

Umbilical Pilonidal Sinus: A Rare and Unusual Clinical Entity: Report Of Two Cases and Review of Literature

Hemant Jain¹, Mohit Jain^{2*}, Naina Kumar³, Richa Jain⁴

^{1,3}Resident, ²Assistant Professor, ⁴Professor And Unit Head

Dept Of General Surgery Sawai Man Singh Medical College Jaipur, Rajasthan, India Pin-302004

Corresponding Author: Dr Mohit Jain

Abstract: Sinus Is Blind Ended Epithelized Tract Lined With Granulation Tissue. Sinus, When Associated With Tuft Of Hairs, Known As Pilonidal Sinus. Pilonidal Sinus Usually Presents As Hair Containing Abscess. Most Common Site Of Presentation Of Pilonidal Sinus Is Sacro-Coccygeal Region. These Pilonidal Sinuses Can Be Found At Axilla, Inter Digital Web, Umbilicus, Suprapubic Area, Prepuce, Penis, Inter Mammary Region, Clitoris And Nose. Umbilicus Is A Rare Site To Occurrence Of Pilonidal Sinus. Umbilical, Pilonidal Sinus Victims Are Usually Active Young Males, Having Deep Naval And Hairy Abdomen. In These Hair Containing Sinuses, Bacteria And Debris Are Collected Which Leads To Formation Of Pus Filled Abscess. Treatment Options For Umbilical Sinus Are Conservative, Which Includes Increase In Hygiene And Hair Extraction And Surgery. Indication Of Surgery Is Usually Failure Of Conservative Therapy.

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I. Introduction

Pilonidal Means, Hair (Piles) And Nest (Nidus). Mayo In 1833 Described Pilonidal Sinus As Hair Containing Cyst Just Below The Coccyx¹. More Common In Drivers And Hair Dresser. Willium And Patey In 1956, First Reported The Case Of Umbilical Pilonidal Sinus². In Pilonidal Sinus, Hair Shaft Penetrate Epidermis And Granulomatous Reaction Is Occure³. It Is Hair Containing Cavity, Present As Non Healing, Discharging Sinus And Recurrent Abscess. In This Case Series, We Present Two Case Of Umbilical Pilonidal Sinus Who Were Successfully Treated By Sinus Excision And Umbilical Reconstruction.

II. Case Report

22 Years Male Student And 32 Years Male Driver Presented To Our OPD On Consecutive Days With Complains Of Discharge From Umbilicus For Last 3 Months And 5months. Patients Had Also Complain Of Pain Around Umbilicus. The Discharge Was Usually Serous And Sometimes Mixed With Pus And Blood. There Was No History Of Any Surgery Or Trauma To Umbilicus In Case Of Both Patients. There Was History Of Taking Conservative Treatment With Antibiotics And Sliver Nitrate Ointment In Case Of 22 Years Male Patient. There Was No Family History Of Such Disease In Both Case.

On Examination, In First Case Tuft Of Hair Was Present, Protruding From Sinus With Red Granulation Tissue Around The Sinus Opening. In The Second Case, Multiple Sinus Opening Was There With Hairs. Abdomen Was Hairy In Both Cases.

Based On These Finding Diagnosis Of Umbilical Pilonidal Sinus Was Made. A Written Informed Consent Of Umbilectomy Was Taken In Both Cases. Prophylaxis Was Performed Via Intravenous Route With One Gm Ceftriaxone And Then Under General Anesthesia Was Given. A Curved Incision Was Made 3 To 5 Mm Below The Umbilicus From 3 O'clock To 9 O'clock. 1 Ml Of 5% Methylene Blue Dye Filled Into Umbilicus For Proper Delineation Of Sinus Tract With The Help Of Scalp Vein Set. The Umbilical Complex Containing The Pilonidal Sinus And Tracts Was Removed After Detaching All Deep Connections To The Fascial Layer. The Deep Subcutaneous Tissue Was Approximated With An Absorbable Vicryl 1-0 Purse-String Suture. The Skin Was Closed With Ethilon 2-0. A Ball Of Gauze With Antibiotic Ointment Was Placed Over The Wound To Reshape The Navel And Was Kept In Place For Two Days. Specimens Were Sent To The Pathology Department And Diagnosis Was Confirmed Histo-Pathologically. The Post-Operative Period Was Uneventful.



Figure 1

Umbilical pilonidal disease; hyperemia, peri-umbilical edema and granuloma

Figure 2

Umbilical complex containing a tuft of hair and sinus tracts.



Figure 3 Umbilicus As Presentation Of Pilonidal Disease

III. Discussion

Umbilical Pilonidal Sinus Is Very Rare In Compare To Sacro Coccygeal Pilonidal Sinus. Incidence Is Around 0.6% Of Umbilical Pilonidal Sinus Among All Cases Of Pilonidal Disease⁴. Williams Et Al Reported The First Case Of Umbilical Pilonidal Sinus In 1956².

In Past, Congenital Cause Was More Acceptable Then Acquired For Etiology Of Pilonidal Sinus. The Acquired Theory Gained Importance, When A High Incidence Of This Disease Was Found Among Jeep Drivers, Hair Dresser And Sheep Shavers. The Risk Factors For The Development Of Umbilical Pilonidal Sinus Include Male Gender, Obesity, Hairy Body, Tight Clothing, Deep Naval And Poor Personal Hygiene, Wearing Tight Clothes, Family History Of Pilonidal Sinus And Body Mass Index (BMI).

Pilonidal Sinus Most Commonly Occurs In The Sacro-Coccygeal Region. At Other Locations (Sites Where Accumulation Of Hair Can Be Occur) Including The Axilla, Between The Breasts, The Perineum, The Penile Shaft, In Spaces Between The Fingers (In Particular, In The Case Of Barbers), Umbilicus, Occiput Etc, Pilonidal Sinus Can Be Develop. During Body Movements Due To Friction And Negative Pressure, Hair Shaft Penetrates Into The Epidermis Leading To Penetration Of The Hair Shafts. Edema, Moisture, And Reduced Skin Integrity Further Facilitates The Insertion Of New Hair Shafts Which Result In Foreign Body Reaction And Development Of A Sinus Lined By Granulation Tissue.

The Clinical Features Of An Umbilical Pilonidal Sinus Are

- A) Umbilical Pain, Most Common Symptom;
- B) Bloody Discharge,
- C) Purulent Discharge,
- D) Umbilical Mass.

Umbilical Pilonidal Sinus May Present With An Acute Abscess.

Umbilical Pilonidal sinus Is A Clinical Diagnosis; Presence Of Deep Seated Hair In The Cavity Is All That Is Required To Confirm The Diagnosis Which Must Also Be Confirmed Histo-Pathologically. Microscopic Feature Of Pilonidal Sinus Includes Keratinized Stratified Squamous Epithelial Lining Of The Sinus. Hair Follicles And Broken Hair Shaft Can Be Found On The Cavity. Preoperative Intra-Abdominal Imaging May Be Required For Doubtful Cases.

Differential Diagnosis Of Umbilical Pilonidal Sinus Includes Umbilical Hernia, Endometriosis (For Women), A Sister Mary Joseph Nodule, A Pyogenic Granuloma, Urachal And Epidermoid Cysts, Metastatic Tumors, Urachus And Other Commonly Encountered Congenital Anomalies Of Umbilicus^{5,6}.

Due To Very Rare Occurrence, There Is No Protocol Or Guidelines For The Management Of This Disease. The Treatment Depends On The Type Of Presentation.

- 1) Acute Abscess: Incision And Drainage Is The Treatment Of Choice.
- 2) Asymptomatic Patients: Maintaining A Good Personal Hygiene Is Enough.
- 3) Recurrent Discharging Sinus: Conservative Management Which Include Simple Hair Extraction From The Sinus Tract, Topical Or Systemic Oral Antibiotics, Maintaining Good Personal Hygiene And Avoiding Tight Clothing.

The Commonest Cause For Failure Of Conservative Management Is Incomplete Hair Extraction

- 4) Repeated Failure Of Conservative Management: Surgical Management.
 - A) Sinus Tract Excision With Umbilectomy Followed By Reconstructive Procedure.
 - B) Umbilical Excision And Wound Closure By Secondary Intention And Found The Subsequent Scar To Resemble A Normal, Depressed Umbilicus⁷.
 - C) The Deeper Third Of Navel, Containing The Sinus Tracts And Infected Tissues Is Removed With The Aim Of Preserving The General Appearance Of Umbilicus⁸.

IV. Conclusions

Umbilical Pilonidal Sinus Is A Less Known And Rare Entity But Should Be Kept In Mind While Dealing Umbilical Pathology In Young Active Male With Hairy Abdomen. Diagnosis Is Easy To Establish. Extension Of Infection To The Peritoneal Cavity Is Also Possible. Treatment Of Choice For Asymptomatic Sinus Is Extraction Of The Hairs From The Sinus And Maintain Personal Hygiene. For Chronic, Intermittent Cases Treatment Is Surgical Removal Of The Affected Portion; Paying Special Attention To Cosmetic Appearance. Failed Conservative Management Is An Indication For Surgery.

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