

Exploring the Experiences of Children Who Are Living with a Single Lumen Skin-Tunnelled Catheter or a Totally Implanted Port, with a Focus on their Quality of Life



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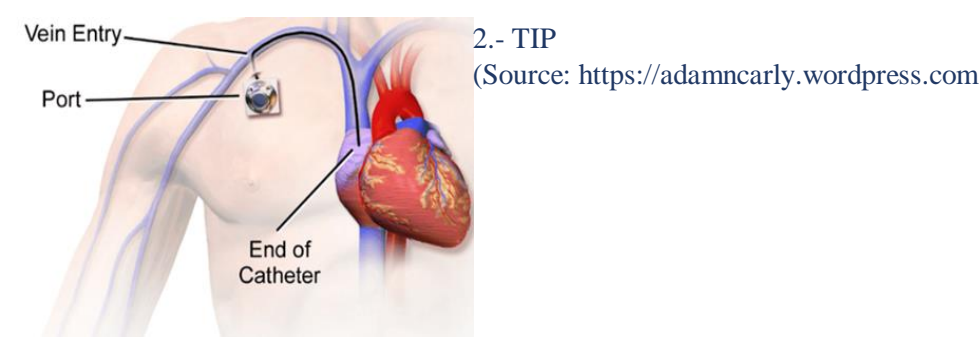
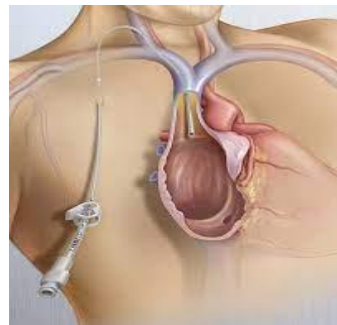


INTRODUCTION

'Central venous access devices (CVADs) provide access to the greater vascular system to administer therapy that is contraindicated to be given peripherally, for longer term treatment, and for venous monitoring and blood sampling' (Loveday et al. 2014). This study focuses on:

- 1.- Single lumen skin-tunnelled catheters (SLSTCs, i.e., single lumen broviacs) and,
- 2.- Totally implanted ports (TIPs, i.e., port-a-caths).

1.- SLSTC
(Source: www.bardaccess.com)



BACKGROUND

Several studies have suggested that in comparison to broviacs, port-a-caths are less noticeable, have fewer infection rates and require less care as there is no exit site since they are enclosed under the skin; they also allow for more freedom of movement and there is no risk of accidental dislodgement, providing the child with freedom for certain activities such as swimming (Soyleyici *et al.*, 2017). It is generally agreed in the literature that TIPs have a lower complication rate than SLSTCs (Kulkarni *et al.*, 2014; Coady *et al.*, 2015; Wu *et al.*, 2016; Beck *et al.*, 2019) but despite this, in Irish hospitals they are rarely used in comparison to broviacs. According to the records by the Operating Theatre Department in OLCHC in 2014 there were 250 SLSTC implanted in comparison to 21 ports.

The main disadvantages of implanted ports include the use of a needle to access it (Cellini *et al.*, 2020), which can cause anxiety in children (Barnacle *et al.*, 2008)

According to Johansson *et al.* (2009) health care professionals play a key role in the selection of the type of CVAD to be implanted based on such elements as appropriate catheter capacity/function, risk of complications and length of stay, which are some of the reasons for choosing broviacs over port-a-caths, although it is argued in the literature that improvements in the development of ports have made them appropriate for all type of medication, including chemotherapy (Cellini *et al.*, 2020) and both devices last several years in place with the right care (Clare, 2020), making both devices comparable in terms of durability and their ability to support all types of medication. Fratino *et al.* (2005) reported as the main reason for choosing skin-tunnelled catheters over ports is the psychological impact that fear of needles can cause in children.

In line with the literature, children and their parents should share the decision-making with healthcare professionals and should be informed of the potential benefits and risks of each CVAD to help them decide on a device, as Hallam *et al.* (2016) maintains.

The main reason for this study is that to the best of my knowledge there have been no studies looking at QoL factors in children living with a broviac or a port-a-cath in which children were the participants, following the child and family centred approaches and to promote public and patient involvement. Also, because of the believe in the importance of standardised international practice. In the US for example, ports are common choice for oncology patients (American Cancer Society, 2020).

AIMS

The aim of this study was to gain a deeper understanding of how the life of children and their parents is affected by having a single lumen broviac or a port-a-cath, and how this impacts their quality of life (QoL).

OBJECTIVES

- To explore the experiences of paediatric patients and their families in two groups, those living with a TIP, and those living with an SLSTC.
- To understand how children and their parents perceive the impact that a TIP or an SLSTC has on their QoL.
- To compare the experiences of each group with regards to QoL in search of similarities and differences.

METHODS

In this study, a qualitative phenomenological descriptive method was employed. For this, a purposeful sample of five children with a single lumen broviac, and five children with a port-a-cath, were selected at CHI at Crumlin. The criteria for selection included children aged between twelve and eighteen with a SLSTC or a TIP implanted in the previous five years, and which is still active or has been recently removed (i.e., in the last four weeks). The interviewer conversed with the children and their parents via video call, due to covid-19 restrictions for face-to-face meetings. Open-ended semi-structured interviews were employed.

PRELIMINARY FINDINGS

The analysis is still ongoing, and the findings are pending, but preliminary data correspond with similar studies previously conducted with regards to central venous access device satisfaction and performance, in where port-a-caths were found to be less noticeable, to have fewer infection rates and to allow for more freedom for certain activities such as swimming. This would translate into increased QoL in the patient and their families. The relevance of this study is that it could add to the body of literature the point of view of paediatric patients, where a gap was found. It could potentially highlight the benefits of offering a choice of device in hospital settings to children and their families, which would allow them to make an informed decision tailored to the child's needs, in conjunction with the consultant.

CONCLUSION

To conclude, children with a port-a-cath have reported higher levels of satisfaction than those with a broviac, and high tolerance to the needle access. This in turn, would have an effect of their quality of life during a very challenging illness. Offering a choice of device prior insertion would appear to be beneficial to children and their families. The pros and cons should be carefully explained to them, and the fear of the needle access should not be underestimated, but perhaps a port-a-cath would suit some children better, and the choice should be theirs.

LIMITATIONS

- Small scale of the study.
- Due to Covid-19 restrictions, face to face interviews were not possible, which could in turn perhaps diminish the rapport between the interviewer and the children. Also, children were possibly less aware of the limitations in activities due to the CVA, since they were not allowed to perform any during the lockdown.
- Double and triple lumen broviacs were not considered in this study and some patients require these for their treatment. Port-a-caths have only one access point.

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