Gonorrhea Presenting as a Subcutaneous Abscess

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Gonorrhea is a common sexually transmitted disease that has various clinical manifestations. It may be asymptomatic in about one half of infected women and in 10% of infected men. There have been scattered case reports in the literature of primary cutaneous infections with *Neisseria gonorrhoeae*. Lesions on the hand have been described, presumably from digital-genital contact,[1–3] as well as superficial skin infection and ulceration of the lower leg.[4] The following is a case report of a large, deep, subcutaneous abscess caused by *Neisseria gonorrhoeae*. Extensive computerized literature searches of the MEDLINE and MEDLARS systems covering the past 20 years failed to reveal any similar case.

CASE REPORT

A 70-year-old woman presented with the complaint of a painful swelling in her right upper back for about 2 weeks. She had multiple medical problems including hypothyroidism, adult-onset diabetes mellitus treated with insulin and an oral agent, rheumatoid arthritis treated with intermittent prednisone, and alcoholic cirrhosis with esophageal varices and ascites. The patient was generally compliant with her medical regimen and had avoided alcohol ingestion for about 2 years. The patient denied any sexual activity for the past 20 years but she did share a bed with her 30-year-old daughter.

The patient reported sudden onset of pain and swelling around the right scapula without history of trauma or other symptoms of systemic illness. On physical examination a large (5 × 8 cm), deep, subcutaneous fluctuant area was noted at the inferomedial aspect of the right scapula. The mass was not fixed to the scapula. There was no increased warmth to the area, nor were there overlying skin changes. A chest x-ray film was unremarkable for underlying rib or scapula pathology. A computerized axial tomography (CT) of the chest revealed a 4 × 10-cm fluid collection. In view of this patient's multiple medical problems, she was hospitalized. Complete blood count revealed a white cell count of 8.3×10^9/L ($8.3 \times 10^3/\mu l$) with .89 segmented neutrophils and .01 band cells. Results of chemical analysis of the blood were within normal limits. On initial urinalysis, her urine was found to be contaminated (many epithelial cells and mixed growth of normal skin flora), but findings on a repeat urinalysis were within normal limits. Rapid plasma reagin (RPR) for syphilis was nonreactive. Blood cultures were not performed.

A needle aspirate was performed with CT guidance. The Gram stain test revealed white blood cells (4+) and gram-negative diplococci. The patient was started empirically on intravenous ticarcillin disodium and clavulanate potassium. Surgical incision and drainage were done under local anesthesia, which released approximately 150 mL of thick, purulent non-foul-smelling material. The wound was irrigated and packed with sterile gauze.

The patient was continued on her current antibiotic regimen, and the wound was treated with daily irrigation with hydrogen peroxide and sterile gauze packing. The wound grew a pure culture of *Neisseria gonorrhoeae* (β-lactamase negative) by the 3rd day, identified by Vitek (Vitek Systems, Hazelwood, MO) and reconfirmed using API Quadfirm (a Division of Sherwood Medical, Plainview, NJ). The ticarcillin disodium and clavulanate potassium were discontinued and oral amoxicillin, 500 mg every 8 hours, was administered. This antibiotic was given over the next several weeks while her wound healed and the abscess cavity gradually closed.

DISCUSSION

This case describes a spontaneous subcutaneous abscess caused by *Neisseria gonorrhoeae*. The finding of this organism was unsuspected, and the source of the infection is unknown. No blood, pharyngeal, cervical, or rectal cultures were performed, as antibiotics had already been begun 2 days before identification of the pathogen.

The patient denied sexual activity, and the only possible

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source may have been the patient's 30-year-old daughter with whom she shared a bed. This daughter was treated for gonorrhea approximately 10 months prior, and the size of the patient's abscess suggests a chronic process. There may have been a break in the skin integrity that allowed the organism to enter and thus cause a deep abscess. Metastatic spread from another site could not be ruled out.

The patient's use of prednisone and the location of the abscess may explain why it became so large with minimal local symptoms and no systemic symptoms.

There were no reports found in the English literature of gonorrhea causing a subcutaneous abscess. Although *Neisseria gonorrhoeae* has many skin manifestations and should always be considered in any pyogenic infection in a sexually active patient, this report shows that infection may also present in unusual locations and in elderly patients.

References

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