

Extremity axillary loop graft - an opportunity in haemodialysis access

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Introduction

Dialysis vascular access complications are considered as significant causes of morbidity in chronic hemodialysis patients.

Vascular access in haemodialysis (HD) patients can be challenging especially in those with failed primary, secondary and/or tertiary procedures. A functioning vascular access represents a key issue in the management of patients needing chronic haemodialysis. However, all professionals involved in vascular access creation and preservation are facing an everyday challenge: how to meet their HD patients' vascular access needs.

Several studies took in consideration the option of axillary loop grafts for haemodialysis access in patients on chronic haemodialysis with vascular steal or inadequate upper extremity venous access sites.

Objectives

Evaluating the success of using an alternative technique of vascular access for haemodialysis in which a prosthetic graft was anastomosed to the axillary artery and internal jugular vein; the patient had no more conventional options available for creating a haemodialysis vascular access.

Methods

Case study of a 60-year-old patient, male, with a history of complex vascular accesses for end-stage renal failure. He started the haemodialysis treatment in 1988 with left femoral catheter. His vascular access history included a left arm wrist shunt, a left upper arm access graft, a right upper arm arteriovenous fistula and multiple long life catheters in his jugular veins and left femoral vein. As long as the patient was having a functional arteriovenous fistula, we performed regular fistula assessment by means of ecography and the patient was cannulated only after analysing the results and by specialised nurses.

Anterior chest wall prosthetic accesses are a particular type of vascular access. The axillary artery is anastomosed by means of a Polytetrafluorethylen (PTFE) graft to the internal jugular vein.

Results

Ultrasound examination played a major role in the early identification of vascular access complications. Timely schedule of implantation of an anterior chest wall prosthetic graft finally saved the life of the patient by providing him with a functional and reliable vascular access for haemodialysis. The treatment results showed that the graft is suitable for the treatment as the measured and reached Kt/V was according to the target set.

Conclusion

Polytetrafluorethylene vascular graft seems to be an appropriate vascular access and is a promising alternative when upper extremity arteriovenous fistulas cannot be constructed. The axillary-loop graft is a valuable salvage option in patients with complex vascular access.

References

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Figure 1: Patient with an implanted extremity axillary loop graft

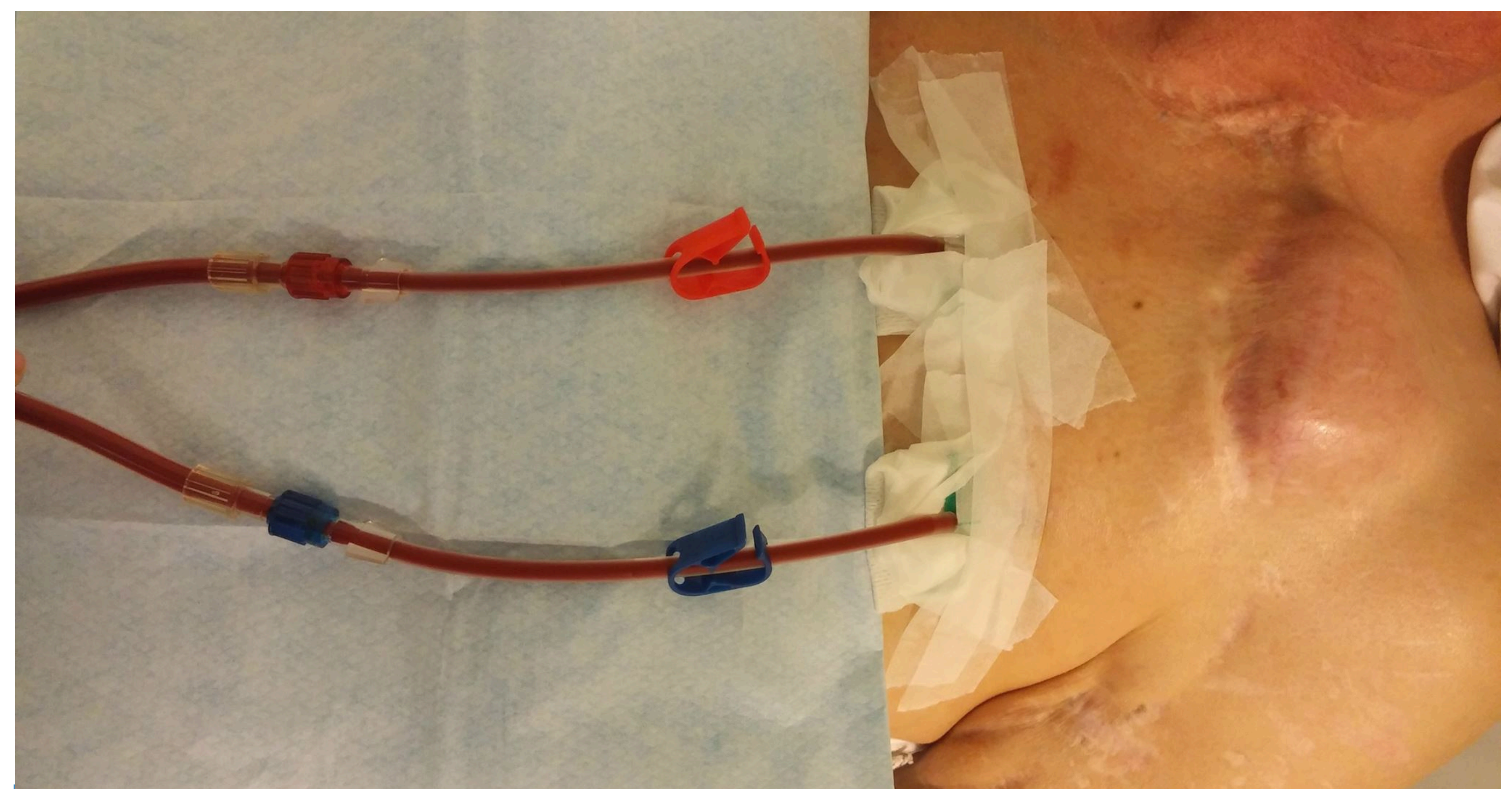


Figure 2: Cannulated extremity axillary loop graft

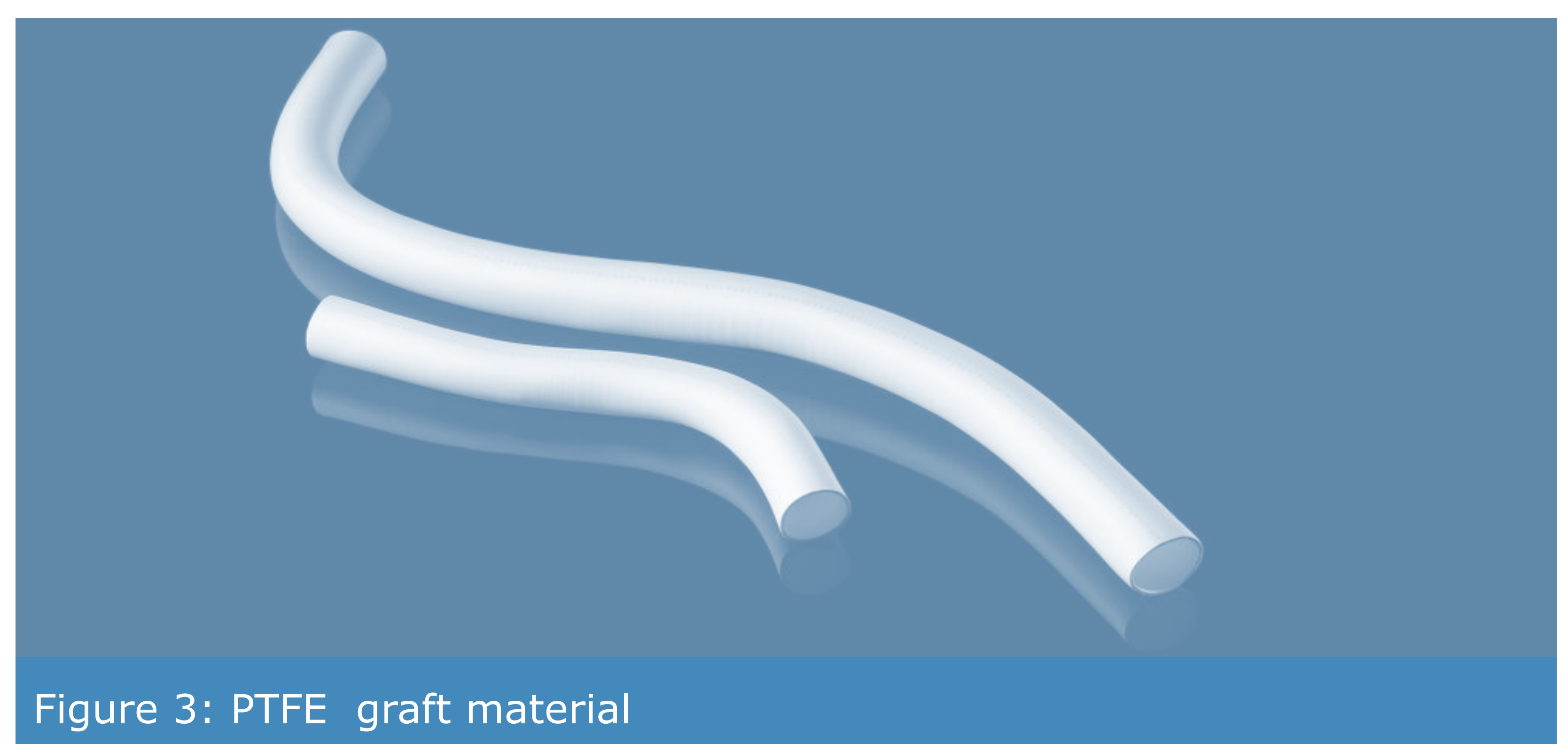


Figure 3: PTFE graft material