

Introduction of Midlines For OPAT In Midland Regional Hospital Tullamore: A Retrospective Review

Huma Razzaqe, Patricia Carroll, Sabrina Hogan, Eileen Sweeney (Department of Infectious Diseases MRHT)



Background:

Outpatient Parenteral Antibiotic Therapy (OPAT) programs provide intravenous (IV) antibiotics to patients at home, improving outcomes and reducing healthcare costs. Timely hospital discharge however can be delayed due to wait times for peripherally inserted central catheters (PICC). Midline catheters are an alternative vascular access option for OPAT, potentially streamlining discharge discharges and ambulatory pathways. Midlines have been available in Midland Regional Hospital Tullamore (MRHT) since January 2023. This review aims to describe the experience of midlines in MRHT between July and December 2023.

Methods:

A retrospective review of patient records from the local OPAT portal identified all patients discharged on OPAT during the study period. Data collected included patient demographics, vascular access used, complications, readmissions, and use of continuous infusion (CI) antibiotics

Results:

There were ninety-five OPAT discharges in MRHT between July and December 2023. Males accounted for 63% (60/95) of patients. Mean age was 64 (range from 20 – 89 years). Midlines (42/95; 44%) and PICC (41/95; 43%) were the most used vascular access devices, with a small proportion using IV cannulas (IVC) (12/95; 13%). OPAT complications of any severity were reported in nine (22%) patients with PICC and seven (17%) with midlines. Overall, there was a low re-admission rate (15/95; 16%) with nine cases being in PICC group (9/15; 60%) and the

remainder in midline group (6/42; 40%). No readmissions were due to line-related complications in any group. Line complications which required replacement were noted in nine midlines (9/42; 21%) and no PICC or IVC. Five midlines were re-inserted due to mechanical dislodgement and four due to phlebitis. All patients who suffered midline phlebitis were receiving CI flucloxacillin. Overall, CI antibiotics (Flucloxacillin or Piperacillin/Tazobactam) were prescribed in one third of patients (31/95; 33%) who were discharged with PICC lines 18/31 (58%) with the remainder having midlines (13/41; 42%). Flucloxacillin was prescribed in 14 patients with a PICC and six with midlines.

Conclusion:

Overall, the introduction of midlines for OPAT in MRHT has been successful. While complication rates were similar, there is a need to delve further into line related complications. Replacement midlines were required in over one fifth of midlines inserted; (21% vs. 0% for PICC). Dislodged midlines have been addressed by increasing patient and community team awareness. Although numbers are small, the association between midline phlebitis and CI flucloxacillin (4/6; 67%) warrants further exploration as well as the cost-effectiveness of midlines compared to PICC.

