

43-year-old Stable Hand with Resistant Pneumococcal Epidural Abscess

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Background

- Zoonotic transmission significantly contributes to antibiotic resistance.
- Horses have been documented to transmit resistant pathogens such as MRSA, ESBL *E coli* and MDR *Salmonella* to humans.
- It is unknown if equine pneumococcus can infect humans.
- We will discuss a case of resistant *streptococcus pneumoniae* with a literature review.

Case Description

- 43-year-old stable hand presented to the ED with back pain and fevers.
- Two weeks prior, he was diagnosed with influenza B pneumonia, treated with five days amoxicillin/clavulanate.
- MRI revealed a spinal epidural abscess.
- Intraoperative cultures reveals pneumococcus with resistance to ceftriaxone.
- Local antibiogram shows 100% *S.pneumoniae* susceptibility to ceftriaxone at non-meningitis breakpoints.

Literature Review

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| 1994 Blunden | First evidence of pneumococcus primary infection in horses | <ul style="list-style-type: none">❖ Ponies directly inoculated with pneumococcus collected from horse respiratory tract❖ Capsular serotype three❖ Clinical respiratory disease |
| 1999 Whatmore | Molecular characterization of equine pneumococcal serotype 3 | <ul style="list-style-type: none">❖ 11 pneumococcus serotype three from tracheal washings of horses with URI❖ Phylogenetic analysis comparison to human serotype three❖ Pneumolysin and autolysin were not isolated on PCR |

To date, only *S. pneumoniae* serotype three have been isolated in horses.



Conclusion

- Given lack of virulence factors vital to human transmission, it is unlikely that this case was caused by equine transmission.
- Prior amoxicillin/clavulanate exposure may have impacted observed susceptibility profile

References

