Time To Administration Of First Antibiotics Is Associated With Hospital Length Of Stay In Children With Bacterial Infections

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Background

Delay in antibiotic administration has been associated with increased mortality in adults with sepsis presenting to the emergency department (ED). Data in children are scarce and are skewed towards critically ill children.

Aim

We assessed the time to first antibiotics (TTFA) in children presenting to the ED with a bacterial infection, and studied the association with outcome.

Methods

Non-academic, single-center, retrospective study in children admitted with a bacterial infection, defined as receiving intravenous antibiotics within 24 hours after ED registration with a subsequent in-hospital antibiotic therapy duration of at least 3 days (n=485). Primary outcome measure was PICU transfer and/or mortality, and secondary outcome measure was prolonged hospital length of stay (≥ 7 days).

Results

Correlation TTFA and hospital LOS $r=0.104$

Discussion

Conclusions

The time to first antibiotics was not associated with PICU transfer and/or death in this cohort of children presenting to the ED and subsequently admitted with a bacterial infection. We did find an association between TTFA and hospital length of stay.

Future perspectives

- Larger, prospective multicenter studies adjusting for morbidity and illness severity are needed.
- Explore the utility of care bundles to reduce time to administration of first antibiotics.

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