PILONIDAL SINUS (PILONIDAL CYSTS AND FISTULAS)

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WHAT ARE THEY?

Pilonidal cysts are (collection of hairs surrounded by an inflammatory reaction of the subcutaneous tissue. They are mainly situated in the natal cleft and in the sacrococcygeal region (sacrococcygeal cysts).
Pilonidal fistulas take their origin from the transformation of pilonidal cysts into abscesses and from their externally opening through a cutaneous orifice, usually placed in the natal cleft. They are more common in young white men after puberty, and in very hairy people.

WHAT ARE THE CAUSES?

In the past it was believed that they were congenital remnant of embryonic tissue or glands normally still present in some animals.
Today, on the other hand, it is believed that the most probable cause is the penetration of fallen hairs in the skin pores of the sudoriparous and sebaceous glands. The hairs gather to form nests in the depth of the subcutaneous tissue (Pilonidal sinus) and create a foreign body reaction, therefore a cyst.
The most frequent location is the natal cleft in the sacrococcygeal region. Other possible but rare locations are the sulcus behind the ear, between the fingers, the armpit, and the umbilicus.
Excessive hair, scarce personal hygiene, local traumatisms due to life style (rigid or tight clothing, particular working conditions), obesity, sedentary lifestyle, abundant sweating may all favour the development of this disorder.

HOW DOES IT APPEAR?

The pilonidal disease may appear in three ways:

1) **Pilonidal cyst**: it is the initial phase, made up of a small slightly painful lump in the natal cleft which can be accompanied by one or more adjoining cutaneous orifices, from which can be seen a tuft of hairs.
2) **Pilonidal abscess**: this is the inflammatory phase due to an infection of the cyst by bacteria of the skin that leads to the purulent collection. The lump increases, becomes extremely painful and the skin becomes red. The abscess may open spontaneously or require surgical incision. The pus that flows out is thick and fetid.
3) **Pilonidal fistula**: It may remain either after the spontaneous opening of the abscess or after a surgical incision. It is made up of a short canal that joins the cystic cavity to the outside through one or more cutaneous orifices situated in the natal cleft. A yellowish purulent serum flows out either continuously or at intervals.

HOW DOES IT EVOLVE?

It can evolve in different ways:

- The pilonidal cyst may remain dormant even for many years or may turn into an abscess soon after its formation.
- Usually the abscess is followed by the development of a fistula.
- The fistula may remain open and discharge continuously or close and then give origin to relapses. Closing of the fistula is favoured by continuous micro traumatisms, abundant sweating, sebum, cutaneous scaling, and sclerosis of the scar.

If the fistula wasn't operated, it can extend itself both sideways to the buttocks, upwards or downwards spreading to the whole natal cleft. Sometimes it can reach the anus and make the differential diagnosis with a real anal fistula difficult.

HOW IS IT DIAGNOSED?

It can be diagnosed through a simple surgical examination. In fact the presence of one or more orifices in the natal cleft, at times plugged by tufts of hairs, and external secretion, the palpation of an area of subcutaneous infiltration, which if squeezed may increase the secretion, are unambiguous signs of a pilonidal disease.
Finally, in order to establish its extension, it is sufficient to explore the tract with a thin probe. In rare cases of non fistulizing cysts ultrasonography of the soft tissues will reveal a subcutaneous pilonidal disease.

HOW IS IT TREATED?

The only treatment is surgery, with two types of approach:

- Open
- Closed

The "**open**" approach foresees the opening of the sinus tract (fistulotomy) and the excision of the skin and the subcutaneous tissue including the pilonidal tissue and all the cutaneous orifices. Healing takes place by secondary intention, with the growth of granulation tissue, which fills the wound completely within 30-40 days. This technique, if correctly performed, should only give 2-3% cases of relapses and cause slight pain. It is recommended in very widespread disorders with suppuration under way and especially in cases of relapses.
The "**closed**" approach always consists in the excision of the pilonidal sinus, and in the primary wound closure. Healing occurs more earlier (on average two weeks) Pain is greater and proportional to the tension of the suture. Moreover when suture is very tense dehiscence may occur with a re-opening of the wound and therefore healing will take place by second intention. The risk of relapse is higher when there is suppuration under way, when the disease is wide and relapsing(11-28,5%). This approach is recommended in particular for cysts, fistulas of small and medium entity and those with poor concomitant suppuration.
Both techniques can be performed using local anaesthesia even in day-surgery.
Other techniques less frequently used, derive from the combination of the two principal methodologies.
In case of very large pilonidal fistulas, it is possible to reconstruct the continuity of tissue by means of many **plastic surgery** techniques (Z-plasty, W-plasty, advancement flap, rotation flap). These techniques must be carried out in the absence of suppuration under way and may require total anaesthesia. Relapses occur in 2-8% of cases.
Curettage and marsupialization are the two historical traditional surgical methods used in treating this disease.

IS IT POSSIBLE TO PREVENT?

Hairy patients are advised to maintain the sacrococcygeal region depilated (by using depilating cream) in order to avoid the fall and deposit of hairs in the sulcus. This is advisable in particular to recent operated patients to avoid relapses. It is equally important to maintain good personal hygiene and wear comfortable clothing in order to avoid friction of the buttocks and continuative micro-traumatisms.

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