

Legionellosis and recent travel to Bali

The National Centre for Disease Control has been advised of two cases (one in June and one in August) of legionellosis in persons who had recently returned from Bali. The public health authorities in Bali have been

notified and investigations are continuing. It is an important reminder of the need to ask about recent travel when trying to ascertain the source of exposure for patients diagnosed with legionella infection.

Sporadic human anthrax in urban Brisbane

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Introduction

In July 1998, a young man was admitted to a Brisbane Hospital with a skin infection, subsequently diagnosed as cutaneous anthrax; the first reported case in Queensland since 1939. This report describes clinical and microbiological aspects of the case and the public health investigation.

Clinical Case

On 18 July 1998, a 20 year old forklift driver attended the Emergency Department feeling unwell with a painful lesion over the right anterior superior iliac spine (ASIS). He had first noticed a small painful papule in the area 24 hours beforehand. A 1cm lump was present over his ASIS, surrounded by a 10cm area of reddened, indurated skin. He was febrile and had tender inguinal lymphadenopathy. A differential diagnosis of cellulitis or a spider bite was made. The patient was commenced on oral dicloxacillin and observed overnight. The next morning he was still febrile and the area of induration and erythema was larger. He was admitted under the Orthopaedic Service with a diagnosis of cellulitis and commenced on intravenous penicillin and flucloxacillin. The lesion continued to progress and 24 hours later had developed into a 10cm area of necrotic skin with vesicles. Brawny induration extended over the lower part of the abdominal wall and down the leg. The patient was toxic and in pain. The diagnosis was changed to necrotising fasciitis, swabs of the vesicle fluid were taken and he was taken to theatre where the necrotic tissue with surrounding margins was resected. Gram stain of the fluid showed no polymorphs with scanty gram positive bacilli and gram positive cocci. Clostridial infection was suspected and high dose intravenous penicillin and flucloxacillin continued. Two courses of hyperbaric oxygen therapy were administered. Following debridement, his temperature settled rapidly and he improved clinically. The patient remained in hospital for a further three weeks for skin grafting to be carried out on the affected area, and was discharged on 14 August.

Microbiology

Cultures of the vesicle fluid grew *Bacillus* species and coagulase negative staphylococci. The bacillus was inoculated into a Vitek Bacillus Card. As *Bacillus anthracis* is not identified by the card, the organism was initially reported as an unidentified *Bacillus* species. It was subsequently identified as *B. anthracis* on the basis of lack of haemolysis, non-motility, penicillin sensitivity, production of a capsule on bicarbonate serum agar in CO₂, capsular staining with McFadyeans Stain and positive 'string of pearls' test.¹ The Brisbane Southside Public Health Unit (BSPHU) was notified and an investigation was commenced.

Public Health

Upon confirmation of the diagnosis, an investigation team was established which included public health, clinical and laboratory staff, and representation from the Department of Primary Industries, and the Workplace Health and Safety Program of the Department of Employment, Training and Industrial Relations. The aim of the team was to coordinate the investigation to determine the source of the infection, to assess the risk to others and to prevent further cases of the disease.

A detailed history was obtained from the case that included occupational details and other sources of potential exposure to anthrax during the incubation period of the disease (up to seven days, usually within 48 hours).² The areas identified for further investigation included the workplace, home environment and exposure to soil through contact sport (rugby). The case had not worked with or been exposed to any livestock or animals during the incubation period.

The case worked as a labourer in a warehouse. During the incubation period he was exposed to new, imported hessian (plant fibre) material used in the packaging of Australian ginned cotton. He was also involved in repackaging of fertiliser produce. Investigations revealed that the fertiliser product was chemical based and not derived from blood and bone produce. Subsequent

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