Appropriateness of Tazocin Prescribing on an Acute Medical Unit

NHS
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Background – Inappropriate use of broad-spectrum antibiotics is associated with increasing rates of antimicrobial resistance. Between 2015-2019 there was a 32% increase in antibiotic resistant bacteraemias.[1] Rates of Piperacillin/Tazobactam (Tazocin) prescribing have been increasing since an international shortage led to a reduction in use in 2017.[1] A review of the literature found that the use of Tazocin has been evaluated in several studies[2-6] and the appropriateness rate of Tazocin prescribing ranged from 57-90%.

Objectives – Assess appropriateness of Tazocin prescribing against:

- Approved indications
- Antibiotic review at 48-72 hours
- Course length

Method – Patients admitted to the acute medical unit (AMU) between 25-30th Oct 2020 and prescribed Tazocin were identified using the electronic prescribing system, iSoft. Data was gathered using iSoft, Nervecentre, and paper notes. Prescribing was deemed appropriate if:

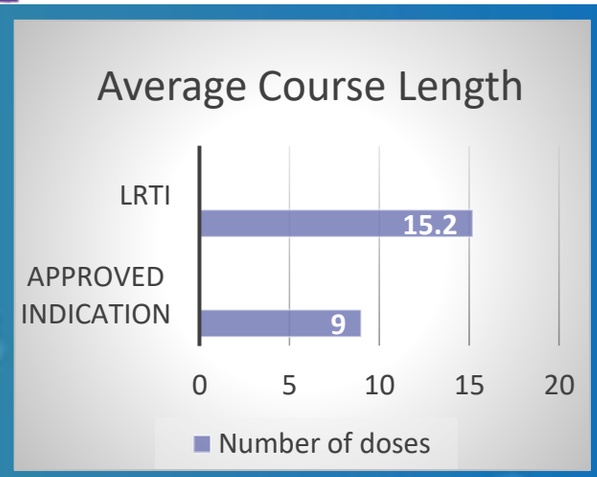
- There was clear documented evidence of infection/sepsis
- Tazocin was prescribed for an approved indication (using the Trust's Antimicrobial Guidelines)
- There was a documented review after 48 hours with clear plan.

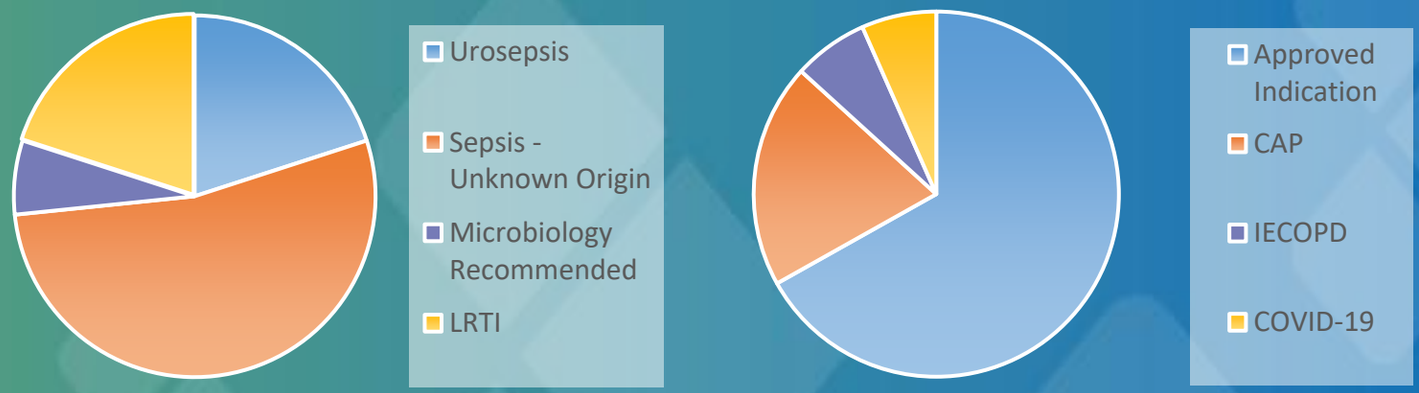
Results – 15 patients were prescribed Tazocin on AMU during the 6 day period.

- Initially 80% were prescribed Tazocin for an approved indication (LRTI is not an approved indication)

All patients had an antibiotic review within 24 – 72 hours:

- A further 13.3% of patients were identified as having LRTI but a more appropriate antibiotic choice was not considered
- 40% of patients had input from microbiology, which resulted in a more appropriate antibiotic choice





Conclusions – Appropriateness of Tazocin prescribing was broadly in line with evaluations found in literature. Most inappropriate prescribing was due to initial choice of antibiotic – particularly for community acquired pneumonia (CAP), this has also been noted in literature.[6,7] Evidence suggests that the use of broad-spectrum antibiotics in CAP is associated with poorer outcomes,[8] and the use of narrow-spectrum antibiotics should be promoted.[9]

- Increased awareness of Trust antimicrobial guidelines for LRTI/CAP is needed to improve appropriateness of Tazocin prescribing – this could be done through the use of 'Did You Know' posters placed in the AMU doctors office.
- Time constraints did not allow for recommendations to be implemented – this would be useful future work followed by a reaudit to assess effectiveness.

There are a number of limitations – the small sample size and short time frame mean results may not be representative. Antimicrobial stewardship will also have been affected by the COVID-19 pandemic.

References

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