

## Acute Umbilical Sepsis and Pilonidal Disease

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In adults, umbilical pain associated with discharge is a rare presentation in primary care, and poses a diagnostic challenge for the family physician. Umbilical pain can be attributable to a large number of causes, but in conjunction with a discharge, the differential diagnosis includes umbilical anomalies that may account for these symptoms.<sup>1</sup> In each of the following three cases, the patient presented with umbilical pain, but there were subtle differences in the associated signs and symptoms. A careful history and physical examination revealed a common cause in all cases, which averted the need for surgical consultation. Desloughed hairs remained entrapped in the depth of the umbilicus as a result of poor hygiene and obesity. These hairs formed a spindle-shaped foreign body that pierced the skin and caused a subcutaneous infection. In this manner, pilonidal disease of the umbilicus led to the development of umbilical sepsis and discharge. A simple technique is described that confirmed the diagnosis in all three cases and initiated the first step of treatment.

### ILLUSTRATIVE CASES

#### Patient No. 1

A 22-year-old woman (weight 280 lb) felt a tender lump around her umbilicus for 3 days and a serosanguinous umbilical discharge for 1 day. The umbilical pain was mild and constant. Examination revealed diffuse tenderness (without guarding or rebound) around a hirsute, normal-appearing umbilicus. A simple technique was used to inspect the base of the umbilicus. Two sterile cotton swabs were inserted to the depth of the umbilicus and were parted to separate the walls of the umbilicus. This technique of examination revealed an erythematous umbilical base and a spindle-shaped cluster of hair. The hairs were lifted from the base of the umbilicus by using the two

cotton wool swabs. The umbilicus was irrigated with sterile water to remove residual debris and to wash away the purulent discharge. She was given free samples of cefadroxil, 1 g every day for 6 days. The umbilical sepsis cleared without complications.

#### Patient No. 2

A 30-year-old man (weight 246 lb) presented with constant periumbilical pain for 2 days. He had no other associated symptoms nor noticed any physical signs. On examination, there was a slight erythematous reaction around a tender, hirsute umbilicus. Examining the base of the umbilicus revealed a purulent umbilical discharge and a cluster of hair, which was removed. The periumbilical cellulitis responded to free samples of cephalexin, 500 mg four times a day for 1 week.

#### Patient No. 3

A 21-year-old man (weight 226 lb) presented with a 2- to 3-day history of constant periumbilical pain, without a complaint of a discharge. He had no other symptoms and was otherwise healthy.

On examination, there was marked periumbilical pain without peritoneal signs. The umbilicus was examined and revealed an offensive discharge of pus. After cleaning the umbilicus, two spindle-shaped clusters of hair were found and removed from the base of the umbilicus, which was 3.5 cm from the surface. He was treated with dicloxacillin, 250 mg four times a day for 7 days, and instructed to irrigate his umbilicus with hydrogen peroxide on a daily basis. The pain and umbilical discharge resolved within 2 days.

### DISCUSSION

The combination of umbilical pain and discharge is an uncommon presentation in adults. The differential diagnosis includes infection secondary to trauma, umbilicoliths, pilonidal sinus or disease, and umbilical anomalies, which

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include anomalies of the omphalomesenteric duct, the urachus, or, rarely, both.<sup>1,2</sup> These umbilical anomalies usually present before the age of 15 years (78%).<sup>3</sup>

In the above three patients, acute umbilical sepsis developed as a result of a sequence of events. Obese patients with hirsute abdomens are predisposed to this uncommon problem. Desloughed hairs accumulated and remained in the base of the umbilicus as a result of poor umbilical hygiene and the depth of the umbilicus secondary to obesity. (The depth of the umbilicus was 3.5 cm in the third case). These hairs formed a spindle-shaped foreign body that pierced the skin and initiated an infective process. In this manner, pilonidal disease of the umbilicus caused local sepsis and discharge.<sup>4</sup>

Although umbilical pain was the presenting complaint in each case, these patients had subtle differences in their clinical presentations. Only one patient noticed a discharge; in the other two patients a purulent discharge was found on examination. The reasons for inspecting the base of the umbilicus differed in the latter two patients. In the second patient, periumbilical cellulitis provided the stimulus for the physician to examine the base of the umbilicus. The third patient, however, posed a challenging differential diagnosis for umbilical pain. The patient did not have any overt signs for umbilical sepsis but had marked periumbilical tenderness on physical examination, which in an obese patient with a hirsute umbilicus prompted the physician to inspect the base of umbilicus.

The management of this problem consisted of local measures, antibiotics, and patient education. Local measures consisted of removing hairs by the technique described and

removing the discharge and debris by irrigation of the umbilicus with sterile or antiseptic solutions. Local measures and patient education may be sufficient to treat this condition; however, antibiotics were used to treat the subcutaneous infection in these patients.

Finally, it is recommended that the base of the umbilicus should be routinely examined in obese patients with hirsute abdomens and poor umbilical hygiene who present with localized periumbilical pain. The technique of examination described for the first patient will not only identify an underlying cause, but also provide an approach to the initial management of this condition, which is to remove the foreign body, the cluster of desloughed hairs. Poor umbilical hygiene was responsible for the development of this condition in these obese patients; therefore, these patients also need to be educated regarding prevention and should wash their navels regularly.<sup>5</sup> Acute umbilical sepsis secondary to pilonidal disease is easily treatable in primary care and does not require consultation with a surgeon.

#### **References**

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