



Pilonidal Sinus

Alternative Names

PNS
Jeep Rider's Disease

Record Category

Disease phenotype

WHO-ICD

Diseases of the skin and subcutaneous tissue >
Infections of the skin and subcutaneous tissue

Incidence per 100,000 Live Births

11-50

OMIM Number

173000

Mode of Inheritance

Autosomal dominant

Gene Map Locus

N/A

Description

A pilonidal sinus is a blind-end tract lined with granulation tissue, which leads to a cystic cavity lined with epithelial tissue. As the name suggests, these hair containing abscesses are usually found in the sacrococcygeal region. However, they may also occasionally occur in the axilla, groin, interdigital web, umbilicus, nose, inter mammary areas, suprapubic area, clitoris, prepuce, penis, occiput or on the feet. The sinus is caused by the friction of the skin at the base of the spine, leading to the embedding of the hair beneath the surface. The hair forms small cavities or pits, which are in truth, enlarged hair follicles, which go on to become sinuses. Bacteria and debris enter this sterile area, producing local inflammation and formation of pus-filled abscesses. In chronic condition, the sinus becomes an open cavity, constantly draining small amounts of fluid.

Occasionally malignant tumors, mostly primary, may arise in a PNS.

The frequency of PNS has been calculated to be 26 cases per 100,000 people in the US. The disease shows a male predominance, with males showing 2.2-4 times greater tendency to exhibit the disease. Affected patients are usually between the ages of 25-40 years. Treatment for symptomatic PNS involves surgery to incise and drain the abscess. The surgery can be either wide excision and healing by secondary intention (longer healing time, low chance of recurrence), excision and primary closure by sutures (quicker healing, risk of recurrence), or plastic surgery technique (for recurring and/or extensive sinus).

Molecular Genetics

There has been controversy and disagreement regarding the acquired or congenital nature of the pilonidal disease. However, it is generally agreed that although the disorder per se is acquired, the formation of the pits through which the hair enters the subcutaneous tissue is congenital. A recent report has shown a significant association between mutations in the protein kinase, cAMP-dependent, regulatory, type I, alpha (PRKAR1A) gene and pilonidal disease, suggesting a hereditary predisposing abnormality.

Epidemiology in the Arab World

Bahrain

Paulose et al. (1989) reported an unusual case of a pilonidal sinus appearing on the nose. From the clinical and pathological findings, Paulose et al. (1989) found it difficult to believe that this was an acquired condition. En bloc excision by an external rhinoplasty approach was performed with no evidence of any recurrence.

Jordan

Sroujeh and Dawoud (1989) conducted a retrospective study by reviewing the records from



Jordan University Hospital. Of all patients investigated 24 were treated surgically for a discharging umbilical sinus, which is a rarely reported case of pilonidal sinus. Three of the patients had known causes for their umbilical sepsis, namely stitch sinus, urachal remnant and an umbilical polyp. Of the remaining 21 patients, seven had clinical and pathological evidence of hair in their umbilicus. Most of the patients were young men who presented with discharge, soreness or pain, swelling, and cellulitis. Treatment by umbilical excision, leaving the skin defect to heal by secondary intention, proved satisfactory. The resultant scar resembled a normal umbilicus.

In 2001, Al-Jaberi conducted a retrospective study to evaluate the outcome of asymmetrical complete excision of pilonidal sinus with simple primary closure without using drains or tension sutures. Between November 1994 and October 1998, 46 patients with chronic pilonidal sinus were observed at the Teaching Hospital in Jordan. They were treated by excision of the sinus down to the sacrococcygeal fascia and simple primary closure of the wound without tension sutures or drains. Complete healing was achieved in 41 patients (89%) after a mean follow up period of 36 months (range 12-60). Two patients (4%) developed recurrent sinuses and in three (7%) the wound broke down. All the patients who healed completely were back to work within three weeks of the operation.

Saudi Arabia

Murshid (1996) carried out a prospective study of 75 patients with pilonidal sinus (70 males and 5 females). All the patients were Saudi nationals (mean age 24.4 years), and had chronic or acute cases of PNS. The majority of the patients were students

(46.6%), and the causative factor for the disease in them may be due to sitting on a hard seat for long periods of time. Of the patients, 24% were recurrences. The pilonidal sinus were excised with primary closure. Post-operatively, natal cleft examination was performed for up to 24 months, at 3 months interval. Only two patients had recurrences. Both were obese, and admitted to being non-compliant with post-operative instructions. The results of Murshid (1996) prove primary excision and closure of pilonidal sinus to be an effective mode of surgery, showing a very low recurrence rate.

References

- Al-Jaberi TM. Excision and simple primary closure of chronic pilonidal sinus. *Eur J Surg.* 2001; 167(2):133-5. PMID: 11266254
- Murshid KR. Pilonidal sinus: primary closure with low recurrence. *Emirates Med J.* 1996; 14:96-100.
- Paulose KO, al Khalifa S, Raj SS, Saeed T. Pilonidal sinus of the nose. *J Laryngol Otol.* 1989; 103(12):1210-3. PMID: 2614243
- Sroujeh AS, Dawoud A. Umbilical sepsis. *Br J Surg.* 1989; 76(7):687-8. PMID: 2765801

Related CTGA Records

N/A

External Links

- <http://www.emedicine.com/EMERG/topic771.htm>
- <http://www.emedicine.com/MED/topic2738.htm>
- <http://www.pilonidal.org/>
- <http://www.pnas.org/cgi/reprint/101/39/14222.pdf>

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