

rhabdomyolysis is doubtful in these cases [6]. In our patient there was no seizure, and ketoprofen has not been associated with muscle damage, so that GBS is the only factor that can explain the rhabdomyolysis. The pathogenesis is not clear, but it has been suggested that infection may lead to the production of a proteolytic factor or a polypeptide which causes muscle degradation [6].

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***Pasteurella multocida* abscess in an African patient with human immunodeficiency virus infection**

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We report here a case of abdominal *Pasteurella multocida* abscess in an African HIV-positive patient. *Pasteurella multocida* is a Gram-negative coccobacillus which can be found in the normal flora of the nasopharynx and gastrointestinal tract of both domestic and wild mammals and birds [1]. Human transmission generally occurs via animal bites and scratches and via exposure to animal secretions [2–5]. In 5–15% of *Pasteurella multocida* infections there is no evidence of animal

contact. The gastrointestinal tract is also a possible port of entry, since cases of *pasteurella* peritonitis after endoscopy have been described [2]. Underlying disease and immunocompromised status increase the susceptibility to infection [2,3,6,7]. In humans, clinical manifestations of *pasteurella* infection can be roughly divided into three groups [2]: a local cellulitis with or without deep-seated infections [4,5], a pulmonary infection [1,3,8] or bacteremia with or without metastatic lesions [2,6,9].

Case report

A 25-year-old Liberian woman had been living in Belgium since January 1995. In 1992 and 1993 she had terminations of pregnancy. In July 1995 she was found to be HIV seropositive when she presented with a breast abscess. At that time her CD4 lymphocyte count was 184 cells/ μ L. In August 1995 she was admitted to the Antwerp University Hospital because of high fever (39°C), abdominal pain, diarrhea, vomiting and cough. On clinical examination she was found to have generalized lymphadenopathy and hepatosplenomegaly. An abdominal CT scan confirmed the hepatosplenomegaly and showed an omental 'cake' with adhesions and a multi-chambered abscess surrounded by micro-abscesses in the pouch of Douglas, bilateral pelvic inflammatory disease with salpingitis and a mild right hydronephrosis. The abscess was drained externally following insertions under CT guidance of a catheter. *Pasteurella multocida* was cultured from the drained hemopurulent fluid. Laboratory results showed anemia and abnormal liver function tests. Blood, urine and fecal cultures were negative.

The patient was treated with intravenous ciprofloxacin 200 mg twice daily for 7 days, followed by oral ciprofloxacin 250 mg twice daily for 9 days, and then amoxicillin/clavulanic acid 500 mg/125 mg four times a day. After 1 month she had responded well to treatment but the CT-scan appearances remained unchanged. The patient was discharged and subsequently lost to follow-up.

To our knowledge, this is the first description of an HIV-seropositive patient developing an abdominal abscess with *Pasteurella multocida*. Very few cases of *pasteurella* infection in HIV-seropositive patients have been described. Most of them were cases of peritonitis, pneumonia and sepsis [3,9,10]. It is unclear how our patient became infected. There was no history of animal bite or scratch or exposure to animal secretions. She never underwent an endoscopic procedure. *Pasteurella* infections respond well to benzylpenicillin, second- and third-generation cephalosporins, tetracyclines, chloramphenicol and quinolones. The susceptibility to erythromycin is variable and there is

universal resistance to vancomycin and clindamycin [2,4,11].

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High levels of resistance to antibiotics in *Escherichia coli* isolated from Cambodian doctors during a postgraduate course

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Cambodia has suffered tremendously from its recent turbulent history. The country and its people are struggling to recover from their wounds. The medical

infrastructure was completely destroyed. Several programs are being developed aimed at improving medical practice as well as at more general educational objectives. Our university has recently been involved in training courses for medical doctors, given at the Faculty of Medicine at the University of Phnom Penh. The local doctors, 16 in total, differed in age and in their disciplines (surgeons and non-surgeons) and also had their practices in different areas of the country. They participated very actively and enthusiastically in the update programs which were organized for several disciplines.

During the microbiology courses it became apparent that many infectious diseases are virtually unknown to the doctors. They were almost unaware of the problem of schistosomiasis, a parasitic disease that must be very frequent in a country living mainly off freshwater fish and rice production. Melioidosis, endemic in Cambodia and the surrounding countries of Vietnam and Thailand, was also unknown to the participants.

Furthermore, it appears that many serious infections are diagnosed as typhoid fever, and where neurologic involvement occurs this is considered as a possible case of Japanese encephalitis B. The question of how a *Pseudomonas aeruginosa* infection should be treated remained unanswered, since nobody ever diagnoses this infection.

The major reason for this lack of medical knowledge may be the absence of diagnostic microbiological laboratories in the country: none of the 16 participating doctors had ever taken a sample for microbial culture or serologic analysis during his entire career. Detection of hepatitis B and HIV infection in donor blood and microscopic detection of acid-fast bacilli in sputum samples were the only exceptions. The absence of laboratories also results in the inability to perform susceptibility testing, which leads to inappropriate antibiotic therapy. This problem was illustrated during the practical exercises organized for the microbiology course.

Each of the 16 doctors performed a culture of his own stool, in which antibiotic-containing paper disks were applied on the McConkey agar medium of the primary culture. The susceptibility of colonies of resistant coliform bacteria was analyzed in more detail using Kirby–Bauer antibiograms. The results were surprising: six of the 16 doctors harbored *Escherichia coli* (identified by conventional techniques) resistant to quinolones, two isolates were gentamicin resistant, and three isolates (from two subjects) were also resistant to ceftriaxone. The resistance rate in this small sample is higher than that found in hospitalized patients in Europe and the USA. It may be that in the absence of