been reported in the literature and has been termed as a “paradoxical response” [6–8]. Within the first 10 days after starting antituberculous therapy, our patient had significant morbidity due to an unclear mechanism. It is possible that persistent compression of the cerebral cortex by a stable epidural mass was responsible for cerebral venous thrombosis, ischemia, and/or infarction and vasogenic or cytotoxic edema of subjacent white matter, leading to seizures and headache in this 21-year-old man. In addition, a type IV hypersensitivity reaction may have developed within the unchanged abscess, resulting in cerebral vasculitis, infarction, edema, and clinical seizure [9]. The improvement seen during steroid therapy may have been due to a reduction in cerebral edema (i.e., a mechanical effect) and/or to a direct anti-inflammatory mechanism on the cerebral vasculature [10]. However, MRI during this acute phase revealed no change in cerebral edema or in a midline shift to the left.

Paradoxical reaction syndrome complicating therapy for M. tuberculosis infection involving the intracranial fossa (other than meningitis) is still ill defined, and the role of preemptive glucocorticosteroid therapy is uncertain. However, early recognition and treatment of this complication with systemic corticosteroids may result in a more favorable outcome.

Amar Safdar,1,5 Arthur E. Brown,1,2,5,6 Dennis H Kraus,3,1 and Mark Malkin1,4,5
1Infectious Disease Service, Department of Medicine, 2Department of Pediatrics, 3Head and Neck Service, Department of Surgery, and 4Department of Neurology, Memorial Sloan-Kettering Cancer Center; and Departments of 5Medicine, 6Pediatrics, 7Surgery, and 8Neurology, Weill Medical College of Cornell University, New York, New York

References

Recurrent Cervical Lymphadenitis Caused by Haemophilus aphrophilus

We describe a case of recurrent cervical lymphadenitis due to Haemophilus aphrophilus in a healthy child. To our knowledge, this is the first English-language report of a soft-tissue infection due to H. aphrophilus in 18 years [1] and the first documented report of this organism as a cause of cervical lymphadenitis.

A 7-year-old girl presented with a tender 1.5 × 1-cm vesicle on the postauricular area of her right neck. There was no history of fever, trauma, or animal exposure. Gram staining of fluid obtained by needle aspiration was negative for organisms and cells, but culture of the fluid was positive for H. aphrophilus. No antibiotic therapy was given, and the lesion resolved over the next 4 days.

Thirteen days later, the child presented with a new tender 4.5 × 4.3-cm mass on the right neck, just posterior to the angle of the mandible. The WBC count was 11,300/mm³ (absolute neutrophil count, 5500/mm³). Blood culture was subsequently negative. The clinical impression was cervical lymphadenitis caused by H. aphrophilus, and treatment with oral penicillin was prescribed. The child remained afebrile, but 3 days later, the mass had increased in size. Contrast-enhanced CT identified a 1 × 0.6-cm mass consistent with an abscessed lymph node located within the superficial lobe of the parotid gland (figure 1). Surgical drainage revealed 15 mL of purulent fluid in the abscess cavity, and culture was positive for H. aphrophilus.

After 48 h of therapy with iv gentamicin and ampicillin/sublactam, treatment with amoxicillin/clavulanate was continued for an additional 14 days. There was complete clinical resolution of the infection. However, 6 months later, a recurrence in the same site that was again due to H. aphrophilus occurred. Surgical drainage was again required, and antibiotic therapy consisted of iv ampicillin/sublactam for 48 h and oral amoxicillin/clavulanate for 2 weeks. Two months later, the site was well-healed.

The original organism was found to be β-lactamase-negative by use of the BBL Cefinase disk (Becton Dickinson Microbiology Systems, Cockeysville, MD). By use of the Etest (AB
Figure 1. Axial contrast-enhanced CT through the level of the nasopharynx of a patient with recurrent cervical lymphadenitis caused by *Haemophilus aphrophilus*. There is a low-attenuation ring-enhancing abscess (large arrow) located in the superficial lobe of the parotid gland (P). The abscess is associated with an inflammatory reaction (s), which is seen as an increased attenuation in the fat superficial to the parotid gland. Note the thickening of the overlying skin (arrowheads) indicative of cellulitis and compare this with the normal appearance of the skin on the opposite side (small arrows).

**Figure 1.** Axial contrast-enhanced CT through the level of the nasopharynx of a patient with recurrent cervical lymphadenitis caused by *Haemophilus aphrophilus*. There is a low-attenuation ring-enhancing abscess (large arrow) located in the superficial lobe of the parotid gland (P). The abscess is associated with an inflammatory reaction (s), which is seen as an increased attenuation in the fat superficial to the parotid gland. Note the thickening of the overlying skin (arrowheads) indicative of cellulitis and compare this with the normal appearance of the skin on the opposite side (small arrows).

BIODISK, Piscataway, NJ), the MIC of gentamicin for the organism was 1.5 μg/mL and the MIC of ampicillin was 0.19 μg/mL. The organism isolated during the recurrent infection was also β-lactamase-negative. The MIC of gentamicin for this organism was 2 μg/mL and the MIC of ampicillin was 0.25 μg/mL.

*H. aphrophilus*, an oral commensal with a low level of pathogenicity, is a rare cause of human infection [2, 3]. Most previously described infections occurred in adults, including serious invasive infections (brain abscess, meningitis, endocarditis, osteomyelitis, and pneumonia) and soft-tissue infections [2, 3]. Most invasive infections occur in patients with predisposing conditions, and most soft-tissue infections are related to localized trauma (bites, lacerations, and postoperative wounds) at the site of infection [1, 4].

In this case, lymphadenitis probably resulted from the transport of organisms via afferent lymphatics from the site of the postauricular vesicle to the involved intraparotid lymph node. This progression is consistent with standard lymphatic drainage of the periauricular region, which is to the cervical (group II) and intraparotid lymph nodes [5].

In 2 previous studies, most strains of *H. aphrophilus* were susceptible to penicillin G and gentamicin, but results of antibiotic susceptibility testing for ampicillin were variable [3, 4]. Our patient was treated for both episodes with iv ampicillin/sulbactam followed by oral amoxicillin/clavulanate. Although her serum levels were not measured during therapy, the relatively low MICs of ampicillin were probably exceeded in the serum by appropriate per weight doses [6]. The recurrence of infection 6 months later suggests that viable organisms remained dormant in cervical lymph node tissue until reactivation. Given the variability of response to β-lactam agents, initial management with a longer course of high doses of parenteral penicillin may have prevented a recurrence [1]. Another described treatment option that may prevent recurrences is iv ceftriaxone given once daily for 4–6 weeks [7].

This case demonstrates that soft-tissue infections due to *H. aphrophilus* may recur if not treated adequately. Even with ap-
Successful Treatment of *Mycobacterium fortuitum* Prosthetic Valve Endocarditis: Case Report

To date, no cases of the successful treatment of prosthetic valve endocarditis due to *Mycobacterium fortuitum* complex have been reported. To our knowledge, we report the first such case.

A 21-year-old woman with a history of mitral valve replacement at age 9 and aortic valve replacement with a Dacron patch (Meadox, Boston, MA) at age 20 (both St. Jude Medical valves) secondary to rheumatic heart disease presented to her local emergency department with a 2-month history of fevers, chills, cough, and headaches. She was initially treated for pneumonia and discharged; however, her symptoms continued, and she returned 2 days later. At that time, her temperature was 39°C, WBC count was 8200/mm³ (with a left shift), and a chest radiogram revealed a left lower lobe infiltrate. She was admitted to the hospital, and iv antibiotic therapy for community-acquired pneumonia was started.

The initial transesophageal echocardiogram revealed no evidence of endocarditis. The patient continued to be febrile with temperature spikes to 40°C. On the seventh hospital day, cultures of blood specimens obtained at admission revealed growth of gram-positive rods in the antibiotic bottles. Subsequent blood cultures were also positive for gram-positive rods; modified acid-fast staining of blood was positive. The Indiana State Department of Health (Indianapolis) identified the gram-positive rods as *M. fortuitum*. Antibiotic therapy was changed to clarithromycin, imipenem, and amikacin.

The patient’s condition continued to be poor with daily fevers (figure 1). A repeated transesophageal echocardiogram revealed an echogenic density on the prosthetic aortic valve that was consistent with a vegetation. Blood cultures were sent to the University of Texas at Tyler, where the isolate was confirmed as *M. fortuitum* by PCR–restriction fragment length polymorphism analysis and antibiotic susceptibility testing. Ciprofloxacin was added to treatment with imipenem and amikacin on the basis of this information (clarithromycin therapy was stopped). Repeated blood cultures were negative. The patient underwent prosthetic aortic valve replacement by Roth’s procedure. Vegetations were found on the underside of the Hemashield graft (Meadox) and on the Dacron graft, and pathological examination revealed fibrin thrombosis. Culture of these lesions were negative for acid-fast bacilli.

The patient did well postoperatively, and defervescence occurred almost immediately. She completed a total of 12 weeks of iv therapy with imipenem, ciprofloxacin, and amikacin. She continued therapy with oral ciprofloxacin and trimethoprim-sulfamethoxazole. Her course was complicated by the development of a left ulnar artery aneurysm at the site of a percutaneous arterial catheter that required a saphenous vein bypass. Cultures of the aneurysm were negative for acid-fast bacilli. She is currently doing well and has completed her oral antibiotic therapy.

Secondary infections due to *M. fortuitum* complex are rare. In the most recent retrospective study of *M. fortuitum* complex infections by Svahn et al. [1], 86 isolates (71 of which were pulmonary) were recovered, and there were no cases of endocarditis. A similar study by Wallace et al. [2] reviewed 125 cases of disease due to rapidly growing mycobacteria and found 4 cases of prosthetic valve infection, 2 due to *M. fortuitum* and 2 due to *Mycobacterium abscessus*; all 4 of these patients died.

On further review of the literature, we found that none of the patients with mechanical valve endocarditis due to *M. fortuitum* complex survived [3–9]. We describe the first known survivor of *M. fortuitum* complex prosthetic valve endocarditis (17 months after valve replacement surgery). The patient was treated with both valve replacement surgery and long-term antibiotic therapy guided by results of in vitro antibiotic susceptibility testing.