

# Unnecessary hospital admissions, procedures and complications from delayed AVF salvage

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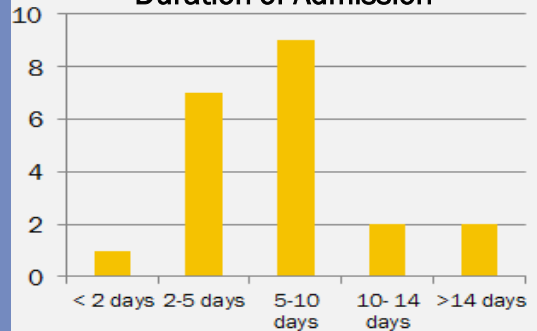
**Introduction:** Delayed emergency arteriovenous fistula salvage (EAVFS) harms patients and incurs unnecessary admissions and interventions.

**Results:** Over 14 months, 45 patients had EAVFS. Of whom:

- 28 (62%) required admission
- 22 patients (78%) required temporary access
- 9 (32%) of whom required more than one temporary line
- 1 patient had *Staph Aureus* bacteraemia and 1 had haemorrhage from line removal
- 65% of patients who required admission solely for EAVFS had a potassium of <6.0mmol/L, making them suitable for outpatient management

**Methods:** Between 01.01.2018 – 22.02.19, all EAVFS at our trust were identified along with admissions, procedures and complications from electronic records.

## Duration of Admission

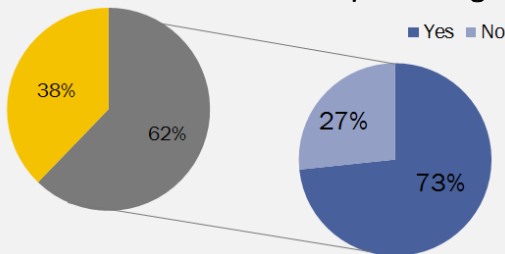


**Graph 1** – EAVFS patients incurred 120 bed days and average admission length of 6 days. The median wait from admission to procedure was 3 days.

## Emergency Fistuloplasty

- Emergency Admission
- Managed as O/P

### 1<sup>st</sup> Attempt at Salvage



**Graph 2** – Of those patients who had an emergency admission, 33 (73%) EAVFS were successful on 1<sup>st</sup> attempt.

**Conclusion:** Delayed EAVFS results in avoidable admissions, procedures and adverse events for patients. This data supports the need for increased access and resourcing of emergency interventional radiology services, to eliminate hospital admissions solely for AVF salvage.

## Proposed Outpatient EAVFS Pathway:

### 1. Potassium management:

- Insulin/dextrose if > 6.5
- Lokelma/ Patiromer (1) if Potassium ≥ 6.

**2. Angiojet vs Indigo** –Indigo aspirates the clot which does not require K+ of <5.2 unlike Angiojet which causes lysis and induces hyperkalaemia (3).

**3. Insertion of a tunnelled central venous catheter** –if EAVFS unsuccessful, TNL allows management as an outpatient and fewer adverse outcomes e.g. endocarditis (2).

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**References:** (1). Pharmacology of new treatments for hyperkalaemia: patiromer and sodium zirconium cyclosilicate. (2). Risk of Infective Endocarditis in Patients with End Stage Renal Disease. (3) Mechanical Thrombectomy in Acute Thrombosis of Dialysis Arteriovenous Fistulae and Grafts Using a Vacuum-Assisted Thrombectomy Catheter. **Disclosure of interests** – None declared