

Abstract

Haemodialysis Arteriovenous Access-Related Aneurysms

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Objectives:

To describe varieties, presentation, the surgical modalities and outcome in haemodialysis (HD) patients who presented with complicated arteriovenous access (AVA) aneurysms.

Patients and Methods: This is a prospective study carried out between August 2007 – February 2011. Nine hundred and eighteen patients presenting with AVA in three centers in Khartoum were reviewed. Anatomy of pseudoaneurysms and true aneurysms was evaluated preoperatively using physical examination, Doppler U/S & CT angiography. The different modalities of treatment offered were recorded. The mean post-intervention access function, was determined by palpable thrills, blood flow velocity, venous static and dynamic pressure at 1,2,3 months interval.

Results:

Twenty seven cases were included: 17 were venous axis pseudoaneurysms, 8 were true venous axis aneurysms, 1 was true brachial artery aneurysm and 1 was brachial artery pseudoaneurysm, 16 AVA-related aneurysms were anastomotic and 11 were non-anastomatic, they comprised: 14 radiocephalic, 9 brachiocephalic and 4 brachio-basilic. There was no graft AVA. The indications for surgical intervention were: rupture with severe hemorrhage in 7 cases, danger of impending rupture in 14 cases, and reduction of cannulation area in 6 cases. The mean post-intervention patency rate at 1,2,3 months were 92.1%, 82.9%, 82.9% respectively. Infection was not seen in any patient. Hematoma was detected in “12” patients, but resolved spontaneously at 1-21 days. Two patients died in the postoperative period.

Conclusions:

Anastomotic pseudoaneurysm was the commonest variety of AVA-related aneurysms. The commonest indication of surgical intervention was impending rupture. Surgical revision and repair of AVA-related aneurysms is life saving and is associated with acceptable post-intervention patency rate.