Original Article

Epidermoid Cyst

Recurrence Rate in Aesthetic Approach for Removal of Epidermoid Cyst

Habib ur Rahman Khan Toor, Gulshan Ali Memon and Kashif Ali Shah

ABSTRACT

Objectives: To determine the recurrence rate in minimally invasive aesthetic approach for removal of epidermoid cysts

Study Design: Observational /descriptive study.

Place and Duration of Study: This study was conducted at the Peoples University of Medical and Health Sciences Nawabshah (PUMHS) from October 2013 to October 2015.

Materials and Methods: 125 cases with epidermoid cyst were included according to selection criteria. Procedures were performed in main operation theater under local anesthesia. A small stab incision, less than 5mm, given and cheesy contents of the cyst expressed out by squeezing lateral pressure with index finger and thumb. Wall of the cyst was stripped and squeezed out with artery forceps. Wounds were not stitched but approximated with adhesive dressing. patients were than sent home and three doses of oral amoxicillin with diclofenac sodium was prescribed in all cases. Follow up visits were scheduled to observe any post operative bleeding, wound infection, wound cosmetics and any recurrence.

Results: Among 125 cases 82 were male and 43 were females with M:F ratio of 3:2. Mean age was 29 years with a range of13- 52 and SD ± 9. Mean operating time was 12 minutes with SD ± 3 and a range of 8-15. Primary hemorrhage was noted in 1(0.8%) reactionary bleeding was noted in 2(1.6%) while there was no any secondary bleeding. wound infection was noted in 4(2.4%) cases. Wound cosmetics was remarkable as scar was almost non visible after some time. There was no any recurrence even after 1 year follow up.

Conclusion: Minimally invasive aesthetic approach to remove small epidermal cysts at cosmetically concern body areas, give excellent scar cosmetic and no greater chance of recurrence.

Key Words: Epidermoid Cyst, Minimal Invasive Surgery, Recurrent Epidermoid Cyst

Citation of article: Toor HRK, Memon GA, Shah KA. Recurrence Rate in Aesthetic Approach for Removal of Epidermoid Cyst. Med Forum 2017;28(4):178-180.

INTRODUCTION

Epidermoid cyst is one of the commonest benign skin tumor. The size of the epidermoid cysts varies from a few millimeters to 5 cm in diameter. They frequently appear on the scalp, face, neck, trunk, scrotum and less commonly on other parts of the body[1,2,3]. Breast is not a rare site of its occurrence[4]. These slow growing lesions remain asymptomatic in majority of the cases. Symptoms starts appearing when the size is rapidly increasing or the cyst become infected and the main symptom is usually a small, non-painful lump beneath the skin. The lining of the epidermoid cyst is very similar to the infundibulum of the hair follicle, therefore, it is assumed that the source of this epidermis is nearly always the infundibulum of the hair follicle [5]

Department of Surgery, Peoples University of Medical and Health Sciences Nawabshah.

Correspondence: Dr. Habib ur Rahman Khan Toor, Assistant Professor of Surgery, Peoples University of Medical and Health Sciences Nawabshah.
Contact No: 0301-3804411
Email: dr_habibtoor@yahoo.com

Received: February 5, 2017; Accepted: March 5, 2017

The true incidence of malignancy remains uncertain as there is very variable (0.045–19.0%) malignant potential in epidermoid cysts.[6] On clinical examination these cysts appear as -yellowish, firm, round nodules of variable size. A central pore or punctum may be present. Majority of the patients do not seek medical advice until the epidermoid cyst become symptomatic or because of cosmetic reasons. The mainstay of treatment of an epidermoid cyst is surgical removal of the cyst. Surgical treatment of epidermoid cysts may involve simple excision or incision with removal of the cyst and cyst wall though the surgical defect.[7] A conventional approach with a wide elliptical incision with an effort to remove the cyst in *toto,* leave a prominent scar but almost completely remove the cyst wall and ultimately reduce the chances of recurrence. Recurrence of epidermoid cysts after surgical removal strongly correlates with the residual wall of the cyst. Whenever a surgical scar is to be made on a part of the body with high cosmetic concern especially the face, an aesthetically inconspicuous scar becomes a real demand. Worldwide various less invasive techniques were introduced in an attempt to make a minimal scar for the removal of epidermal cyst like Patton1 in 1963, Vivakananthan2 in 1972, Moore and Greer5 in 1975Park SW et al in 2015.[8,9,10,11] As compare to conventional approach , less invasive procedure are not

supposed to be much accurate in complete removal of the wall of the epidermoid cysts. Removal of sebaceous cyst with small linear incision, squeezing out cheesy material, stripping off the wall of the cyst and without applying any stitch gives good aesthetic results.[12] This study was conducted at PUMHS Nawabshah to determine the rate of recurrence of an aesthetic approach in removal of epidermal cyst.

MATERIALS AND METHODS

This is a descriptive study extending from October 2013 to October 2015 and comprised 125 patients. Patients were selected from surgical outpatient department (OPD). No age and gender discrimination was made. Demographic data was recorded. Diagnosis of the Epidermoid cyst was solely made on history and clinical examination. Patients with epidermoid cyst of less than 2.5 cm were selected. Infected and recurrent epidermal cyst were not selected for this study. Immuno- compromised cases like diabetics , taking steroids and patients with bleeding disorders were not included. Patients with generalized skin disorders were also not considered for this study. All patients were advised to get blood complete picture, coagulation profile and hepatic viral status lab reports. Procedures were done in operation theater with all aseptic measures. Local anesthesia with ring block using 2% xylocain and 1:2000 adrenalin in an insulin syringe was used. A small less than 5mm stab incision was given on the most prominent part of the swelling or on the punctum if present. All the cheesy material is sequeezed out by applying rolling compression with thumb and index finger. After complete emptying of the cyst, a pair of small artery forceps was introduced into the cavity through the stab wound to catch the wall of the cyst. The wall of the cyst then sequeezed out or stripped off with rotatory movements of artery forceps. Hemostasis is secured by applying gental pressure. Wound cavity was irrigated with small amount of normal saline. No stitching was used and wound is approximated with adhesive dressing. Few minutes after procedure patients were sent home. Three doses of oral amoxycyclline along with diclofenace sodium were prescribed. After 3 days dressing was removed on their first follow up in the OPD and patients were then allowed to wash the wound area routinely. After first early visit, patients were scheduled for 2nd and 3rd follow up after 2 and 12th week of surgery respectively to observe the cosmetic of the scar. Patients were advised to come for follow up after one year or any time after that, when they notice any swelling at the operated site to detect any recurrence Data was analyzed on spss latest version.

RESULTS

125 patients were included in this study that was conducted between October 2013 and 2015. Among these 125 cases 82 were male and 43 were female making a male female ratio M:F 2;1. Mean age was 29 years with a range of13- 52 and SD ± 9. Mean operating time was 12 minutes with SD ± 3 and a range of 8-15. Primary hemorrhage was noted in 1(0.8%) reactionary bleeding was noted in 2(1.6%) while there was no any secondary bleeding occurred in any case Post operative wound infection was noted in 4(2.4%) cases. Scar was almost invisible after 3 months in110 cases and undetectable after 1 year in all 95 cases who came for their fourth follow up. No recurrence found even after 1 year.

DISCUSSION

In this two year 125 cases were selected for the study. Male to female ratio was 2:3.On clinical parameter a size of 2.5 cm was selected as an upper limit of the epidermoid cyst as larger cysts may develops a thick and adherent cyst wall, difficult to remove. This size selection is similar to Paliotta A *et al.*[13,14] The mean operating time 12 minutes was similar to Lee.[15] The epidermoid cyst is one of the commonest skin swelling, usually presents as a small papule or nodule subcutaneously on the head, neck, trunk and extremities.[16] Majoriry of the cases remain asymptomatic until the cyst enlarge in size or become infected. Patients seek medical advise due to cosmetic reasons and developing symptoms . Surgical excision is the only optimum treatment. Conventional surgical excision requires a wide elliptical incision and complete removal of the cyst wall but left with a permanent scar. A significant ratio of epidermoid cysts occur at exposed areas of the body with a high cosmetic concern like face, neck and extremities. To get minimal scarring and better cosmetic results many new less invasive procedure were introduced like removal with a biopsy punch incision[14], laser punch evacuation and minimal incision.[17,18] In the present study the cosmetic of scar was excellent as the scars were almost invisible after few months of surgery and patients found delighted. As compare to conventional surgical approach these less invasive procedures may not completely remove the wall of cysts resulting in a relatively greater chances of rate of recurrence. Most recurrences occur within the first year of surgical removal[14]. In the present study ,there was no any recurrence found even after one year follow up that is very similar to Park SW[9] (no recurrence) and HuiLing Wu et al's minimal invasive laser punch aesthetic surgery(no recuurence)[18]. Klin observed the a negligible recurrence (0.66%) in his similar work of 302 cases.[19] Song's et al also shown no recurrence in his work of minimally invasive small hole CO_2 laser technique.[20] These studies are supporting the aesthetic approach of small incision for removal of sebaceous cysts with no increase chance of recurrence.

CONCLUSION

Minimally invasive aesthetic approach to remove small epidermal cyst at cosmetically concern body areas,

gives excellent scar cosmetic and no greater chance of recurrence.

Conflict of Interest: The study has no conflict of interest to declare by any author.

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