Hemodialysis Technique in a Diabetic Population

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Abstract : Introduction: Diabetic nephropathy is the leading cause end stage renal failure in Australia, responsible for 36% of cases. Patients who require dialysis may be suitable for haemodialysis through an arteriovenous fistula (AVF), and preoperatively careful planning is required to select suitable vessels for a long-lasting fistula that provides suitable dialysis access. Due to high levels of vascular disease in diabetic patients, we sought to investigate whether there is a difference in the types of autologous AVFs created for diabetic patients in renal failure compared to their non-diabetic counterparts. Method: Data was collected from the Australasian Vascular Audit, for all vascular surgery completed at St. Vincent's Hospital Melbourne between 2011-2020. Patients were selected by operative type, creation of AVF, and compared in two groups, diabetic patients and patients without diabetes. Chi-squared test was utilised to determine significance. Results: Data analysis is ongoing and will be complete with updated abstract in time for the conference. Discussion: Diabetic nephropathy is the cause for roughly a third of end stage renal failure in Australia. Diabetic patients present with a unique set of challenges when it comes to dialysis access due to increased risk of peripheral vascular disease and arterial calcification. Care must be taken in the creation of fistulas to minimise complications and increase the chance of long-lasting access. Our study investigates the difference in autologous AVFs between diabetics and non-diabetics, and results may be used to influence location of fistula creation. Further research may be used to investigate patency rates of fistulas in diabetics vs non-diabetics which would further influence treatment decisions.
Keywords : dialysis, diabetes, renal access, fistula
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