hospitalization time. However some local and systemic complications may occur rarely. To the best of our knowledge, this is the first case with the abscess formation in retroperitoneum after percutaneous ethanol sclerotherapy in the literature.

Keywords

Ethanol Sclerotherapy; Percutaneous Sclerotherapy; Percutaneous Sclerotherapy Complications; Psoas Abscess; Simple Renal Cyst

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Corresponding Author: Volkan Sen, Department of Urology, Izmir Bozyaka Training and Research Hospital, Izmir, Turkey.
GSM: +905533896859 E-Mail: sen_volkan@yahoo.com

Introduction

Simple renal cysts are common and usually asymptomatic in adults and increases with age, with an incidence of 50% in autopsied patients over 50 years of age [1]. Although most simple renal cysts are asymptomatic; some patients may experience symptoms and signs as; flank pain, hematuria, cyst rupture, hemoperitoneum or hypertension. Symptomatic renal cysts can be managed by the variety of surgical and percutaneous methods; including percutaneous aspiration (with or without injection of a sclerosing agent), endoscopic marsupialization or excision, open surgery and laparoscopic cyst excision. Percutaneous sclerotherapy is more widely used compared to the other treatment methods because of less pain, less bleeding and shorter hospitalization time [2]. However some local and systemic complications may occur rarely. To the best of our knowledge, this is the first case with the abscess formation in retroperitoneum after percutaneous ethanol sclerotherapy in the literature.

Case Report

A 65 years old female patient presented with a 2-month history of right flank pain. She had no hematuria, disuria or any urological symptoms. Her abdomen was unremarkable and no costovertebral angle tenderness was observed in a physical examination. Laboratory analysis revealed as a serum creatinine 0,9 mg/dl, hemoglobin 13,7 g/dl and normal urine test. A 10 cm simple cyst at the upper pole of right kidney was detected in abdominal ultrasonography (US). The association of cyst and collecting system was excluded with magnetic resonance imaging (MRI) (Figure 1). We performed percutaneous ethanol

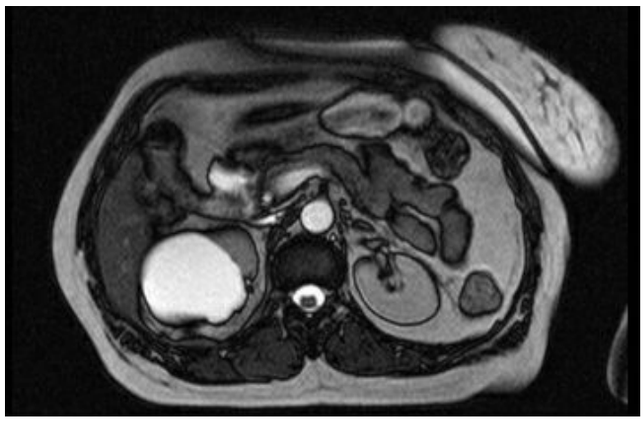


Figure 1. A 10 cm simple cyst at the upper pole of right kidney.

sclerotherapy to right renal cyst as there was a symptom of severe blunt right flank pain in the patient. Cyst puncture was done with an 18 G needle under US guidance in prone position after local anesthesia with lidocaine. The first 10 ml of aspirate was sent for cytological and biochemical examination. A pig-tail catheter was used for drainage of ethanol solution. At the end of the aspiration, 1 ml/kg (totally 80 ml) dehydrated 95% ethanol was injected into the cystic cavity. During instillation of ethanol a severe flank pain was occurred with the score 10 evaluated by visual analogue scale (VAS) scorring. Postoperative first day a pig-tail catheter was removed and the patient was discharged with anti-inflammatory drug and antibiotics.

The patient presented with a severe right flank and leg pain at the second week after procedure. Right costovertebral angle tenderness was positive in physical examination but she had no fever. The patient had difficulty in walking because of leg pain. She had leukocytosis in labarotory analysis and 90x38 mm psoas abscess was detected in US and MRI evaluations (Figure 2). Broad-spectrum intravenous antibiotics and non-steroidal



Figure 2. The psoas abscess in MRI.

anti-inflammatory drugs were given for treatment, bed rest and immobilisation of the affected leg were recommended for the patient. The patient was followed closely. The first week of after medical therapy, the size of abscess reduced and the symptoms became tolerable. The abscess was completely disappeared at postoperative third month controls.

Discussion

Simple renal cysts are common, usually incidentally diagnosed by US or CT. Symptomatic renal cysts can be managed by a variety of surgical and percutaneous methods. The advantages of percutaneous drainage of simple renal cysts are; minimally invasiveness, well tolerability, easy administration under US guidance and no necessity for hospitalization [3]. However, simple aspiration without sclerosing agents has high recurrence and low success rates [4]. Various sclerosing agents have been used to improve the efficacy of percutaneous drainage. In this wise, the combination of drainage and sclerotherapy reduces the rate of recurrence [4].

The most commonly used sclerosing agents for percutaneous sclerotherapy are bismuth phosphate, minocycline, ethanolamine oleate, povidone iodine, ethanol and acetic acid [4,5]. They destroy the lining epithelium of the cyst and provoke local inflammation on the luminal surface of the cyst leading to the adhesion of the walls [2]. Most of the studies were done with ethanol injection and it was found to be more effective than only percutaneous drainage in renal cysts [2,4]. However with the leakage of ethanol into the surrounding tissue, the minor complications such as local tissue corrosion, pain, fever, microscopic hematuria, vagal reactions and the major complications

such as aseptic abscess, perirenal hemorrhage, arteriovenous fistula, severe central nervous system depression are possible [2,4].

In this case we presented a 90x38 mm psoas abcess with the possible nerve injury due to the mass effect of abscess. The iliohypogastric, ilioinguinal and genitofemoral nevre injury caused by percutaneous simple renal cysts with ethanol are very rare complications of the procedure [6]. The lumbar plexus is derived from the anterior rami of the L1 through L4 nerve roots. These rami pass downward and laterally along the psoas major muscle where they eventually form the plexus and divide into anterior and posterior branches in psoas major muscle. L2–L4, the posterior branches of anterior rami, become the femoral nerve, which exits from the lateral aspect of the psoas, traveling through the iliacus and under the inguinal ligament to the anterior thigh. The lumbar plexus also gives off ilioinguinal, iliohypogastric and genitofemoral nerves [7]. The leg pain and difficulty walking of our patient may be connected with this mechanism of nevre injury. Because of these complications insertion of a pig-tail catheter into the cyst and ethanol aspiration from the renal cyst after instillation was recommended but this is controversial. We prefer inserting a pig-tail catheter in the management of simple renal cysts with ethanol. The management of aseptic psoas abscess includes broad-spectrum antibiotherapy, anti-inflammatory therapy and the drainage of the abscess. We did not need to drain the abscess because there was neither fever nor sepsis symptoms. We closely followed up the patient for the possible complications. At the 3 rd moth visite abscess was resorbed and the patient was completely cured. To the best of our knowledge, this is the first report of psoas abscess caused by percutaneous simple renal cyst sclerotherapy with ethanol. Although it was seen very rare, physicians should keep in mind the possibility of this severe complication. It could be managed with broad spectrum antibiotherapies, non-steroidal anti-inflammatory drugs and/or drainage.

Competing interests

The authors declare that they have no competing interests.

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