Outpatient Parenteral Antimicrobial Therapy (OPAT) – A Malaysian Public Hospital Experience

*Afra Nahdia MN², Suraya Hanim AH¹, Benedict S¹, Hing YL³, Mohamad Hafizan MF¹, Vijaya BA¹, Syamhanin A², Christopher LKC¹

¹Medical Department, Hospital Sungai Buloh, Ministry of Health Malaysia
²Pharmacy Department, Hospital Sungai Buloh, Ministry of Health Malaysia
³Clinical Research Centre, Hospital Sungai Buloh, Ministry of Health Malaysia

Abstract

Outpatient Parenteral Antimicrobial Therapy (OPAT) as defined by the IDSA is ‘the provision of parenteral antimicrobial therapy in at least two doses on different days without intervening hospitalisation’. It was first described in the USA in 1974 for the treatment of cystic fibrosis in children. The OPAT service has since been adopted and used in other countries, example Canada, UK, countries across Europe like France and Italy, Australia and Singapore. The OPAT services have been described to be safe and efficacious and have shown significant benefit to the local healthcare services and patients. After more than 40 years since it was first described, Malaysia follows in the footsteps of setting up its first OPAT service in 2016. This study describes the first OPAT service in Malaysia based in Hospital Sungai Buloh in terms of patterns in admissions, demographic and clinical data of all patients enrolled into OPAT. This was a retrospective cross-sectional observational study. Data on 483 episodes of OPAT administered between 2016 and 2017 were retrieved from the electronic medical records. In total, 43 patients received OPAT in 483 episodes and the mean age was 48 years old (SD=14.52). All patients referred to OPAT were from the medical wards. Bacteraemia accounted for (53.5%) of OPAT episodes followed by intra-abdominal abscess (30.2%) and urinary tract infection (9.3%). Peripheral cannula was the most common venous access used (53.5%) followed by peripherally inserted central catheter (PICC) (37.2%). Most frequently prescribed antibiotics were Ceftriaxone (34.9%), Ceftazidime (25.6%) and Ertapenem (23.3%). Readmission rate was 9.3%. Reasons for readmission included line related complications resulting from catheter-related blood stream infection (2.3%) and severe plaster reaction (2.3%). Other reported readmissions were due to surgical procedure (2.3%) and antibiotic complications (2.3%). OPAT service in our centre is currently limited to the medical unit, hence the low OPAT enrolment. Patients were carefully selected following a protocol that was set in accordance to the IDSA OPAT guidelines as a measure for patient safety while under OPAT. Complications occurred led to readmission of patients. Our data has shown high percentage of completion of treatment and low complications rate, suggesting that OPAT is effective. OPAT is a safe and effective alternative in delivering intravenous antibiotics to...
patients. Our results are set to be a benchmark for the expansion and improvement of OPAT service in Malaysia.

**Keywords:** Outpatient Parenteral Antimicrobial Therapy, OPAT, Malaysia, Outpatient, Antimicrobial, Antibiotics, Parenteral

*Authors for Correspondence*