

## Case Letters

# A human case of strangles (equine distemper) with skin lesions

Sir,

Strangles (adenitis equorum, equine distemper or Coryza contagiosa equorum) is a contagious upper respiratory tract infection of horses and other equines caused by a bacterium, *Streptococcus equi* var. *equi*. *Streptococcus equi* belongs to the pyogenic group of streptococci (group C of the Lancefield classification).<sup>[1]</sup> It consists of three subspecies of zoonotic agents rarely reported as human pathogens: *S. equi subsp. equi*, *S. equi subsp. zooepidemicus* and *S. equi subsp. ruminatorum*. After an incubation period of 4–8 days, the affected animals present with fever, heavy nasal discharge and swollen or enlarged lymph nodes in the neck and throat latch. They may also stop eating and have a dull aspect.<sup>[2]</sup> The disease spreads by nasal discharge or material from the draining abscess which contaminates pastures, barns, feed troughs and stables.

We describe a rare instance of human infection caused by group C *Streptococci* (probably *Streptococcus equi*) presenting with only skin lesions in a patient who recovered well following trimethoprim/sulfamethoxazole therapy.

## CASE REPORT

A 38-year-old man was referred for multiple, oval and confluent, erythematous, scaly and crusted plaques over face, neck and chin. He had exudation on the chin and subcutaneous abscesses were also present [Figure 1]. The submandibular and parotid lymph nodes were enlarged and there was limitation of mobility of the neck and difficulty in swallowing. He was afebrile. Mycological investigations including scrapings for potassium hydroxide examination were all normal.

The patient worked with horses in a horse stable in northern Poland. There was history of exposure to a horse having nasal discharge, enlarged neck lymph nodes and a penetrating ulcer on the neck. The horse had been diagnosed by a veterinary physician to have

strangles (equine distemper) and was positive for *Streptococcus equi*. In our patient, the skin lesions had occurred 5 days after contact with the infected horse.

Laboratory investigations revealed a total leukocyte count of 10,100/mm<sup>3</sup> and C-reactive protein of 5 mg/L. The pharyngeal and skin swabs were negative for mycological culture. Culture from a swab of the skin yielded growth of catalase-negative, β-hemolytic, Gram-positive cocci belonging to the Lancefield group C of Streptococci.

Streptococci group C were identified by using the PathoDextra Strep Grouping Kits (UK); a latex serological test which relies on the detection of group antigen on the bacterial surface (if the result shows a C group of Streptococci, it is likely it may be a *S. equi*).

The patient received trimethoprim/sulfamethoxazole therapy (960 mg twice a day) with significant improvement within 2 weeks [Figure 2].

Repeat investigations after 2 weeks showed growth of *Haemophilus parainfluenzae*, *Streptococcus pyogenes* gr A, *Streptococcus anginosus* (natural flora) and *Streptococcus equi subsp. zooepidemicus* on throat swab culture while swab from pustules grew *Pseudomonas stutzeri* (++) , *Staphylococcus aureus* (+++) and *Rhizopus spp.*

## DISCUSSION

Human infections caused by *S. equi* include outbreaks of food-borne diseases, meningitis, septicemia, pneumonia or glomerulonephritis which have been reported from USA, Finland, France and Romania.<sup>[1-3]</sup> We were unable to find any previous reports of skin involvement in human *S. equi* infection. In our patient, skin lesions occurred without systemic symptoms. He did not complain of any symptoms beyond limitation of mobility of the neck and difficulty in swallowing saliva.

Marchandin *et al.* reported infection in a 53-year-old man admitted to an intensive care unit with a high fever and in a comatose state.<sup>[1]</sup> The strains were identified as *S. equi subsp. ruminatorum*. A case report from France described a 70-year-old man with acute spondylo-discitis and endocarditis (*S. equi subsp. ruminatorum* was identified in the blood cultures) along with intertrigo of the feet.<sup>[4]</sup> Bateman *et al.*



**Figure 1: Skin lesions on face, chin and neck; eruption on the body showing multiple oval and confluent erythematous scaly plaques with crusts**

reported two unrelated deaths associated with these organisms in a 55-year-old woman who died after 3 days of diarrhea and vomiting, and in a 65-year-old man who died after a week of non-specific symptoms.<sup>[5]</sup> Lancefield group C Streptococci were isolated from both cases.

Not all cases are fatal. Minces *et al.* described the case of a 51-year-old woman who acquired meningitis after contact with a horse who had strangles.<sup>[3]</sup> This patient was successfully treated with ceftriaxone. A 59-year-old man with a history of fever, unsteadiness, hemiparesis, motor aphasia and altered mental status was hospitalized for *S. equi subsp.*<sup>[6]</sup> The patient had a practice of consuming unpasteurized goat cheese from an uncertain source. In Finland, seven cases of septicemia secondary to *S. equi subsp. zooepidemicus* have been described. All had consumed fresh goat cheese produced in a small-scale dairy located on a farm.<sup>[2]</sup> Six had septicemia and one had purulent arthritis. *S. equi subsp. zooepidemicus* was isolated from throat swabs, fresh goat cheese, the milk tank and vaginal samples of one goat.

The mode of *S. equi subsp. equi* transmission to humans remains unknown. More information is needed on its reservoirs. Prevention of human infections due to *S. equi* should include frequent microbiologic sampling of lactating animals and control measures for unpasteurized dairy products. Treatment comprises of broad-spectrum antibiotics according to the antibiogram.<sup>[1]</sup> We treated our patient with trimethoprim/sulfamethoxazole. In several studies *S. equi* has been found to be susceptible to



**Figure 2: Clinical appearance after 2 weeks of treatment. Skin lesions on neck and necklineshowing numerous scars and less exudative lesions**

trimethoprim/sulfamethoxazole while about 98% of strains of *S. equi* are sensitive to erythromycin and clindamycin.<sup>[3,4]</sup>

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#### Conflicts of interest

There are no conflicts of interest.

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