Microaerophilic Streptococcus Meningoencephalitis : Report of a Case

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Abstract

A 64-year-old woman who presented with acute meningoencephalitis was reported. Cerebrospinal fluid (CSF) revealed polymorphonuclear pleocytosis with gram-positive cocci. Blood and CSF grew microaerophilic streptococcus. The patient was treated with intravenous penicillin G and chloramphenicol for 2 weeks and recovered without sequela. There was no evidence of any focus of infection prone to the development of this infection.

Key word : Meningoencephalitis, Microaerophilic Streptococcus, Case Report

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Anaerobic meningitis rarely occurs in cases of purulent meningitis and a variety of bacterial species are responsible for causative agents such as *Bacteroides* spp., *Peptostreptococcus* spp., *Fusobacterium* spp., *Clostridium* spp., *Actinomyces* spp., *Propionibacterium acnes* and *Veillonella parvula*[1-4]. We report, to our knowledge, the first proven case of meningitis caused by microaerophilic streptococcus.

CASE REPORT

A 64-year-old previously healthy woman was admitted to Srinagarind Hospital in February 2000 with the chief complaint of fever with chill and headache for 1 day and stupor for 6 hours prior to admission. There was no history of sinus or ear infection and head injury. Significant past history revealed a well controlled hypertension for 20 years and a total abdominal hysterectomy with bilateral salpingo-oopherectomy 18 years ago.

Physical examination showed a woman in a stuporous state with body temperature of 39°C and stiffness of the neck. Other findings, including otoscopic and per vaginal examination, were unremarkable.

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Laboratory results included: hematocrit level of 41 per cent; peripheral white cell count of 14,800 cells/mm^3 with 93 per cent polymorphonuclear cells; normal blood glucose, serum BUN, creatinine, electrolytes, liver function tests and urinary analysis. Serum anti-HIV was non-reactive. Chest X-ray, CT scan of the brain and paranasal sinuses, ultrasound of abdomen, barium enema and echocardiography were within normal limits. A lumbar puncture demonstrated a yellowish cerebrospinal fluid (CSF), normal opening pressure, white blood cell of 1,750 cells/mm^3 with 90 per cent polymorphonuclear cells, protein of 608 mg/ dl, glucose of 10 mg/dl (blood glucose 122 mg/dl). Gram stain revealed moderate gram-positive cocci in chain. India ink preparation, cryptococcal antigen and latex agglutination for *H. influenzae*, *N. meningitis*, *S. pneumoniae* and *E. coli* were negative.

The patient was treated with intravenous ceftriaxone 4 g/day for 3 days. Her consciousness gradually improved but fever and headache still persisted. Three days after admission, the hemocultures and CSF culture grew microaerophilic streptococcus (speciation was not done). The antibiotic was switched to intravenous penicillin G 24 million units/ day and chloramphenicol 4 g/day for 14 days. Then, the fever and headache markedly subsided. On follow-up 2 months later, she was healthy.

DISCUSSION

Anaerobic meningitis is usually associated with a variety of clinical conditions. The predisposing conditions are acute and chronic otitis media, chronic mastoiditis, acute and chronic sinusitis, immunosuppression, head and neck neoplasm, head injury, suppurative pharyngitis, a craniotomy or laminectomy wound infection, antecedent anaerobic sepsis, a focus of anaerobic infection elsewhere in the body such as an empyema or abdominal abscess, CSF shunts and brain abscess rupture or extension to the surface or ventricle of the brain[1]. Anaerobic culture should be performed for these patients with gram stain-positive, culture-negative purulent meningitis.

In our patient, anaerobic meningitis was definitely diagnosed from hemoculture and CSF culture but the predisposing factor could not identified. Anaerobic bacteria should be looked for in a patient with gram stain-positive, culture-negative purulent meningitis, who has no underlying condition.

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เยื่อหุ้มสมองและสมองอักเสบจากไมโครแอโรฟิลิค สเตร็พโตค็อคคัส : รายงานผู้ป่วย 1 ราย

วีรจิตต์ โชติมงคล, พ.บ., ธีรศักดิ์ แก้วอมตวงศ์, พ.บ.**

รายงานผู้ป่วยหญิงไทย 1 ราย อายุ 64 ปี มีอาการของเยื่อหุ้มสมองและสมองอักเสบชนิดเฉียบพลัน ผลการตรวจน้ำไขสันหลังมีโพลีมอร์โฟนิวเคลียร์เซลล์เพิ่มขึ้นและการย้อมสีกรัมพบเชื้อแบคทีเรียรูปกลมติดสีกรัมบวก ผลการเพาะเชื้อในเลือดและในน้ำไขสันหลังขึ้นเชื้อไมโครแอโรฟิลิค สเตร็พโตค็อคคัส ผู้ป่วยตอบสนองดีต่อการรักษา

คำสำคัญ : เยื่อหุ้มสมองและสมองอักเสบ, ไมโครแอโรฟิลิค สเตร็พโตค็อคคัส, รายงานผู้ป่วย

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