CASE REPORT

Ureteral Obstruction Secondary to Inflammatory Isolated External Iliac Artery Aneurysm

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Introduction
Extrinsic obstruction of the ureter is a common urological problem in which the diagnosis may be difficult to establish. Isolated iliac aneurysm is uncommon and often gives rise to urinary tract obstruction.1–3 It should be considered when performing differential diagnosis of extrinsic ureteral obstruction. We report one patient with right hydroureretonephrosis secondary to extrinsic ureteral trapping due to inflammatory isolated external iliac aneurysm.

Case Report
A 49-year-old man was admitted because of right inguinal pain. Physical examination was unremarkable. Laboratory investigations revealed an ESR value of 54 mm/h. Excretory urography demonstrated a right hydroureretonephrosis. Retrograde pyelouretography revealed a right hydroureretonephrosis with lower ureteral stenosis. Computerised tomography (CT) of the abdomen confirmed a right iliac artery aneurysm of 4 cm in length and 2 cm in diameter and an encased right ureter.

At exploration, an isolated aneurysm of the right external iliac artery, 4 cm in length, and entrapment of the right ureter in perianeurysmal fibrosis was observed. Resection of the aneurysm with Dacron graft replacement of the external iliac artery and ureterolysis was performed.

Microscopic examination of the fibrotic tissue revealed a “Perianeurysmal retroperitoneal fibrosis”. Convalescence was uneventful.

Discussion
Inflammatory iliac aneurysms are uncommon. The incidence of isolated iliac artery aneurysm is 1.9% and that of isolated internal iliac aneurysm is only 0.5% of abdominal aortic aneurysm.1

Patients with iliac artery aneurysms are most likely to present with urological manifestations.2,3 Isolated iliac aneurysm often gives rise to urinary tract obstruction.

Rarely external iliac artery aneurysms may cause ureteral obstruction.4 The ureters may be obstructed either by direct compression of the aneurysm or by entrapment of the ureter in fibrotic process, which may be perianeurysmal immediately or more extensive in the retroperitoneum, resembling idiopathic retroperitoneal fibrosis.3,4 The pathology of this fibrotic process is characterised by proliferation of fibrous tissues with inflammatory cell infiltration.3,4 There are two basic explanations for the development of perianeurysmal fibrosis and retroperitoneal scarring. One is that small leaks develop at the weakest points of the aneurysm. After these seal, a retroperitoneal inflammatory reaction ensues and results in scarring that may extend laterally to encase and subsequently obstruct the ureter. The second explanation relates to
the generalised atherosclerotic process involved in the formation of the aneurysm. Atherosclerosis often has an associated desmoplastic inflammatory component that extends to involve the adventitia of the scarring in the retroperitoneum.\textsuperscript{5,5} Patients who present with this type of retroperitoneal fibrosis may be difficult to differentiate from those with idiopathic retroperitoneal fibrosis.\textsuperscript{3}

Treatment of choice is resection of the aneurysm and replacement by a vascular graft. Ureterolysis should be performed if the ureters are enveloped by periaeurysmal fibrosis.

We present a rare case of ureteral obstruction secondary to isolated external iliac artery aneurysm which is described only in childhood cases in the literature.

References