

Streptococcus sanguis Meningitis : Report of a Case

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Abstract

A 35-year-old woman who presented with acute purulent meningitis and hearing loss was reported. No bacteria was seen with Gram's stain of cerebrospinal fluid (CSF). CSF grew *Streptococcus viridans*, which was subsequently identified to be *S. sanguis*. The patient improved after treatment, including hearing.

Key word : Meningitis, *S. sanguis*, Case Report

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Streptococcus sanguis is a viridans streptococcus that colonizes the mouth and the gastrointestinal tract. In humans, the clinical infections of this organism are endocarditis and carries. Meningitis due to *S. sanguis* has rarely been described⁽¹⁻⁹⁾. An additional case of *S. sanguis* meningitis, associated with hearing loss is report.

CASE REPORT

A 35-year-old previously healthy woman was admitted to Srinagarind Hospital in May 2001

with the chief complaint of fever, headache and hearing loss for 2 days. She had a history of ear infection in childhood, and had regularly drank Thai beer for 5 years.

Physical examination showed an alert woman with body temperature of 39°C and stiffness of the neck. Otoscopic examination revealed an old healed perforation of both tympanic membranes. Oral examination and other findings were unremarkable.

The peripheral white cell count (WBC) was 13,700 cells/mm³ with 51 per cent polymorpho-

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nuclear (PMN) cells and 26 per cent band forms. Serum glucose, BUN and creatinine, electrolytes, urinary analysis and chest X-ray were within normal limits. Liver function test showed cholesterol level of 151 mg/dL, albumin level of 3.7 g/dL, globulin level of 2.5 g/dL, total bilirubin level of 2.5 mg/dL and direct bilirubin level of 1.5 mg/dL, ALT (SGPT) level of 625 U/L, AST (SGOT) level of 453 U/L and alkaline phosphatase level of 89 U/L. Serum HBsAg, HBsAb and anti-HCV were negative. Abdominal sonographic findings and CT scan of the brain were within normal limits. Audiogram revealed bilateral sensori-neural hearing loss. A lumbar puncture showed a cloudy cerebrospinal fluid (CSF) with an opening pressure of 330 mmH₂O. The WBC count was 6,400 cells/mm³ with 90 per cent PMNs. The protein level was 218 mg/dL and glucose level was 40 mg/dL (simultaneous serum glucose level of 139 mg/dL). No bacteria was seen with Gram's stain.

The patient was treated with intravenous ceftriaxone 4 g/days. Three days later, the results of the CSF culture grew *S. viridans*, which was subsequently identified to be *S. sanguis* biotype II. Her

symptoms gradually improved. She received ceftriaxone for 10 days. On follow-up 6 months later, Her hearing and audiogram had slightly improved.

DISCUSSION

In this patient, *S. suis* meningitis was initially diagnosed from the clinical manifestation of purulent meningitis with hearing loss and CSF culture grew *S. viridans*⁽¹⁰⁾. The authors then requested Ramathibodi Hospital to give definite identification of the organism, which was later identified as *S. sanguis*.

From previous reports, patients with *S. sanguis* meningitis usually had predisposing factors, such as ventriculoperitoneal shunt⁽²⁾, inner ear dysplasia⁽³⁾, epidural anesthesia^(1,6), tooth extraction⁽⁷⁾ and vacuum extraction⁽⁹⁾. In the presented patient, a predisposing factor could be from alcoholic hepatitis. Because *S. sanguis* is a mouth organism, a transient bacteremia with seeding into the subarachnoid space may be the possible mechanism of infection. From this patient, *S. sanguis* meningitis should be looked for in this clinical setting.

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เยื่อหุ้มสมองอักเสบจากเชื้อสเตรปโตค็อกคัส แซนกวิส : รายงานผู้ป่วย 1 ราย

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รายงานผู้ป่วยหญิงไทย อายุ 35 ปี มีอาการของเยื่อหุ้มสมองอักเสบเฉียบพลันชนิดเป็นหนอง ร่วมกับมีการไดอินลดลง ผลการย้อมสีกรัมของน้ำไขสันหลังไม่พบเชื้อแบคทีเรีย ผลการเพาะเชื้อของน้ำไขสันหลังชั้น สเตรปโตค็อกคัส วิรินเดนส์ ซึ่งจากการวิเคราะห์โดยละเอียดพบเป็น สเตรปโตค็อกคัส แซนกวิส ผู้ป่วยตอบสนองดีต่อการรักษารวมทั้งการไดอินดีขึ้นบ้าง

คำสำคัญ : เยื่อหุ้มสมองอักเสบ, สเตรปโตค็อกคัส แซนกวิส, รายงานผู้ป่วย

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