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Arteriovenous Grafts For Hemodialysis: A Retrospective Study from A Local Urological Centre

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Objective:

Arteriovenous grafts (AVGs) are indicated in hemodialysis patients who have failed arteriovenous fistulae, unsuitable vessels or exhausted superficial veins. The aim of this clinical audit is to evaluate the outcomes of AVG creation in a local urological centre and to compare the results with international standards.

Patients & Methods:

Twenty-three AVGs were created in 19 patients between July 2009 and December 2010. Patients' demographic data and AVG details were retrospectively retrieved from electronic patient records. Primary patency, assisted primary patency and secondary patency rates, as defined by Sidawy *et al.*, were calculated. AVG complications, failure reasons and salvage outcomes were also reviewed.

Results:

The mean age of the patients was 48 ± 10 years; and male-to-female ratio was towards 1:1. Fourteen AVGs (61%) were created at upper extremity and eight (35%) were created at lower extremity. All of them were non-autogenous grafts. The mean follow-up period was 7.6 months. The cumulative patency rate of AVGs at 6 months was 67.8%. Seven AVGs (30.4%) were complicated with thrombosis/occlusion and two AVGs (8.7%) became infected. Steal syndrome and pseudo-aneurysm were observed in one patient (4.3%) each. Only one AVG was removed at 2 months post-operatively due to infection refractory to conservative management. Thrombosis/occlusion contributed to the majority (62.5%) of primary non-function of AVGs. Salvage procedures were performed for half of the failed AVGs but no AVG was salvageable.

Conclusions:

The cumulative patency rate and the complication rate of AVGs in our urological centre were comparable to international standards. Early detection of AVG failure and prompt action may improve the salvage outcomes.