Received: 2016.12.24
Accepted: 2017.01.15
Published: 2017.03.15

ISSN 1941-5923
© Am J Case Rep, 2017; 18: 267-270
DOI: 10.12659/AJCR.903016

Umbilical Pilonidal Sinus, an Underestimated and Little-Known Clinical Entity: Report of Two Cases

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Conflict of interest: None declared

Case series

Patient: Male, 26 • Female, 21
Final Diagnosis: Umbilical pilonidal sinus
Symptoms: Hair tuft in the umbilicus • pain • periumbilical dermatitis • purulent discharge from the umbilicus • skin lesions • pruritis
Medication: —
Clinical Procedure: Umbilicus preserving surgery
Specialty: General Surgery • Dermatology • Plastic Surgery

Objective: Rare disease
Background: Umbilical pilonidal sinus (UPS) is a rare disease of young, hirsute, dark men with deep navels and poor personal hygiene. UPS could easily be misdiagnosed and mistreated due to its rarity and lack of awareness of the condition by physicians. However, the diagnosis is easy to establish with physical examination and a detailed history. Although it is being diagnosed and reported more frequently, there is still no consensus regarding best treatment options.

Case Report: In this report, we present two cases of UPS, one in a man and one in a woman, who had typical symptoms of pain, swelling, and intermittent malodorous discharge from the umbilicus. They had small sinus openings with hair protruding deep in the navel. Because these two patients had previous histories of failed conservative treatments, an umbilicus preserving surgery was performed for both cases. Wounds were healed in 2–3 weeks with acceptable cosmetic results. During a more than 2 year follow-up period, there were no signs of recurrence.

Conclusions: In a patient presenting with a history of intermittent discharge, itching, pain, or bleeding from the umbilicus and the presence of granulation tissue with or without protruding hair and periumbilical dermatitis, the diagnosis should consider UPS, even in female patients. Treatment generally depends on the severity of the disease, ranging from good personal hygiene to surgical excision of umbilical complex. The treatment of choice for chronic intermittent cases is surgical removal of the affected portion; paying special attention to cosmetic appearance.

MeSH Keywords: Pilonidal Sinus • Umbilicus • Urachal Cyst

Full-text PDF: <http://www.amjcaserep.com/abstract/index/idArt/903016>

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Background

Umbilical pilonidal sinus (UPS) is still a little known entity, and only recently (2016) has there been a high-level evidence to support its occurrence. Although UPS is easily diagnosed, it is frequently overlooked in routine clinical practice due to lack of awareness of the condition by physicians.

Treatment of UPS depends on the disease severity, ranging from improved personal hygiene [1,2] to surgical excision of the affected part of the umbilical complex [3,4]. Extreme care is needed to avoid affecting the aesthetics of the umbilicus if surgery is required, particularly in women [3].

UPS is extremely uncommon in women; however, we report two cases, one in a man and one in a woman.

Case Report

Case 1, was a 26-year-old man and Case 2, was a 21-year-old woman. Both patients were admitted to the surgical outpatient department of Medical Park Gaziantep Hospital with pain, swelling, and intermittent discharge from the umbilicus for six months and 10 days, respectively. The discharge was serous, usually purulent, malodorous, and occasionally bloody. History of trauma to the navel was absent in both cases, and both patients had previous similar symptoms and conservative treatment (CT) with antibiotics and wound care within the last year. In Case 1, the male patient, an additional silver nitrate application had been performed two months after the first treatment had failed.

The male patient was extremely hairy, whereas the female patient had sparse hair, especially around the umbilicus. The male patient had seropurulent discharge, a small sinus opening coated with granulation tissue with a tuft of hair protruding deep in the umbilicus, forming a “nest of hair”, periumbilical dermatitis with erythema, and soiling from the umbilicus (Figure 1A, 1B). In the female patient, a few silky hairs were found stuck to a sinus opening in a relatively shallow umbilicus that was inflamed, edematous, and painful. Laboratory data revealed no significant anomaly. Wound cultures reported predominance of polymicrobial aerobic bacteria. Based on these findings, UPS was diagnosed in both patients.

Surgical treatment

Since previous conservative treatment attempts had failed, surgical interventions were decided for both cases, as previously described [3]. A written informed consent was obtained from both patients for the surgery. Following the administration of a single dose of prophylactic intravenous antibiotics,

local anesthesia was performed under sedation. Skin incisions were made using a radio-surgical hand piece with a fine needle electrode tip attached. A precise circular skin incision was made 3 to 5 mm below the umbilical ostium through the subcutaneous fat toward the linea alba, posterior to the umbilicus. The inner third of the umbilical complex containing the pilonidal sinus and tracts was removed after detaching all deep connections to the fascial layer. The deep subcutaneous tissue was approximated with an absorbable purse-string suture. The skin was left to heal by secondary intention to avoid infection. A ball of gauze with antibiotic ointment was placed over the wound to re-shape the navel and was kept in place for two days.

Specimens were sent to the pathology department (Figure 1C) and diagnosis of UPS was confirmed histopathologically. Both patients were discharged within a few hours, with antibiotics and analgesics. Recommended wound care consisted of washing, drying, and dressing the wound daily. Wounds healed in 2–3 weeks with acceptable cosmetic results and high patient satisfaction (Figure 2). The patients were followed for more than two years without any signs of recurrence.

Discussion

More than 90% of UPS cases are young men with deep navels and abundant body hair [1–5]. Case 1 depicts these typical characteristics. UPS may also be observed in women with absent or minimal body hair and without a deep navel [1–3], as seen in our second case. Therefore, unless proven otherwise, in a patient presenting with a history of intermittent discharge, itching, pain, or bleeding from the umbilicus, and the presence of granulation tissue with or without protruding hair and periumbilical dermatitis (Figure 1), the diagnosis should be UPS, even in female patients. Laboratory and/or radiologic investigations are only reserved for complications or differential diagnosis from other pathologies, such as umbilical hernia, granuloma, dermoid cyst, urachal and omphalomesenteric anomalies, umbilical endometriosis, and benign and malignant neoplasms [6].

Approximately 85% of patients with UPS are 10–30 years old. UPS is very rare in other age groups [3]. High occurrence in young men could be because body hair growth naturally begins with puberty and peaks after age 20. Higher depth of the umbilicus makes it a natural target for hair accumulation. Additionally, softness, maceration, erosions, and wide pores make the umbilical skin very vulnerable to hair insertion. Once umbilical skin is penetrated by hair roots, a foreign body inflammatory response begins. Edema, moisture, and reduced skin integrity further facilitates the insertion of new hair shafts into the forming sinus tracts.

Figure 1. Typical appearance of umbilical pilonidal disease in a hirsute male patient is shown. (A) On first admission, a nest of hair including a tuft of hair penetrating the skin and hyperemic granulation tissue with purulent drainage from the umbilicus is identified. (B) Recurrence after a course of conservative treatment. A marked hyperemia around the umbilicus and periumbilical edema is observed. The navel is relatively deep and a granuloma is noticed at the bottom. (C) Umbilical complex containing a tuft of hair and sinus tracts.

Figure 2. Postoperative second week appearance of the umbilicus in a young woman. (A) Overall appearance of the anterior abdominal wall and umbilicus with acceptable cosmetic result. (B) Lifted umbilical cleft and the scar after surgical treatment is shown.

Asymptomatic disease discovered incidentally can be managed by improving personal hygiene which includes the shaving of the surrounding skin, extracting all protruding hairs, and keeping the umbilicus dry. For those presenting with acute abscess or severe infection, simple drainage and curetting of the abscess, removing hairs, and packing the wound daily with appropriate antibiotics is the preferred treatment [1,2,7]. Since the infection is usually polymicrobial, broad-spectrum antibiotics (i.e., sulfamethoxazole 750 mg and ornidazole 500 mg twice per day orally) should be used for 1 or 2 weeks in conjunction with wound care until the infection subsides. In patients with symptomatic chronic intermittent disease, surgical treatment (ST) has shown to be more effective than conservative treatment [3,4]. Despite multiple attempts at CT, 28% patients present with recurrence and 32% do not heal at the two-year follow-up. However, ST has a better result, with 98% recurrence-free rate for the first attempt and 100% for the second attempt [3].

Due to the difficulties in making a correct diagnosis, there are patients who have undergone extreme surgical procedures including total umbilectomy and diagnostic laparoscopy [7]. However, total umbilectomy is not recommended, only the deeper third of navel, containing the sinus tracts and infected tissues should be removed with the aim of preserving the general appearance of umbilicus (Figure 2) [3]. Since the umbilicus is a component of cosmetic appearance for many people, it has been postulated that the preference of surgeons towards CT is reasonable [8]. However, surgeons' fear of bad cosmetic appearance after ST may be eliminated with the umbilicus preserving surgical technique described here. Thus, it is important to inform patients objectively when reaching a joint decision with them on treatment options.

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UPS is diagnosed mainly by clinical examination; however, it must also be confirmed histopathologically. Because a spectrum of pathologies can affect the umbilicus and mimic UPS [6], all excised specimens should be sent for histopathologic examination, especially when dealing with a macroscopically suspicious lesion [8].

Conclusions

UPS could easily be misdiagnosed and mistreated due to its rarity and lack of awareness of the condition by physicians. Diagnosis is easy to establish with physical examination and a detailed history. Treatment of choice for chronic, intermittent cases is surgical removal of the affected portion; paying special attention to cosmetic appearance.

Acknowledgements

The authors wish to thank Zeynep Sude Kaplan for her contribution in the technical artwork of the figures. Additional thanks to Kenan Erzurum, director of the Library and Documentation Center of the Bahcesehir University and Yigitcan Dursuner, responsible for journals and their provision for the bibliographic review.

Conflict of interest

The authors declare no conflict of interest.