
Figure 1


Figure 2

PILONIDAL SINUS OF THE FOOT

A COMMON CONDITION IN AN UNUSUAL LOCATION

Pilonidal sinus is a commonly reported condition, which occurs when hair penetrates and enters the skin creating a chronic sinus or fistula. This paper describes an unusual case arising interdigitally on the foot of a 57-year-old woman.

CASE REPORT

A 57-year-old woman presented in clinic for her routine podiatry treatment. Her medical history included ulcerative colitis and spina bifida, which has resulted in peripheral neuropathy in both her feet. Upon examination by the podiatrist, hairs were noted to be 'sprouting' from her third and fourth interdigital space (Figure 1) of her right foot. Closer examination revealed a pilonidal sinus (Figure 2) with numerous hairs evident protruding from the lesion. The hairs were carefully extracted by the clinician (Figure 3) and dressed. Healing was uneventful.

The patient owns five dogs. While at home, she admitted to just wearing socks. Dog hairs subsequently became embedded in the material, which presumably was the source of the problem. Due to the lack of sensation, the patient was unaware of itching or other symptoms as the hairs penetrated her skin. Subsequent to this episode, similar lesions have developed on the patient's feet (Figure 4), some with accompanying infection. These have been managed with wound care, monitoring and flucloxacillin 500mg QDS.

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BACKGROUND

A pilonidal sinus (PNS) is a condition that most commonly occurs on hair bearing areas - typically the sacrococcygeal area, but they have also been reported to affect other hair bearing areas such as the umbilicus[1], chest[2], anal canal[3], ear[4], nose[5], penis[6] and scalp[7]. The term translates from Latin, literally meaning 'hair nest'[8]. Recognised by British Surgeon Herbert Mayo in 1833, it was named by Hodges in 1880[9]. Typically, growing hairs may become embedded into the surrounding skin. However, a PNS can develop in non-hair bearing areas too. The only difference in these cases is that the embedding hair does not come from the patient.

Lesions arising in non-hair bearing areas have been reported to arise in specific occupations such as hairdressing[10], dog grooming[11], milking[12] and sheep shearing[13]. This has led to the term 'occupational PNS' being used. The typical areas for developing this type of PNS are the interdigital areas of the hands and fingers. Less commonly, cases also occur on the breasts, under the nails and in the popliteal fossa [14].

Figure 3

Figure 4

Figure 1: Interdigital lesion showing hair between the digits.
Figure 2: Close up of the pilonidal sinus
Figure 3: Dog hair extracted from the lesion.
Figure 4: Further lesion evident on left foot.

However, cases such as this one, involving the feet and web spaces, have rarely been noted in medical literature[15-18]. The feet are most vulnerable when going bare foot or in open footwear, as reported in a case of a hairdresser with recurrent PNS who consistently wore sandals[16].

In occupational PNS with barbers, it is thought that cutting of the hair creates a sharp end to the hair shaft that can easily penetrate the epidermis. Barbers who cut men's hair are thought to be most at risk, as men's hair tends to be shorter, and penetration is also more likely when the skin is damp[19]. The hair may then penetrate the epidermis and dermis. From here, the clinical picture can be very varied, ranging from an asymptomatic sinus with or without protruding hairs to large, painful and infected nodules as the embedded hair invokes a foreign body reaction. The picture can be complicated by recurrent bacterial or fungal infections[11] with inflammation and purulent discharge from the sinus. Osteomyelitis of the affected digit has also been observed [14] and in one case, a hairdresser with PNS that affected her feet over a 30-year period, developed a verrucous carcinoma within the fistula[20]. This was successfully treated with excision and a skin graft.

DIAGNOSIS AND TREATMENT

Diagnosis, depending on the clinical presentation can be difficult, particularly if hairs are not visually evident on examination. Dermatoscopic examination has been found to be useful[21]. The typical features of recurrent infection and purulence in an interdigital area should raise suspicion of the condition, although other conditions such as splinters, insect bites, mycobacterial infection and pyoderma should not be ruled out. Ultrasonography has been found to be beneficial in assessing lesions[22]. In minor cases, often the offending hair can be extracted if protruding from the sinus, however, deeply embedded hairs with significant tissue involvement may require complete surgical excision to ensure healing.

Full consent was obtained from the patient prior to publication of this case study.

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