Case Report Olgu Sunumu

Blind-ending duplicate ureter with giant cystic dilatation

Dev kistik dilatasyon gösteren ve kör sonlanan duplike üreter

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Summary

Blind-ending ureter is a rare ureteric duplication anomaly. Most cases are asymptomatic and are detected incidentally. Blind-ending ureter with a huge cystic dilatation is extremely unusual. A 46-year-old man with a complaint of low back pain was referred from the neurosurgery department upon demonstration of a large cystic mass in the retroperitoneum by lumbar magnetic resonance imaging. Ultrasonography showed a large cystic mass filling the right side of the abdomen and the entire pelvis. Intravenous urography showed malrotation and lateral deviation of the right kidney with grade 1 hydronephrosis, severe dilatation of the ureter with proximal kinking, and medial deviation of the ureter. Computed tomography revealed a huge cystic mass beginning at the medial aspect of the upper pole of the right kidney, filling the right half of the abdomen and all the pelvis. The cyst had septations in the pelvis. Cyst aspiration yielded no atypical cells. During surgical exploration, it was noted that the cyst extended to the level of the upper pole of the right kidney and opened into the bladder with an ectopic orifice superior to the right ureter, suggesting the presence of a blind-ending ureter. The normal ureter was dilated and compressed. During resection of the cystic mass, the right ureter was injured and ureteroneocystostomy was performed. Histopathologic identification of the cystic lesion was made as uroepithelial cells. No complication was seen in postoperative period.

Key words: Ureter/abnormalities/surgery; ureteral diseases.

Özet

Üreter duplikasyonları içinde kör sonlanan üreter anomalisi çok nadir görülmektedir. Çoğu anomali asemptomatik seyirlidir ve rastlantısal olarak saptanır. Kör sonlanan üreterde dev kistik dilatasyon görülmesi ise son derece nadirdir. Kırk altı yaşında erkek hasta bel ağrısı nedeniyle gittiği nöroşirürji kliniğinden, lomber bölge manyetik rezonans incelemesinde retroperitoneal kistik lezyon görülmesi üzerine kliniğimize gönderildi. Ultrasonografide batın sağ yarısını ve pelvisi dolduran dev kistik lezyon görüldü. İntravenöz ürografide sağ böbrekte derece 1 hidronefrozla birlikte malrotasyon ve lateral deviyasyon, üreterde proksimal dolanma ile birlikte ciddi dilatasyon ve medial deviyasyon görüldü. Bilgisayarlı tomografide, sağ böbrek üst polü medialinden başlayıp batının sağ tarafını ve tüm pelvisi dolduran kistik lezyon izlendi. Kist pelviste septasyonlar içermekteydi. Aspire edilen kist sıvısında atipik hücre görülmedi. Eksplorasyonda kistik kitlenin sağ böbrek üst pole kadar uzandığı ve mesaneye sağ üreter orifisinin hemen üst seviyesinden açıldığı görüldü. Sağ üreterin ise kistik duplike üreterin basısı ile hafif dilate olduğu saptandı. Olguda kör sonlanan duplike üreter anomalisi olduğu düşünüldü. Sağ üreter, kistik üreterden ayrılırken iyatrojenik olarak kesildi ve üreteroneosistostomi yapıldı. Kistik lezyonun histopatolojik tanısı üroepitelyal hücreler şeklinde kondu. Hastanın ameliyat sonrası takibinde komplikasyonla karşılaşılmadı.

Anahtar sözcükler: Üreter/anormallik/cerrahi; üreter hastalığı.

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Introduction

Blind-ending ureter is a rare ureteric duplication anomaly. Most of the cases are asymptomatic and are detected incidentally during routine medical check-up or renal transplantation,[1,2] or they present as recurrent urinary tract infection and flank pain.[3] It differs from blind-ending branch of bifid ureter.[4] Huge cystic dilatation of the blind-ending ureter is extremely unusual. We report a case of blind-ending giant cystic ureter detected incidentally on lumbar magnetic resonance imaging scans obtained for low back pain.

Case report

A 46-year-old man with complaints of low back pain and right leg pain was referred from the neurosurgery department upon demonstration of a right

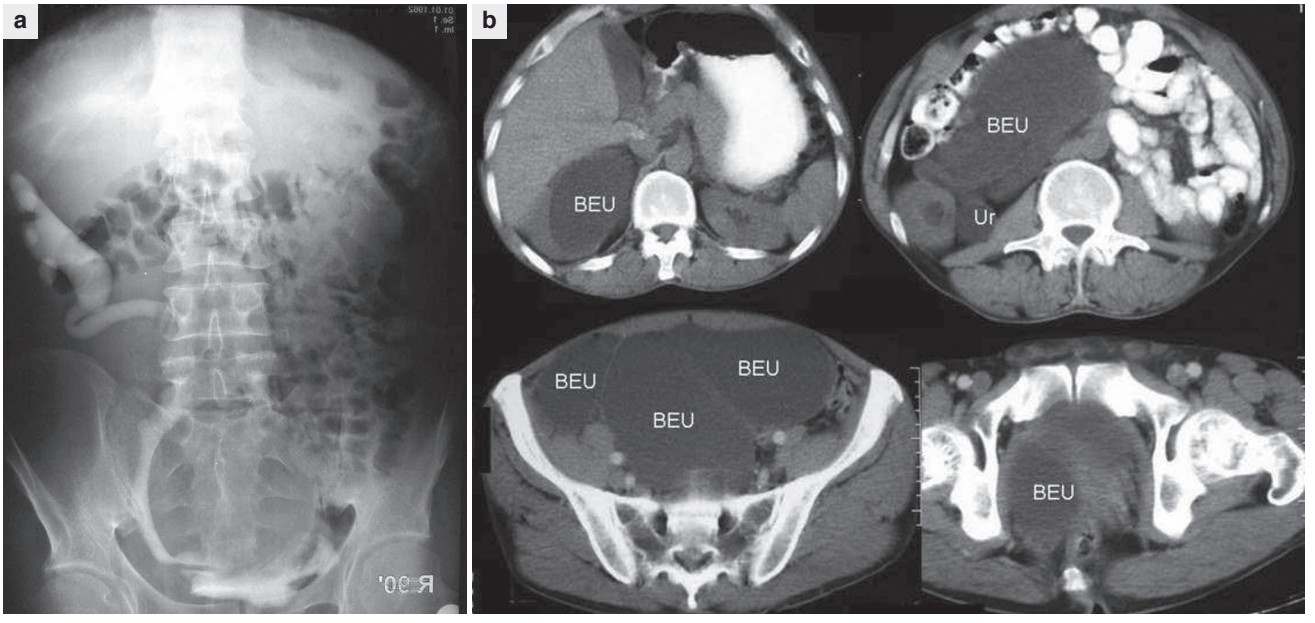

Figure 1 (a) Intravenous urography shows malrotation and lateral deviation of the right kidney with grade 1 hydronephrosis, external compression of the upper pole calyxes and renal pelvis, and kinking and dilatation of the ureter. (b) Computed tomography scans showing cystic dilatation of the blind-ending ureter (BEU) compressing the right kidney as well as the right ureter (Ur), and a cystic mass with fine septations in the pelvis.

paracentral disc extrusion at L_5-S_1 and a large cystic mass in the retroperitoneum by lumbar magnetic resonance imaging. No pathology was found on physical examination of the urogenital system. An ultrasound scan showed a large cystic mass filling the right side of the abdomen and the entire pelvis. Intravenous urography showed malrotation and lateral deviation of the right kidney with grade 1 hydronephrosis, severe dilatation of the ureter with acute proximal kinking, and medial deviation of the ureter (Fig. 1a). Computed tomography revealed a huge cystic mass beginning at the medial aspect of the upper pole of the right kidney, filling the right half of the abdomen and all the pelvis (Fig. 1b). The cyst had fine septations in the pelvis. Cyst aspiration revealed a clear fluid resembling urine and no atypical cells were found microscopically. During surgical exploration, it was noted that the cyst ended blindly at the level of the upper pole of the right kidney, compressing the renal pelvis and opened into the bladder with an ectopic orifice over the right ureter. The upper and middle parts of the normal ureter were dilated and distorted, and the distal part was compressed. During resection of the cystic mass, the right ureter was injured since it was very close to the cystic lesion. Therefore, ureteroneocystostomy was performed. Histopathologic identification of the cystic lesion was made as uroepithelial cells (Fig. 2). Postoperative course was uneventful.

Discussion

Blind-ending ureter is a rare ureteric duplication anomaly in which a renal segment is not drained. A huge cystic ureter with a proximal blind-ending and distal ectopic opening to the bladder was presented in this report. We observed that the blind-ending ureter had become a giant cystic mass due to chronic vesicoureteral reflux because of the ectopic opening to the bladder. De Boe et al.[5] reported a case of blind-ending ureteric duplication with ectopic and refluxing ureterocele. The right ureter was kinked and

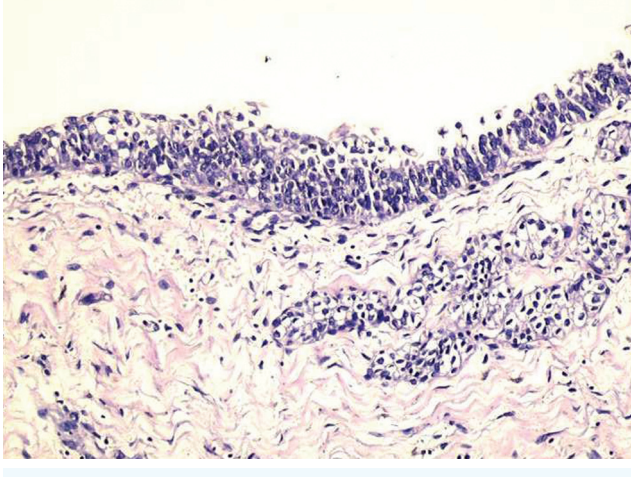

Figure 2 Uroepithelial cells (H-E x100).

dilated because of the mass effect of the other cystic ureter. In most cases, the blind-ending branch originates from the distal or middle third of the ureter.[3] Blind-ending bifid ureter in patients with complete duplication is extremely rare. Many of these blind segments cause no problems. The embryogenesis of blind-ending ureteral duplication does not differ from that of ureteral duplication, but one ureteric bud fails to develop completely without establishing contact with the metanephroi.[6] Different types of duplicate ureter anomalies have been reported such as inverted Y ureter, blind-ending duplicate ureter, and double-blind ureteral duplication. Most of the blind-ending duplicate ureters are in normal diameter. The length of the blind-ending branch varies from 1.5 cm to more than 20 cm.[6] Our case differs from other reported cases of blind-ending duplicate ureter in that it was associated with a giant cystic dilatation. Because of non-filling feature of the blind ureter in intravenous urography, careful cystoscopy, retrograde pyelography, and technetium-labeled dimercaptosuccinic (DMSA) renal scintigraphy may be required for diagnosis. Since there is an increased probability of vesicoureteral reflux in these patients, voiding cystourethrography (VCUG) should also be used to rule out this pathology. A DMSA renal scintigraphy can facilitate the diagnosis by showing a normal-appearing single system kidney. Since this rare anomaly was not initially considered, we did not perform VCUG and DMSA scintigraphy.

In conclusion, although it is extremely rare, blind-ending double ureter anomalies with cystic dilatation should be considered in the differential diagnosis of pelvic/retroperitoneal cystic masses.

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