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Neck Abscess Caused by Feather Foreign Body

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Introduction

Neck abscesses are common occurrences and can be caused by multiple processes. In children, neck abscesses are usually the result of suppuration of cervical lymph nodes associated with acute infections such as upper respiratory tract infections and skin infections. We present a case of a neck abscess caused by a very unusual foreign body. This study was approved by the Institutional Review Board at the Greenville Health System.

Case Description

An 11-month-old male presented to the emergency department with a 10-day history of right upper neck swelling and a 3-day history of fever up to 103°F. He was unable to eat solid foods and was only taking liquids. His mother denied upper respiratory tract infection symptoms, sick contacts, trauma, or skin lesions. He had recently immigrated from Eastern Europe and had not received any childhood immunizations.

Otolaryngology consultation was obtained. On physical exam the patient was noted to have a 4 by 4 cm swelling in the right upper neck in the submandibular area. There was fluctuance in the central aspect of the swelling with erythema of overlying skin. The skin was intact without lesions.

Laboratory exam demonstrated leukocytosis and an elevated sedimentation rate. CT scan of the neck demonstrated a 3 by 3 cm hypodense mass in the right submandibular area (Figure 1).

The patient was placed on ceftriaxone and clindamycin. He was brought to the operating room and a 1.5 cm incision was made along the lower border of the mandible over the area of fluctuance. A large amount of purulent material was expressed from the abscess cavity. After irrigating the wound several times, gentle probing was performed and a thin 4.5 cm feather was pulled from the wound (Figure 2). Culture of the expressed material grew Haemophilus influenza.

On further investigation, the mother revealed that the patient slept on a hand-sewn pillow stuffed with feathers that was made by his grandmother. The feather removed was consistent with a pin feather of a duck.

The CT images were reviewed with the radiologist postoperatively. There was no evidence of foreign body on these images. The possibility of seeing the feather on ultrasound versus CT scan was discussed with the radiologist. The radiologist felt that it was more likely that the feather would have been picked up on ultrasound than on CT scan.

The patient was discharged on the fourth postoperative day and his postoperative course was unremarkable.

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Discussion

Foreign body induced neck abscess is not an uncommon phenomenon. There are many reports in the literature of ingested foreign body\textsuperscript{1-4} and external penetrating\textsuperscript{5} foreign body induced neck abscesses. To our knowledge this is the first reported case of a feather from a pillow causing a neck abscess.

The skin of an infant is very thin, making it more susceptible to penetrating injuries from objects that would not be able to penetrate the skin of an adult. Duck pin feathers can be extremely fine. In this case a pin feather from a handmade pillow was able to completely penetrate the child’s skin, resulting in a retained foreign body with no obvious wound.

Use of pillows in infants is not recommended for children under 12 months of age by the American Academy of Pediatrics. There are international pediatric groups working on education to avoid the use of pillows and blankets that can cause airway obstruction in infants. Pillows are used in other countries to position infants during sleep, but use of handmade pillows with infants is certainly rare.

The importance of copious irrigation and probing of neck abscesses is demonstrated in this case. Without adequate irrigation and probing this feather could have easily been missed, resulting in retained foreign body. Probing and irrigation of abscess cavities is important to break up any loculations and completely remove all purulent material and as in this case any retained foreign material.

Author Contributions

Rishabh Shah, reviewed the literature, participated in the preparation of the manuscript, provided final approval. Patrick W. McLear, designed the case report, reviewed the literature, participated in the preparation of the manuscript, provided final approval.

Disclosures

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