Serious Bacterial Infections: Successful Outpatient Management by Infectious Disease Physicians in Office Practice Settings

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Abstract

Background: Patients with serious bacterial infections (SBI) are identified as those with signs and symptoms suggestive of infection (SNI), bacteremia/endocarditis, and certain serious organ SBI. Infections are frequently detected on outpatients' previous treatment (OPT). They account for about 45 of all infections, related to 18% of inpatient mortality, and are associated with increased hospital costs. SBI infections are often treated with intravenous therapy (IV) and require hospitalization even though infections may respond to oral therapy. Outpatient management (OPAT) of SBI can reduce hospital costs and improve patient outcomes.

Methods: OPAT was standardized with SBI hospitalization OPT in 2017 in 14 FOCs. A group of 100 SBI patients was randomized to either OPT or OPAT. During OPAT, the mean time from diagnosis to hospital admission was 23 days (2 to 13 days), compared to 48 days (2 to 13 days) for OPT. The mean number of hospital days was 3 days (1 to 8 days) for OPAT and 7 days (1 to 13 days) for OPT. SBI outcomes were compared between OPAT and OPT (n=1,083).

Results: SBI included 31 (31%) bacteremia/endocarditis (n=163) and 97 (97%) of SBI were successfully treated. Of 163 SBI, 103 (63%) were bacteremia/endocarditis. The most frequent reason for unsuccessful OPT (n=34) was discontinuation of therapy due to patient refusal (n=20; 59%). The risk for unsuccessful OPT was significantly lower in OPAT (OR=0.23, 95% CI 0.06 to 0.86; p=0.01)

Conclusion: OPAT may be a feasible and effective treatment for SBI in selected patients, as it can reduce hospitalization costs and improve patient outcomes. Further studies are needed to determine the optimal methods for OPAT in SBI patients.