REVASCULARIZED INTERNAL ILIAC ARTERY ANEURYSM PRESENTING AS A PAINFUL PULSATILE SCROTAL MASS AFTER AORTOBIFEMORAL BYPASS SURGERY

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ABSTRACT

Pulsatile scrotal masses are extremely rare. We report the first case of pulsatile and painful scrotal mass that had an arterial collateral circulation, equivalent to an arterioarterial shunt, feeding an excluded internal iliac artery aneurysm after aortobifemoral bypass surgery.

A 79-year-old man was referred to urology for left scrotal pain. His past medical history included an aortobifemoral graft implantation 8 years earlier for abdominal aortic aneurysm and left internal iliac aneurysm. The left internal iliac artery was tied at its origin, and the internal iliac aneurysm was left in situ. The patient complained of chronic left inguinoscrotal throbbing pain that had been progressively increasing since his vascular surgery. On physical examination, both testes had normal volume, shape, position, and consistency. Arterial pulsations were readily felt over the left hemiscrotum. These pulsatile masses were painful on palpation and reproduced the patient’s complaint. They did not change in diameter in the erect position or with the Valsalva maneuver. Auscultation of the scrotum revealed a high pitched systolic murmur. Scrotal ultrasonography demonstrated normal bilateral testicular volume and echogenicity and an important left “varicose mass” measuring 4 mm in diameter, with arterial flow that did not vary with the Valsalva maneuver. Angiography revealed the large left internal iliac artery aneurysm, which had revascularized despite surgical exclusion. Several collateral vessels communicated with and fed this aneurysm, including left prominent scrotal vessels and branches from the inferior mesenteric artery and the right internal iliac artery (Fig. 1).

Treatment was accomplished by selective embolization of the scrotal collateral vessels and the other major feeding vessels. The patient became pain free immediately after the procedure and the scrotal pulsations could no longer be felt.

COMMENT

In the present case, the scrotal pulsatile masses were dilated arteries perfused at high flow, which explained the scrotal pain and the high pulse amplitude. The anterior scrotal blood supply derives from the external pudendal vessels, branches of the
external femoral artery, and the posterior blood supply derives from the internal pudendal artery, a branch of the internal iliac artery. In our case, a communication between these two systems was established, allowing revascularization of the left iliac aneurysm to occur in a retrograde fashion. As expected, the right hemiscrotum was not affected, because the scrotal vessels do not cross the median raphe.

Two cases of pulsatile scrotal masses have been described. Rupture of an aortic aneurysm into the renal vein presented as a left-sided varicocele, and a large varicocele presented as a pulsatile scrotal mass secondary to severe tricuspid insufficiency. Nonpulsatile varicocele caused by compression from an aortic graft false aneurysm has also been reported. In our case, important collateral circulation and arterioarterial shunts developed to feed an excluded aneurysm, which acted like an ischemic organ recruiting blood vessels.

Judicious diagnosis of this rare case of pulsatile scrotal mass unmasked a serious vascular condition. Selective embolization was successful in relieving the scrotal pain and decreasing the vascular supply to the internal iliac aneurysm.

REFERENCES