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RES-120

TIMELINESS OF CEFTAZIDIME INITIATION IN SUSPECTED MELIOIDOSIS CASES IN BINTULU HOSPITAL.

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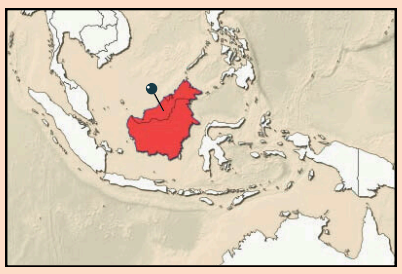
INTRODUCTION

Bintulu, Malaysian Borneo is endemic for melioidosis (1). Timely antimicrobial(s) administration in sepsis saves lives (2). The need for empirical ceftazidime therapy is a day-to-day antibiotic stewardship conundrum faced by clinicians when they manage community-acquired sepsis at melioidosis-endemic areas.

This study aimed to analyse ceftazidime use to advise future prescription practices at Bintulu Hospital.



METHODOLOGY

The study analysed the ceftazidime prescription in melioidosis at Bintulu Hospital in 2024 as an antimicrobial stewardship activity.
Cases were reviewed and classified into “Culture-confirmed ”, “Probable”, “Possible” and “Not melioidosis” (3).

RESULTS

Eighty-four (84) cases were included.

Seventy (83.3%) were male. The median age was 43.5 years (IQR 32.0-54.8). Ceftazidime was initiated in 35 (41.7%), 7 (8.3%), 11 (13.1%), and 31 (36.9%) cases ⩽24 hours, 25-48 hours, 49-72 hours, and >72 hours of hospitalisation, respectively.

Ceftazidime was initiated ⩽24 hours in 46% (16/35), 25-48 hours in 57% (4/7), 49-72 hours in 64% (7/11), and >72 hours of hospitalisation in 48% (15/31) cases who had final diagnosis of culture-confirmed, probable, or possible melioidosis.

Among the 37 culture-confirmed and probable cases, less than 50% received ceftazidime ⩽48 hours of hospitalisation. Of the 10 cases that had ceftazidime >72 hours post-admission, a median delay of 6 days (IQR 5-10) was observed.

Case fatality rate of melioidosis was 11% (4/37, 2 culture-confirmed, 2 probable). Deaths occurred at a median of 45 (IQR 22-102) days post-admission.

TABLE

Time to initiate ceftazidime

Melioidosis diagnosis	< 24 hours (n=35)	24-48 hours (n=7)	49-72hours (n=11)	>72 hours (n=31)	Mortality (n=7)
Culture-confirmed * (n=18)	6 17.1%	4 57.1%	3 27.3%	5 16.1%	2 11.1%
Probable # (n=13)	7 20.0%	0	1 9.1%	5 16.1%	2 15.4%
Possible ** (n=11)	3 8.6%	0	3 27.3%	5 16.1%	0
Not melioidosis (n=42)	19 54.3%	3 42.9%	4 36.4%	16 51.6%	3 7.1%

Footnote:
Definition of cases (3).
* Culture-confirmed
= One or more clinical samples culture-confirmed for B. pseudomallei.
Probable melioidosis
= Evidence of one or more abscesses that would be consistent with a diagnosis of melioidosis but culture not performed or negative for B. pseudomallei, or culture negative for B. pseudomallei on first presentation but represented to hospital within 1 month with culture-proven melioidosis.
** Possible melioidosis
= Clinically suspected melioidosis improved after treatment with an effective antimicrobial regimen for melioidosis (ceftazidime/carbapenem drug/amoxicillin-clavulanate) or clinically suspected melioidosis but the patient died before improvement was observed.

CONCLUSION

Further improvement in clinical and laboratory recognition of melioidosis is required in streamlining ceftazidime use in melioidosis management at Bintulu Hospital.

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