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A Case Series of Pilonidal Sinus Over Anterior Chest Wall

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Abstract:- Pilonidal sinus (PNS) is an acquired inflammatory condition involving the skin and subcutaneous tissue most commonly found in hairy males[1]. Intermammary PNS is a rare variant and usually found in obese young females.Surgery is the most often used form of treatment for PNS which includes wide local excision and healing by secondary intention which requires regular post-operative wound dressing and follow up[2]. Here, we describe a case series of PNS over anterior chest wall who presented to the out-patient of surgery department for the management of the same. All 3 patients successfully underwent wide local excision with primary closure having no intraoperative and postoperative complications with no recurrence noted on short term follow up. Hence, concluding that wide local excision with primary suturing remains the treatment of choice for PNS in the chest. Recurrence rate is usually low having good prognosis.

Keywords:- *Pilonidal sinus, Chest wall, Primary closure.*

I. INTRODUCTION

Pilonidal sinus (PNS) is an acquired inflammatory condition involving the skin and subcutaneous tissue most commonly found in hairy males between 15-30 years of age. It is also called as Jeep-Bottom as it is commonly seen in jeep drivers where vibration and friction causes the hair follicles to enter the opening of the sweat glands in the intergluteal cleft region[3]. PNS are more commonly seen in sacrococcygeal region with other sites being very rare. Intermammary PNS being a clinical diagnosis usually found in obese young females wearing tight brassieres presenting with recurrent abscesses and discharging pus. To reduce recurrence and improve cosmetic results, wide local excision of the whole sinus tract with primary closure is advised. Here, we describe a case series of PNS over anterior chest wall who successfully underwent wide local excision with primary closure.

II. CASE SERIES

A. Case 1

A 28yearold obese female (BMI – 30.6 kg/m^2) presented to the out-patient of surgery department in July 2021, with a discharging sinus in the intermammary region since 6 months with no history of chronic cough/ tuberculosis as well as in close contacts. On examination patient had a hairy chest with a discharging sinus tract having an opening of 0.5 x 0.5 cm in the midline measuring 6cm from suprasternal notch with rest of the physical examination being normal. Ultrasonography of the local region was performed which suggested a tract with closed cavity measuring about 2cm with no intra-thoracic communication. Pus culture and sensitivity revealed staphylococcus infection andnegative for acid fast bacilli. The patient was planned for excision of sinus. Intra-operatively a probe was introduced through the opening and whole of the sinus tract was excised and specimen was sent for HPE and the wound was closed with primary interrupted sutures. HPE report suggested chronic inflammation with granulation tissue consistent with pilonidal sinus/cyst. The scar healed by primary intension and the patient was followed up for a duration of 3 months having no recurrence.

B. Case 2

A 22 year old obese female (BMI – 28.9 kg/m^2) presented to the out-patient of surgery department in December 2021, with swelling and discharge in the intermammary region since 1.5 years. The patient is known PCOD having history of needle intervention for the same swelling 1 year back in local hospital following which she developed intermittent pain and purulent foulsmelling discharge from the swelling. Patient has no history of chronic cough/ tuberculosis as well as in close contacts. On examination patient had a hairy chest with a discharging sinus tract having two openings of 0.5 x 0.5 cm and 0.3 x 0.3 cm over the lateral border of the sternum 1cm apart measuring 5-6 cm from suprasternal notch with no other swellings elsewhere in the body. Ultrasonography of the local region was performed which suggested two tracts having an oblique passage measuring 1cm and 2cm from the skin surface and a closed cavity having a collection of 5cc within in the subcutaneous plain. Pus culture and sensitivity revealed no growth for aerobic and negative for acid fast bacilli. The patient was planned for an excision of sinus. Intra-operatively a probe was introduced through the opening and whole of the sinus tract was excised and specimen was sent for HPE and the wound was closed with primary interrupted sutures. HPE report suggested chronic inflammation with granulation tissue consistent with pilonidal sinus/cyst. The scar healed by primary intension with no recurrence during the follow up period of 2 months.

C. Case 3

A 24 year old male presented to the out-patient of surgery department in May 2022, with wound and discharge over anterior chest wall since 3 months. Patient gives history of cough 2 years back for which he was diagnosed to have pulmonary tuberculosis and was treated for the same. ATT was given for a period of 6 months and has completed the coarse of treatment. Physical examination showed a hairy chest with opening of sinus tract in the upper anterior chest measuring 0.3 x 0.3 cm in size situated 10 cm expressing a scanty yellowish discharge. The rest of the physical examination was under normal limits with no other swelling/ lump noted in the axilla, groin or the neck.

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Ultrasonography of the local region was performed which suggested a tract with closed cavity having no intra-thoracic communication. HRCT Thorax was performed to rule out tuberculosis, empyema necessitans, osteomyelitis and costochondritis. Pus culture and sensitivity with CBNAAT gave negative results for tuberculosis. Patient was planned for elective surgery - excision and biopsy. Intra-operatively probe was introduced into the tract and was opened, a tuft of hair was found in the sinus tract which was removed and the tract was excised and sent for HPE and the wound was closed with primary interrupted sutures. HPE report suggested chronic inflammatory changes and features consistent with pilonidal sinus/cyst. The scar healed by primary intension with no recurrence during the follow up period of 6 months.

III. DISCUSSION

Pilonidal sinus (PNS) is an acquired inflammatory condition involving the skin and subcutaneous tissue most commonly found in hairy males between 15-30 years of age most commonly found in the intergluteal cleft. It is also called as Jeep-Bottom as it is commonly seen in jeep drivers where vibration and friction causes the hair follicles to enter the opening of the sweat glands in the intergluteal cleft. Another important risk factor for PNS is obesity. PNS are more commonly seen in sacrococcygeal region with other sites being very rare[5]. Intermammary PNS being a clinical diagnosis usually found in obese young females wearing tight brassieres presenting with recurrent abscesses and discharging pus.

Fig 1: Pilonidal sinus and post wide local excision with primary closure

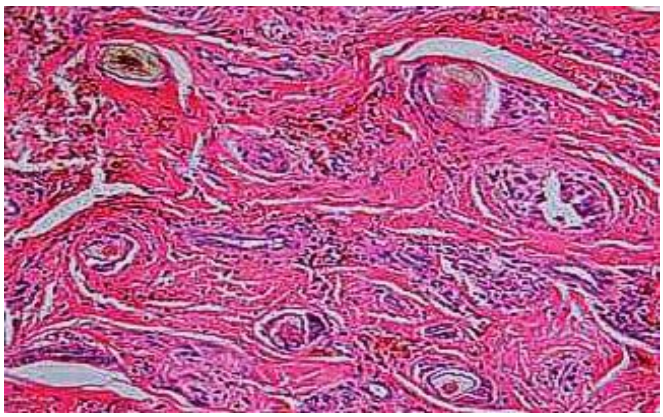

Fig. 2: Pilonidal sinus on histopathological examination.

Surgery is the most often used form of treatment for PNS which includes wide local excision and healing by secondary intention which requires regular post-operative wound dressing with follow up. This limits the early return back to daily activities and prolonged hospital stay. Another possible surgical treatment is excision of the sinus tract with primary closure. The latter has the benefit of an early cure rate, lesser duration of hospital stay with early return back to daily activities, more patient satisfaction, lower cost with better aesthetic appearance. Non-surgical treatment for PNS includes phenol injection, laser ablation and glue application.

Since the majority of atypical PNS are not detected before surgery, excision with primary repair is the preferred method of management. The wound may also be closed using 'Z'plasty[6]. Numerous methods have been suggested in the literature to address the need for flap reconstruction for primary closure of PNS like Limberg flap (Rhomboid flap). Other techniques includes Karydakis procedure and Bascom's technique[7]. The skin in the intermammary regions is considerably more flexible and can be moved about to cover the surrounding structures, which may help to explain as the preferred method using primary closure for intermammary PNS. To reduce recurrence and improve cosmetic results, wide local excision of the whole sinus tract with primary closure is advised.

IV. CONCLUSION

Pilonidal sinus over anterior chest wall is a relatively rare condition found in people having hairy chest. Wide local excision with primary suturing remains the treatment of choice for PNS in the chest. Recurrence rate is usually low having good prognosis.

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