**A Case of Serogroup A Meningococcal Meningitis: A Case Possibly Imported from China**

**Key words:** meningitis, *Neisseria meningitides*, multilocus sequence typing (MLST), China

A 47-year-old man was hospitalized with high fever, headache, vomiting, and agitated state in March 2003. He had returned home from a brief trip to Beijing, China seven days earlier. Physical examination revealed his peripheral temperature to be 40.4°C, heart rate 105 beats per minute and blood pressure 105/55 mmHg. Purpuric lesions were noticed and his neck was extremely stiff. The laboratory investigations included white-cell count 15,600/μl and C-reactive protein 21.8 mg/dl. The cerebrospinal-fluid (CSF) was turbid yellowish white, and cerebrospinal pressure was more than 400 mmH2 O. The cell count was 1,450 cells per mm³ with 83% lymphocytes and 17% polymorphonuclear leukocytes. CSF protein was 463 mg/dl, and glucose was 0 mg/dl (blood glucose 224 mg/dl). Under the clinical diagnosis of meningococcal meningitis, aggressive treatment was started with glycerol, steroid, dopamine hydrochloride and gabexate mesilate. At the same time, 8 g per day of ampicillin, 4 g per day of ceftriaxon and gamma globulin were administered. The culture showed *Neisseria meningitides*, proven to be group A by a serological study. His family and all of the contact medical staff took prophylactic ciprofloxacin and remained healthy. His general condition and mental status improved: He could obey simple commands on the fourth hospital day, and his consciousness level was almost clear in a week. He was discharged hospital 6 weeks later.

*Neisseria meningitides* is classified into serogroups, such as A, B, C, Y, and W-135, by their polysaccharide coat. Most of the isolates in Japan are groups B and Y (1), and we could find only one report on group A (2), which is regarded as highly pathogenic. His general condition and mental status improved: He could obey simple commands on the fourth hospital day, and his consciousness level was almost clear in a week. He was discharged hospital 6 weeks later.

*Neisseria meningitides* is classified into serogroups, such as A, B, C, Y, and W-135, by their polysaccharide coat. Most of the isolates in Japan are groups B and Y (1), and we could find only one report on group A (2), which is regarded as highly pathogenic. The more detailed analysis by multilocus sequence typing (MLST) (3) revealed that the strain was Sequence Type 7 (ST-7), which belongs to Subgroup III. ST-7 is one of the virulent clones and has caused large epidemics in Africa (4). Subgroup III strains caused three pandemic waves originating from China; the first in the mid-1960s, the second in the early-1980s, and the last in the late-1990s (5). This one would be imported from Beijing, China, where no epidemic has been reported since 1993.

Recently, few epidemics have occurred in Asia, and Japanese tourists are not vaccinated against meningococcal disease. The development of rapid and cheap transportation has enabled short stays abroad, and increasing numbers of ordinary people may fall ill after they return home, and visit hospitals with infectious diseases that have been rare in their homeland.

**Acknowledgements:** Special thanks to Yoko Tagawa, who isolated the pathogen and arranged for further investigation. The laboratory research for *Neisseria meningitides* was supported by Yuko Watanabe, Kanagawa Prefectural Public Health Laboratory and by a Grant-in Aid for research from the Japanese Ministry of Health, Labour and Welfare.

Yutaka SUTO, Nozomi MORI, Hideyuki TAKAHASHI*, Haruo WATANABE* and Kenji NAKASHIMA**

From Department of Neurology, Tottori Prefectural Kosei Hospital, Tottori, *Fourth Department of Bacteriology, National Institute of Infectious Diseases, Tokyo and **Division of Neurology, Institute of Neurological Sciences, Tottori University, Faculty of Medicine, Tottori

Received for publication November 6, 2004; Accepted for publication May 23, 2005
Reprint requests should be addressed to Dr. Yutaka Suto, Division of Neurology, Institute of Neurological Sciences, Tottori University, Faculty of Medicine, 36-1 Nishi-cho, Yonago 683-8504

**References**


