

Poster presentation

## Admission diagnosis and timing of lumbar puncture in bacterial meningitis

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### Introduction

To evaluate the possible influence of admission diagnosis and clinical signs on delay in time to lumbar puncture in adult community acquired bacterial meningitis.

### Methods

All adult cases of culture positive cerebrospinal fluids in East Denmark from 2002 to 2004 were included. Medical records were collected retrospectively with 98.4% case completeness. "Cardinal symptoms" were defined as: altered consciousness, fever, nuchal rigidity, subjective headache, convulsions prior to admission and petechiae.

### Results

132 cases were included. Diagnosis at admission included meningitis (39%, n = 50), pneumonia/sepsis (9%, n = 12), acute cerebral vascular disease (10%, n = 13), febrilia (11%, n = 14), confusion/unconsciousness (15%, n = 19), other (16%, n = 21); with median time from admission to lumbar puncture 0.95 hr, 4.5 hr, 3.5 hr, 1.9 hr, 2.3 hr, and 4.15 hr ( $p < 0.0001$  Kruskal-Wallis), respectively. When a minimum "3 out of 6 clinical cardinal symptoms" indicated meningitis, median time to lumbar puncture was shorter (1.0 hr vs 1.9 hr,  $p < 0.001$ ).

### Conclusion

Delay in time to lumbar puncture correlated to admission diagnosis and to initial clinical signs.