

Dermatologic Approach to an Umbilical Mass

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Abstract

The potential for bowel perforation in dermatology is rare; however, perforation remains an important consideration for lesions in and around the umbilicus. We present a case of a 74-year-old female who presented to the outpatient dermatology office for evaluation and biopsy of an umbilical mass. Due to the location, biopsy was deferred and the patient was sent for surgical consultation. The patient was later diagnosed with an incarcerated ventral hernia. We will discuss the differential diagnosis of umbilical masses and the possible complications associated with performing biopsies on lesions in this area.

Keywords: Biopsy, diagnosis, surgery, umbilical hernia

INTRODUCTION

Biopsies for histologic examination and pathologic diagnosis are frequently performed in the dermatology setting. There is rarely a chance for significant harm to the patient for these low-risk, routine procedures.^[1] Certain anatomic sites, however, do necessitate more careful consideration. Umbilical masses can be particularly difficult to assess. We report a case of a 74-year-old female who presented to the outpatient dermatology clinic for evaluation and biopsy of an umbilical mass, who was later found to have an incarcerated ventral hernia.

CASE REPORT

A 74-year-old woman with a history of hypertension, hyperlipidemia, and keratinocyte carcinomas presented to the dermatology office for evaluation of a persistent umbilical mass. She first noticed a blister near the umbilicus 4 months prior. The lesion spontaneously drained, crusted, and reformed. She denied any history of trauma, endometriosis, pain, fever, or chills. On examination, there was a 2.5-cm erythematous, protruding umbilical nodule [Figure 1]. Centrally, the lesion was friable with crusting, but no calor, purulence, or tenderness was noted. A biopsy of the lesion was deferred because of concern for a potential umbilical hernia. The patient was started on doxycycline 100 mg twice daily due to concern for infection, and a referral to general surgery was placed. General surgery also considered a urachal sinus or skin cancer in the

differential. They recommended computed tomography (CT) imaging for further evaluation which revealed a fat-containing umbilical hernia without evidence of bowel involvement. The patient was taken for an elective laparoscopic procedure, and an incarcerated ventral hernia was identified. She underwent successful reduction and repair.

DISCUSSION

Evaluating umbilical masses can be challenging as the differential is broad and includes cutaneous malignancies, umbilical hernias, endometriosis, metastases from underlying malignancies, and a variety of benign lesions such as epidermoid cysts and foreign-body granulomas.^[2,3] The umbilicus itself is anatomically complex, consisting of multiple ligamentous remnants of obliterated fetal structures.^[4] These fetal connections can occasionally persist into adulthood, resulting in epithelial connections with the gastrointestinal tract.^[4] Given the unique and sometimes difficult anatomy of the umbilical area, extra caution must be taken when assessing lesions in this location. Specifically, dermatologists must always consider the possibility that these masses communicate with the gastrointestinal tract or other peritoneal structures.

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Figure 1: Umbilical tumor. A 2.5-cm erythematous nodule with central friability and crusting protruded from the umbilicus

When evaluating an umbilical mass, the treating dermatologist should conduct a thorough physical examination to further guide his or her management plan. Examination findings suggestive of an uncomplicated herniation include a reducible umbilical mass that expands when the cough impulse is elicited.^[5] In uncomplicated cases, outpatient referral to general surgery and further imaging studies should be ordered. Multidetector-row CT with contrast can be ordered for suspected abdominal wall pathology, but other imaging modalities including magnetic resonance imaging (MRI) and ultrasonography are also frequently employed.^[6] If peritoneal signs, including involuntary guarding, rebound tenderness, and abdominal distension, are present or the mass is not reducible, the patient may have an incarcerated hernia and thus should be quickly referred to the emergency department for surgical evaluation and intervention.^[6,7] A high index of suspicion is important for lesions in and around the umbilicus. Biopsy, in this case, could have led to perforation of the underlying bowel, which can be complicated by severe infection, emergency surgery, or even death.^[6,8]

Other locations that carry a higher risk of complication from biopsy or dermatologic procedures are the midline nasal dorsum and midline lumbosacral region.^[9,10] Nasal dermoid cysts commonly present as a midline nasal mass between the columella and glabella and have the potential to communicate

with the anterior skull base.^[9] Dermatologists should avoid performing biopsies of these midline nasal lesions because, should such a connection exist, there is a risk of the biopsy causing cerebrospinal fluid leakage or a serious infection.^[9] Appropriate management for these patients includes MRI of the anterior skull base followed by a referral to an otolaryngologist for surgical excision.^[9] The differential for midline lumbosacral cutaneous lesions is large, and like midline nasal septal lesions, these have the potential to communicate via sinus tracts with the underlying structures.^[10] On evaluation, dermatologists should again obtain plain film and MRI images to either confirm or rule out a suspected communicating tract with the spinal cord.^[10] Should imaging show involvement of the underlying spinal cord, prompt referral to neurological surgery should be placed for further evaluation.^[10]

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Conflicts of interest

There are no conflicts of interest.

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