



Arm Ports in Children, Why not?

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Background

Totally implantable vascular access devices or ports are commonly used in children who require intermittent long-term central venous access. Arm ports, with a reservoir placed in the middle third of the upper arm, are an alternative to traditional chest ports. In this review we aim to present our initial experience with arm ports in children.

Methodology

This retrospective review of all arm ports inserted at the Royal Manchester Children's Hospital was conducted from November 2022 to December 2023

Conclusions

In our small cohort, arm ports appear to be safe and effective central venous devices in children, with advantages over chest ports. Chest-to-arm tunnelling can be used instead of PICC-port insertion in children with arm veins below 5mm in diameter.

Reference

Gowri.S,Vinay.J, Ravindra.S, Narendra.B, Ramesh.S (2016)Totally implantable venous access devices in children requiring long term chemotherapy:analysis of outcome in 122 children from a single institution . Indian journal of surgical oncology. 7(3):326-331

Aim

Arm ports as an alternative to chest ports. The effectiveness of these devices in the paediatric population

Age	Weight	Background	Reason for Arm Port	Technique
4yrs	37.3kg	Low-Grade Glioma	Truncal Obesity	Chest to Arm Tunnelling – General Anaesthetic
8yrs	59.3kg	Leukaemia	Truncal Obesity	PICCport – General Anaesthetic
9yrs	38kg	Pompes Disease	Risks of General Anaesthesia	PICCport – Local Anaesthetic
9yrs	45kg	MPS IV	Patient preference	PICCport – General Anaesthetic
10yrs	37.5kg	Methylmalonic Acidaemia	Truncal Obesity	Chest to Arm Tunnelling – General Anaesthetic
10yrs	48.5kg	Low-grade Glioma	Truncal Obesity	Chest to Arm Tunnelling – General Anaesthetic
12yrs	35kg	Gaucher's disease	Patient preference	PICCport – General Anaesthetic
13yrs	37.9kg	Cystic Fibrosis	Patient Preference	PICCport – General Anaesthetic
16yrs	48kg	Pompes Disease	Risks of General Anaesthesia	PICCport – Local Anaesthetic

Results

Our cohort of patients ranged from 4yrs to 16yrs (mean 10 years 4 months). Indications for port insertion included chemotherapy, enzyme replacement therapy and long-term antibiotics. We inserted 10 Arm ports in 9 children using 2 techniques, Chest-to-arm tunnelling or true PICC-port insertion. A PICC-port was chosen if the basilic vein in the arm was at least 5mm in diameter, and thus was our preferred technique in older children. One patient had two ports inserted, with an additional reservoir placed on the outer aspect of the arm. An arm port was chosen over a chest port for the following reasons: truncal obesity causing difficulty with chest port access, avoidance of general anaesthesia in children with severe cardiorespiratory co-morbidity, and avoidance of prominent chest scars/patient preference. To date we have had no early or late complications, apart from localised ecchymosis, which resolved spontaneously. All devices are still in situ at present.

