

Fatal Enterococcal Meningitis : A Case Report



Medical Science

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ABSTRACT

A 60 Year old female was admitted with – c/o fever & headache since 15 days c/o vomiting and loose motions since 2 days On general examination – patient was drowsy; Microscopy showed- 4-5 polymorphs per High power field, urine output was low(< 400ml/day); Renal functions were deranged with elevated blood urea ,serum creatinine . MacConkey's agar:- tiny magenta colonies ; 6.5% NaCl tolerant test came out to be positive.It was found to be glucose, mannitol & arabinose fermenter proving it to be *Enterococcus faecium*. The isolated *E.faecium* was found sensitive to vancomycin. MIC was done for Vancomycin was found to be 1µg/ml.

Introduction : Enterococcal meningitis is a rare enterococcal infection. It is seen both in adults & children. Enterococcal meningitis may develop spontaneously or as a post- operative infection. In case of spontaneous meningitis underlying diseases in patient include- Diabetes, **Renal failure** , Immunosuppressive drugs etc(1). The commonest species isolated is *E.faecalis* followed by *E.faecium*. *E.casseliflavus* & *E.gallinarum* have also been implicated as cause of meningitis (2). .The reason for reporting this case is incidence of enterococcal meningitis in sixth decade of life is rare.The most common species responsible is *E.faecalis* which accounts for 70-80 % cases. The death reported due to Enterococcal meningitis is usually due to Vancomycin resistant strain. We are reporting a death due to spontaneous meningitis by Vancomycin sensitive strain of *E. faecium*.

Case Report : A 60 Year old female was admitted with – c/o fever & headache since 15 days
c/o vomiting and loose motions since 2 days
On general examination – patient was drowsy.
Pulse rate was 140bpm & blood pressure was 110/70 mm of Hg

Laboratory Investigation :- CSF was sent to Microbiology laboratory,

It was found to be turbid on gross examination
Microscopy showed- 4-5 polymorphs per high power field,
Gram stain showed gram positive cocci in pairs,
Protein was elevated & sugar was below normal,
Urine output was low(< 400ml/day); Renal functions were deranged with elevated blood urea , serum creatinine .
On Blood Agar – small circular whitish non haemolytic colony
MacConkey's agar:- tiny magenta coloured colonies

The organism was non- motile, catalase & oxidase negative.
Growth at 10°C & 45°C was seen.6.5% NaCl tolerant test came out to be positive.

It was found to be glucose, mannitol & arabinose fermenter proving it to be *Enterococcus faecium*.

Antibiotic Susceptibility testing was done by Disc- Diffusion method- The isolated *E.faecium* was resistant to ampicillin & high level gentamycin(120µg), sensitive to linezolid & vancomycin

MIC was done for Vancomycin by E-strip (Hi-Media lab pvt ltd ,Mumbai INDIA) found to be **1µg/ml**.

Treatment - Initially Patient was on ampicillin + gentamycin for 3 days but she didn't respond to treatment. Meanwhile we informed our physician about presence of enterococci on culture and advised to shift her on vancomycin. But the condition of patient further deteriorated. She was then shifted to MICU. There she was administered vancomycin but it was too late, patient expired later in the evening same day.

Discussion - *Enterococcus faecium* meningitis is very uncommon. This organism is not often in the mind of physician while treating meningitis case. In our case, there was no one to look after the poor lady so her renal derangement were left unattended. Patient came up at a very later stage to the hospital. We believe this renal derangements to be the underlying cause of spontaneous meningitis. As soon as the culture showed colonies of enterococci we primarily gave our report to the clinicians. Simultaneously tested for vancomycin MIC . Good thing in our case was the strain was vancomycin sensitive but the bad thing was patient succumbed. Meningitis has always been a cause for significant mortality. Sometimes the empirical therapy does not work on rare organisms. So it is very important to carry out lumbar puncture at the earliest to seek the proper line of treatment.

REFERENCE

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