International Journal Dental and Medical Sciences Research
Volume 3, Issue 2,Mar-Apr 2021 pp 243-246 www.ijdmsrjournal.com ISSN: 2582-6018

Umbilical Pilonidal Sinus: A Rare Case Report with Preservation of Umbilicus and Review of Literature.

Yatindra Kashid [1], Vikas Tyagi [2], Abhinav Puri [3], Sunder Goyal [4]
[1]Associate Professor, [2] Assistant Professor, [3] Senior Resident , [4] Professor.
Department of General Surgery, ESIC Medical College and Hospital, Faridabad, Haryana.

Submitted: 01-03-2021 Revised: 09-03-2021 Accepted: 12-03-2021

ABSTRACT– Pilonidal sinus disease is a recurrent and chronic disorder which is commonly seen over sacrococcygeal region. It is rare in periumbilical area. Hereby we report a case of umbilical pilonidal sinus in a 26 year old male patient that was treated by sinus excision with preservation and reconstruction of umbilicus, which is an alternative treatment option of umbilectomy.

Keywords - Umbilical pilonidal sinus, umbilical preservation

I. INTRODUCTION-

Pilonidal sinus is an acquired disease, characterized by a granulomatous reaction to a hair shaft penetrating epidermis from the cutaneous surface leading to a non-healing and discharging sinus or recurrent abscess formation. This was first described by Herbert Mayo in 1833 as a hair containing cyst in the sacrococcygeal region [1] .

Though the sacro-coccygeal area is the most common site for pilonidal sinus, it can occur at other unusual sites, such as: the umbilicus, inter-digital clefts in barbers, healed mid-thigh amputation stumps, the axilla, the pre-sternal area, the clitoris and mons-pubis, the shaft of the penis, the ear lobe, the nipple, the posterolateral abdominal wall, the brow and the upper eyelid[2]. These areas are more prone due to friction injury to the skin.

Umbilical Pilonidal Sinus (UPS) is an uncommon disease; only few 100 cases have been reported in the literature so far. Its incidence is around 0.6% of all cases of pilonidal disease[3]. The first case of UPS was reported by Patey and Williams in 1956 [4].

Predisposing factors for UPS are male, younger age group, hairy body, deep naval, poor personal hygiene and tight clothing. However its exact aetiology is unknown. Possible mechanism is that, this is common in resistant or recurrent omphalitis. Other theory is congenital aetio-pathogenesis. It was originally thought to be of congenital origin but the presence of interdigital pilonidal sinus in barbers suggested that it may be of acquired origin [5]. As there are high chances of peritoneal extension of inflammation, UPS should be treated more aggressively than its sacrococcygeal counterpart [6].

We present a case of Umbilical Pilonidal sinus and surgical technique for treatment of umbilical pilonidal sinus, through excision of the umbilical sinus with preservation and reconstruction of the umbilicus.

II. CASE REPORT-

A 26 year old male presented with complaints of discharge from umbilicus since one year. Discharge was sometimes purulent, sometimes serous, sometimes bloody with associated pain. Patient took conservative treatment from secondary level hospital but the disease recurred frequently. Clinical examination of the patient at our institute, reveled a sinus tract at umbilicus. Patient was hairy male without any co morbidities. He was a non smoker. Relevant blood investigations done which were within normal limits. MRI of umbilical region showed thick walled blind ending umbilical sinus tract with no intraperitoneal extension or collection.

Pre-op Antibiotic prophylaxis cover with intravenous ceftriaxone was given. Under General Anesthesia, a curved incision was given along superior border of umbilicus. Incision was deepened with cutting electrocautery to minimize bleeding. Sinus tract was excised completely, which was extending upto rectus sheath but not penetrating through it (Fig. 1) . The small post-surgical defect in rectus sheath was reinforced by prolene suture. Flap of umbilicus was placed back over abdominal wall and defect in the center of umbilicus was reconstructed with prolene suture and umbilicus was inverted back. Excised tract was laid open which showed tufts of hair. Post operatively, there were no complications and the patient was discharged on next day. On follow up, the wound was healed well. Histopathologic evaluation was compatible with pilonidal sinus disease.

International Journal Dental and Medical Sciences Research
Volume 3, Issue 2,Mar-Apr 2021 pp 243-246 www.ijdmsrjournal.com ISSN: 2582-6018

(Fig. 1) :- Completely Excised Umbilical Pilonidal Sinus tract showing tufts of hair.

III. DISCUSSION-

Umbilical Pilonidal Sinus (UPS) is a rare disease of umbilicus encountered by general surgeons. Although the diagnosis of UPS is not very difficult, it is frequently overlooked in routine clinical practice because of lack of careful examination. The importance of this disease lies in its recurring symptoms and the probability of spread of infection into the peritoneal cavity.

The spectrum of pilonidal disease includes pilonidal sinus, pilonidal cyst and pilonidal abscess. It is a chronic inflammatory disease characterised by granulomatous reaction to fragments of broken hair shaft which enters the dermis through a stretched hair follicle[7]. The most common symptoms are pain (100 %), Bloody discharge (69 %), Purulent discharge (23%) and umbilical mass (26%) [8]. The rarity of umbilical pilonidal sinus compared with sacrococcygeal disease is believed to result from the hardness of the umbilical cicatrix and less effective driving force [9].

UPS is a clinical diagnosis without any need for investigations. Diagnosis is with naked eye: tufts of hair with sinus. However a preoperative abdominal imaging may be beneficial in some patients. The differential diagnosis of umbilical pathology which can mimic pilonidal disease include umbilical hernia, Sister Mary Joseph's nodule, pyogenic granuloma, endometriosis, epidermoid cyst, metastatic tumors, urachus and other commonly encountered congenital anomalies of umbilicus [8]. Thorough clinical examination would alleviate the problem of under-diagnosis or misdiagnosis.

There is no consensus or guidelines for the management of this disease because of its rare occurrence. However, the treatment depends on the type of presentation. In case of acute abscess, incision and drainage is the treatment of choice[7]. For asymptomatic patients treatment is usually not required except maintaining a good personal hygiene. For recurrent discharging sinus conservative management which include, simple hair extraction from the sinus tract, depilation of hair around the umbilicus, maintaining good personal hygiene and avoiding tight clothing, is the first line of management. Kareem et al [10], and Sarmast et al [11] in their largest series on umbilical pilonidal sinus concluded that, conservative treatment should be the first and the main method in the management of UPS. They have found that incomplete hair extraction is the commonest cause for failure of conservative management. Proper instructions to the patients at the time of discharge can further reduce the chances of recurrence.

Surgery is indicated after repeated failure of conservative management. Although umbilectomy has been advised to reduce recurrence, it is not cosmetically accepted by patients, especially females. Complete excision of sinus followed by reconstructive procedures are the other available surgical options.

Fazeli et al , used reconstructive procedure for the treatment of UPS in their series of 45 cases. They completely excised the sinus after everting

the umbilicus and leaving a portion for reconstruction. The purpose of reconstruction was to maintain cosmesis which gives a better psychological impact and to reduce the depth of the umbilicus which is a predisposing factor for this disease [12].

Elective Ambulatory surgery and close follow-up in the treatment of 52 cases with umbilical pilonidal sinus is also described. A simple surgical technique of Sinus excision, consisting of excising the deep part of the umbilicus with the adjacent subcutaneous tissue with primary closure of the wound and the remnant of the umbilicus, has been reported in all these cases [13].

Umbilical pilonidal sinus can be successfully managed by excision of the sinus with umbilical preservation, without the need for umbilectomy. This limited resection is likely to be effective because umbilical pilonidal disease is significantly different from the sacrococcygeal condition, with low recurrence rates and absence of multiple tracts. In addition, incision through the umbilicus results in a better cosmetic result and more accurate appreciation of the anatomic pathology than umbilectomy or a periumbilical incision [14].

As the umbilicus defines the median abdominal sulcus and contributes to the curved shape of the inferior abdomen, it's absence leads to an unnatural abdominal appearance, and an abnormally shaped or misplaced umbilicus may draw undue attention to the central abdomen. The absence of the umbilicus is an aesthetically and psychologically frustrating condition for patients, and sometimes poses challenges to surgeons [15].

In our case, excision of umbilical pilonidal sinus with umbilical preservation and reconstruction surgery was performed successfully. This in turn reduced post-operative length of stay, morbidity of surgery, improved cosmetic and psychological results of patient with no recurrence.

IV. REFERENCES-

[1]. Mayo OH. Observations On Injuries And Disease Of Rectum. 1833. Burgess and Hill: London; 45–46 .
[2]. Soroujieh AS, Dawoud A. Umbilical Sepsis. Br J Surg. 1989;76:687–688. doi: 10. 1002 / bjs. 1800760711. [PubMed] [CrossRef] [Google Scholar]
[3]. Mustafa G, Akber G, Lodhi JK, Mutahir M, Malik A. Umbilical Pilonidal Sinus. J Ayub Med Coll. 2014;26(1):100–01.
[4]. Williams ES Patey D. Pilonidal Sinus Of The Umbilicus. Lancet. 1956;ii:281–282. [PubMed] [Google Scholar
[5]. Coskun A, Buluş H, Akıncı OF, Ozgonu A. Etiological Factors In Umbilical Pilonidal Sinus. Indian J Surg 2011;73:54-7.
[6]. Barrett TL, Schoelch SB: Umbilical Pilonidal Sinus. Cutis 1998; 62: 83-84.Umbilical pilonidal sinus - PubMed (nih.gov)
[7]. Al-Kadi AS. Umbilical Pilonidal Sinus. International Journal of Health Sciences. 2014;8(3):308–10.
[8]. Eryilmaz R, Sahin M, Okan I, Alimoglu O, Somay A. Umbilical Pilonidal Sinus Disease: Predisposing Factors And Treatment. World J Surg. 2005;29(9):1158-1160. Umbilical pilonidal sinus disease: predisposing factors and treatment - PubMed (nih.gov)
[9]. Mahmoud Haj, Isaac Cohen. Umbilical Pilonidal Sinus Ambulatory Surgical Technique. J. of Ambulatory Surgery. 11 (2004) 37–39.
[10]. Kareem T. Outcomes Of Conservative Treatment Of 134 Cases Of Umbilical Pilonidal Sinus. World J Surg2013;37:313-7.
[11]. Sarmast MH, Javaherizadeh H, Shahvari MR. Non-Surgical Treatment Of Umblical Pilonidal Sinus In Adolescent And Adult Cases. Pol Przegl Chir. 2011;83(12):652–53.
[12]. Fazeli MS, Lebaschi AH, Adel MG, Kazemeini AR. Evaluation Of The Outcome Of Complete Sinus Excision With Reconstruction Of The Umbilicus In Patients With Umbilical Pilonidal Sinus. World J Surg. 2008;32(10):2305-2308.
[13]. Elias Saikaly. Umbilical Pilonedal Sinus: Surgical Technique. American Journal of Surgery and Clinical Case Reports. 2019; 1(1): 1-4
[14]. Vijay Naraynsingh, Seetharaman Hariharan, and Dilip Dan. Umbilical Pilonidal Sinus: A New Treatment Technique Of Sinus Excision With Umbilical Preservation. DermatolSurg 2009;35:1155–1156.
[15]. Manas Panda, Prajesh Bhuta. Umbilical Pilonidal Sinus: Case Report Of 2 Cases And Review Of Literature. Asian journal of Case Reports in Surgery 2020; 4 (4): 12-15.