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# Communications

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## Dermatitis in Duck Workers

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From April 25, 1974, through May 24, 1977, Clinton Hospital treated 17 superficial hand and lower arm abscesses in employees of a large local duck farm. The patients were afebrile and non-toxic. The ages of the 17 workers ranged from 17 to 52 years with the median being 20 years. Review of the literature failed to reveal any similar entity. A retrospective study was begun to investigate this unusual epidemic.

### Methods

Through a computerized printout of duck farm workmen's compensation cases and a thorough review of these patients' charts, 17 cases were certified. The charts were reviewed for appearance of lesions, predisposing factors, laboratory tests, culture results, and final disposition.

Next, the duck farm was inspected by both a physician (SDB) and a veterinarian (BJL).

### Clinical Course

All the patients' lesions resolved with local treatment including incision and drainage, soaks, and oral antibiotics (dicloxacillin, oxacillin, and erythromycin). None progressed to large abscess formation or cellulitis. Of five lesions cultured, all grew *Staphylococcus aureus* (coagulase positive) organisms which were sensitive to erythromycin and resistant to penicillin and ampicillin. The antibiotic profile of sensitivities was identical to that of other staphylococci of the area.<sup>1</sup>

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### Discussion

Birds usually are resistant to staphylococcal infections.<sup>2,3</sup> However, bumblefoot, a purulent web-foot infection which can extend into the whole leg, does occur in ducks. After a small injury to the foot pad from jumping off high roosts onto sand covered concrete floors, various bacteria invade.<sup>4</sup> Usually the pathogens are staphylococci, but *Pasteurella* and *Mycoplasma* have also been reported.<sup>5</sup>

To understand the origins of the lesions in the duck workers, an understanding of the five stages of duck processing is necessary. First, the ducks receive a high voltage shock which stuns them and thus allows humane slaughter. Then the ducks' necks are cut and they exsanguinate. Thirdly, the ducks are immersed in a tank of hot water (55.6 C). This softens the feathers and allows easier plucking. Fourthly, the ducks are immersed in a paraffin bath. When the paraffin solidifies, it is easily removed with any residual feathers. Finally, the ducks are eviscerated. The lungs are vacuumed away. Workers remove the other organs by manually inserting gloved hands and drawing away the contents (these workers are thus called "drawers"). The ducks are then sectioned and/or packed.

There are three possible causes of the dermatitis in the workers. A remote possibility is that the ducks are a source of the infection (biological cause). However, ill ducks would be quickly spotted before slaughtering.

The possibility of the workers having a hypersensitivity or allergy to the ducks (chemical cause) is also remote. If this were so, these workers

0094-3509/79/110951-02\$00.50  
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probably would have the problem when they were not engaged in processing the ducks. Their symptoms would likely be rashes, swelling, and systemic problems, rather than localized infections.

The third possibility is that the young workers are being careless in their personal care after receiving small cuts and abrasions in the course of their work (physical cause). This seems the most likely cause, especially since most staphylococcal infections result from bacteria already present on the patient. Twelve patients were drawers, while the other five included two wax pullers, two killers, and one duck nail cutter. Some workers did not wear their gloves continually and some did not

cuff their gloves to lessen the chances of duck material getting on their hands.

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## Abdominal Pain with Brown Urine as a Diagnostic Problem

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### Case Report

L.S., a 63-year-old quality control inspector, was first seen, after much prodding from his wife, as an outpatient in the fall of 1978. He had an approximate six-month history of intermittent diarrhea, constipation, and crampy abdominal pain. He denied any blood or mucus in his stools. Pain was unrelated to the time of day, activity, or meals, but seemed exacerbated at times of tension or stress. There was no prior history of gastrointestinal disease or any other significant medical history. Physical examination revealed a slender white male whose abdominal examination including digital exploration of the rectum was totally unremarkable. The patient at the time was encouraged to try a diet free of dairy products and was scheduled to return within a week for sigmoidoscopy and barium enema.

The patient's symptoms had reportedly disappeared on the dietary restriction, and he unilaterally cancelled his work-up. However, over the next three to four months he noted a return of

crampy abdominal pains and loose stools with flatus, alternating with constipation. These symptoms had become pronounced enough that he voluntarily rescheduled his sigmoidoscopy and x-ray examination.

At the time of his sigmoidoscopy, the patient was complaining of mild to moderate left lower quadrant abdominal pain. His bowel movements had been infrequent over the past week and yellow and loose in nature. He stated that he had felt *nauseous without vomiting* and had passed no blood except a scant amount of bright red blood three months prior. Sigmoidoscopy was performed to 17 cm and revealed no abnormal findings, although the patient was poorly prepared. The barium enema was cancelled. In view of his symptoms and prior history, a presumptive diagnosis of diverticulitis was made. The patient was afebrile, but slightly uncomfortable with the pain; a program of bedrest, clear liquid diet, and oral ampicillin (500 mg every six hours) was instituted. He was scheduled to return to the office in 24 hours to be rechecked.

Upon his return, he was found to be suffering from increasing intensity of pain which was described as "constant, aching pain" across his lower abdomen and at the time he was exhibiting a

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