CASE REPORT

Pilonidal sinus of the chin: mistreated as a dental fistula

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SUMMARY

Pilonidal sinus is a chronic inflammatory condition associated with penetration of hair particles into the skin. It is rare in the chin area and, to our knowledge, there is only one such reported case. A 56-year-old man was previously admitted to a private clinic, with a hard mass on his anterior buccal sulcus. Three of the patient's teeth were extracted as the swelling was thought to be associated with a dental infection. Because the fistula did not resolve, the patient was referred to our department. Following radiological and clinical examinations, the hard mass was reached intraorally and hair shafts were seen inside it. The area was closed primarily after cleaning the inflammatory tissues and the hairs. The recovery period was uneventful. In this case report, we present a pilonidal sinus encountered in the chin area, the wrong treatment initially given to the patient and the subsequent treatment carried out by us.

BACKGROUND

The term 'pilonidal sinus' was coined by Hodge in 1880 with the aim of identifying abnormal clinical fistulas in the hip area; it is comprised of a combination of the word 'Pilus', which means hair, and 'nidal', which means nest.¹ In the current literature, pilonidal sinus is defined as an inflammatory condition related to penetration of hair particles into the skin.² The aetiology is still controversial.³

Although it has been reported in various areas of the body, it mostly occurs in the intergluteal cleft. Pilonidal sinus has also been reported on the face,⁴ ear,⁵ nose^{6,7} and scalp.⁸ There are also some reports of its existence in the interdental clefts of barbers' fingers.⁹ Pilonidal sinus in the chin area is rare and, to our knowledge, the case presented by Oudit *et al*³ in the literature is unique.

In this case report, we present pilonidal sinus occurring in the chin area, the erroneous diagnosis of dental fistula and wrong treatment initially given to the patient, and the subsequent treatment carried out by us.

CASE PRESENTATION

A 56-year-old man was admitted to our department with fistula formation on his chin area for 6 months. According to the patient's history, he had presented to a private clinic with a hard mass in the anterior buccal sulcus area. He stated that his mandibular right incisor and canine teeth with periodontal problems were extracted under antibiotic prophylaxis with suspicion of dental infection. A fistula formation with purulent drainage developed on the chin area after 1 month. The patient was

admitted to the same dentist and his first right premolar tooth was extracted. Because no improvement was seen in the fistula formation, the patient was referred to our clinic along with his radiological images and the treatment notes (figures 1 and 2).

TREATMENT

Following clinical and radiological examinations, it was decided to reach the hard mass intraorally. After local anaesthesia was performed on the lip, mucous and cheek area, an incision was made and mucoperiosteal flap raised. Dissections were applied in order to reach the hard mass, and the existence of the hair shafts was observed within the mass. After the hair shafts and inflammatory tissues were removed, the intraoral flap was closed with a 3/0 silk suture. The extraoral fistula was sutured with 5/0 vicryl. Amoxicillin 1000 mg was prescribed to the patient to be used two times per day (figures 3 and 4).

OUTCOME AND FOLLOW-UP

After 10 days, while removing the sutures, recovery was seen to have taken place without any problem and no postoperative complications were seen. The patient, unfortunately, was lost to follow-up.

DISCUSSION

There are still controversies over the aetiology of pilonidal sinus.³ Although it was initially thought to have a congenital origin, later findings have indicated an acquired situation. One of the most striking conditions for diagnosing the pilonidal sinus is the existence of free hair shafts within the sinus. These free hairs form a fistula way, causing a reaction. This finding is thought to be proof that the formation of this sinus is an acquired situation.⁶

It is estimated that incidence is 26 in 100 000, affecting men twice as often as women.¹ Although formation of the sinus is mostly observed in those in their early 20s, it is, rarely, observed in those over the age of 45 years.¹⁰ Pilonidal sinus on the face area was reported to be on the ear,⁵ nose^{6,7}

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Figure 1 Preoperative images of patient.

Figure 2 Orthopantomography images of patient ((A) first; (B) second; (C) last).

and scalp.⁸ But our case is the second after that by Oudit *et al*,³ to be reported on the chin. Therefore, pilonidal sinus of the chin can be considered a rarely-seen chronic inflammatory lesion.³

Various treatment techniques have been proposed. While treatment can resolve with simple follow-up, depending on the status of the patient, some cases may require complex surgical reconstruction. Rapid healing of the lesion, thanks to the rich blood supply to the face, after adequate excision and curettage, is to be expected.³⁻⁴ In recent years, minimally invasive treatment techniques such as endoscopic or video-assisted ablation of pilonidal sinuses have been introduced.¹¹ However, because of the superficial location of the pilonidal sinus in our case, we did not find the need for these techniques. In our case, through intraoral access, the area was cleaned of the inflammatory tissues and hair shafts, and curetted. At 10-day follow-up, no complications were encountered. Unfortunately, long-term follow-up of the patient could not be implemented.

Diagnosis of pilonidal sinuses involves evaluation of risk factors and available findings with anamnesis and physical

Figure 3 Exposed hair shafts and intraoral primary closure.

Figure 4 Removed hair shafts, inflammatory tissues and primary extraoral closure.

examine, and investigation of the source for active infection. Pain, pus and swelling are observed in the affected area.¹² Extraoral fistulas originating from dental infection can be evaluated as the most frequently encountered differential diagnosis.¹³

Dental infections are the most frequently encountered reasons for the formation of fistulas on the face and neck areas. They are considered to derive from endodontic infections that generally originate from adjacent teeth. Extraoral fistulas resulting from periodontal infection have been also mentioned in the literature.¹⁴⁻¹⁵ Although conventional periapical and panoramic radiographs are valuable diagnostic tools for periapical infections, they are insufficient for the diagnosis of extraoral fistulas originated from periodontal diseases. Even though extraoral fistulas originating from dental infections are mostly accompanied by swellings in the area, no swellings exist in some cases. This makes it hard to make a distinctive diagnosis of pilonidal sinus.¹⁴

In our case, according to the treatment notes of the previous doctor, it was understood that he ascribed the source of extraoral fistula to periodontal disease after taking the patient's poor oral hygiene into consideration. That treatment, which was carried out without any hard evidence, resulted in extraction of three teeth for no reason. Although the formation of pilonidal sinus on the chin area is unusual, and the diagnosis hard to arrive at, it would have been a more appropriate approach to refer the patient to an expert without treating him based on assumptions lacking hard evidence.

Learning points

- ▶ Pilonidal sinus is a chronic inflammatory condition associated with the penetration of hair fragments into the skin. It usually occurs on the intergluteal cleft. Pilonidal sinus on the chin is rare.
- ▶ Extraoral dental fistulas are the commonest among the many types of sinus tracts that are formed on the face and neck. A sinus tract adjacent to teeth is usually considered to be of endodontic or periodontal origin.
- ▶ Despite pilonidal sinus of the chin area being a rare and difficult condition to diagnose, it must be evaluated for initial diagnosis of extraoral fistulas, if there is no evidence for a dental origin.

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