Abstract:

Background: Implanted vascular access devices play an essential role in the management of pediatric patients. The objectives of this study were to assess our experience with port-a-cath insertion in pediatric patients, report its complications, and compare open versus percutaneous approaches.

Methods: We performed a retrospective cohort study, including 568 patients who underwent port-a-cath insertion between 2013 and 2019 in our center. We grouped the patients according to the technique of insertion into two groups: group 1 (n = 168) included patients who had the open approach and group 2 (n = 404) included patients who had the percutaneous technique. ($p < 0.001$).

Results: Patients in group 1 were younger (4.10 ± 3.45 years) compared to patients in group 2 (5.47 ± 3.85 years). The main indications of insertion were hematological malignancy 57.74% (n = 328), solid organ malignancy 25.18% (n = 143), pure hematological diseases 5.46% (n = 31), metabolic diseases 2.64% (n = 15), and others for poor vascular access 8.8% (n = 50). The most common site for insertion in group 1 was the left external jugular (n = 136; 82.98%) and the left subclavian in group 2 (n = 203; 50.25%). Two hundred and two patients had a central line before catheter insertion (36.6%). Complications during insertion were comparable between both groups ($p = 0.427$). The catheter got stuck in 6 patients; all required additional incision and two needed venotomy. The most common reason to remove the catheter was the completion of the treatment (63.69% and 61.14%, in groups 1 and 2, respectively). The duration of the catheter was comparable between the two groups (13.14 ± 14.76 vs. 14.44 ± 14.04 months in group 1 vs.2; $p = 0.327$).

Conclusions: Open and percutaneous port-a-cath insertions are safe in children with chronic diseases. Port-a-cath improved patients' management, and complications are infrequent. The most common complications are infection and catheter malfunction, which can be managed without catheter removal in some patients.

Reference:

Bawazir, O. and Banoon, E. (2020) Efficacy and clinical outcome of the port-a-cath in children: a tertiary care-center experience. World Journal of Surgical Oncology. 18(1), p.134. https://doi.org/10.1186/s12957-020-01912-w.

Full Text