Evaluation of Characteristics of Patients with Pilomatricoma in Mazandaran Province, 1996-2006

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Abstract: Pilomatricomas are benign cutaneous neoplasm that occur frequently in children and usually present as slow-growing, firm, dermal nodules. About 60% said to arise in patients less than 20 years of age. In this study, 46 case of pilomatricoma, with asymptomatic, single and firm nodule referred to dermatology clinic of Boo-Ali Sina hospital in Sari (1996-2006). A biopsy was taken from suspicious lesions and histopathology assessments were done for cases with pilomatricoma impression. 69.56% patients were female. Mean age of the patients was 20.1 years. The most frequent sites of the tumor were the forearm (41.30%).

Key words: Evaluation, characteristics of patients pilomatricoma, biopsy, histopathology

INTRODUCTION

Pilomatricoma is a benign cutaneous neoplasm with differentiation toward hair matrix, that occurs frequently in children (Kaddu et al., 1994; Holme et al., 2001). Pilomatricoma usually manifests as a solitary, asymptomatic and firm nodule, but some reported pain during episodes of inflammation (Rao and Lin, 2006). Internationally, 15 patients with pilomatricoma were seen in a pediatric surgery clinic in Turkey from 1984-1994 (Demircan and Balik, 1997). Cigliano presents 83 patients with pilomatricoma during a 7-year period (1996-2002) at the departments of Pediatrics, University Hospital "Federico II", Naples, Italy (Cigliano et al., 2005). Kaddu et al. (1994) studied 118 patients admitted at department of dermatology in Australia between "1980-1990". Diagnosis of pilomatricoma is difficult and the final confirmation is by histological examination (Punia et al., 2001). Because preoperative diagnosis of pilomatricoma is usually incorrect, careful clinical examination and a high index of suspicion would result in a more accurate diagnosis (Lan et al., 2003). This study presents 46 cases of pilomatricoma. Principle characteristic clinical presentations of this tumor are discussed.

MATERIALS AND METHODS

In this descriptive study, patients with asymptomatic, single and firm nodule referred to dermatology clinic of Boo-Ali Sina hospital in Sari, Iran (1996- 2006) were assessed. Biopsy was taken from suspicious lesions and histopathology assessments were done for cases with pilomatricoma impression (Fig. 1 and 2). Demographic data, clinical finding, the site, size, color and malignant deformity of lesions were evaluated. The results were descriptively analyzed using ±2 test with SPSS.
Table 1: Frequency distribution of the location in 46 cases with pilomatrixoma referred to Boo-Ali Sina hospital, Sari, Iran during 1996-2006

<table>
<thead>
<tr>
<th>Location</th>
<th>Frequency</th>
</tr>
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<tbody>
<tr>
<td>Forearm</td>
<td>19 (41.3%)</td>
</tr>
<tr>
<td>Arm</td>
<td>8 (17.3%)</td>
</tr>
<tr>
<td>Neck</td>
<td>4 (8.7%)</td>
</tr>
<tr>
<td>Eyelid</td>
<td>2 (4.3%)</td>
</tr>
<tr>
<td>Face</td>
<td>2 (4.3%)</td>
</tr>
<tr>
<td>Leg</td>
<td>2 (4.3%)</td>
</tr>
<tr>
<td>Thigh</td>
<td>2 (4.3%)</td>
</tr>
<tr>
<td>Scalp</td>
<td>1 (2.2%)</td>
</tr>
<tr>
<td>Others</td>
<td>4 (8.7%)</td>
</tr>
</tbody>
</table>

FIG. 3: The most common lesion color was cream.

RESULTS

In this study, we presented 46 cases of pilomatrixoma. These cases were recognized from a total of 2470 dermal biopsies taken in dermatology ward of Boo-Ali Sina hospital Sari, Iran from 1996-2006. Thirty two (69.56%) patients were female and 14 (30.44%) male. Mean age of the patients was 20.1 years (range 2-68 years). The most common age group was 11-20 years. The most frequent sites of the tumor were the forearm (41.30%) arm (17.39%). (Table 1).

The color of lesions was cream 12 (26.08%) (Fig 3), brown 6 (13.04%), light cream 9 (19.56%), gray 9 (19.56%); skin color 4 (8.69%), light red 1 (2.1%), brown 1 (2.1%) and white 1 (2.1%).

The size of most of the lesions was 0.85 cm, the largest size was 4 cm and the smallest was 0.1 cm seen in scalp and arm, respectively. In biopsy study, 22 cases had calcification. None of the cases had malignancy.

DISCUSSION

Pilomatrixoma is a skin appendage tumor that frequently involves the skin of the head, neck and upper extremities in young children (Demircan et al., 1997). In a study by Cigliano, female/male ratio was 2:1 (Cigliano et al., 2005) and in Jaggii's review article, female to male ratio in 209 cases was 1.5:1 (Demircan et al., 1997), but Lan et al. (2003) reported 0.97:1. In our study, this ratio was 2.5 pilomatrixoma can occur at any age (Lan et al., 2003). However, most reported cases have occurred in children (1-4) and it is rather uncommon neoplasm in middle age and old patients (Belukc et al., 1998). Mean age in our study was 20.1 years (range: 2-68 years). The most common age group was 11-20 y. Jaggii found a bimodinal pattern for age presentation: the first peak being 5-15 years and the second being at 50-65 years (Kaddu et al., 1994; Rao and Lin, 2006).

Based on the literature, the tumors occur mainly on the head and neck regions (Pulvermøer et al., 2006; Pirouzmanesh et al., 2005; Rao and Lin, 2006; Darwish et al., 2001; Punia et al., 2001) which is similar to our results. Head and neck were the most common location of the tumor reported by Kumar 73.31% and Cigliano 56.5% (Kumar et al., 2006; Cigliano et al., 2005). In our study, the most common site was upper limb though (58.69%).

The lesions have usual normal skin color but reddish purple lesions were observed (probably resulting from hemorrhage) (Rao and Lin, 2006). In this study, the cream was the most common color (26%).

In several studies, tumor size ranged between 3-43 mm (Kumar et al., 2006; Lan et al., 2003; Darwish et al., 2001; Rao et al., 2006), we obtained a result. Varying amount of calcification was recorded in other studies (Darwish et al., 2001). Demircan claimed that all cases had calcification in histopathology examination (Demircan et al., 1997) but Kumar and Jaggii reported 91 and 75%, respectively. (Kumar et al., 2006; Rao and Lin, 2006). In the subjects of this study was 49%. Pilomatrixal carcinoma is uncommon (Rao and Lin, 2006). No invasive or malignancy lesion was observed by light microscopy (Demircan et al., 1997). In our study, no malignancy observed too.

Because preoperative diagnosis of pilomatrixoma is usually difficult, careful clinical examination and a high index of suspicion would result in a more accurate diagnosis. Complete surgical excision is the treatment of choice.

CONCLUSION

We concluded, because the pilomatrixoma is a benign cutaneous neoplasm with differentiation toward hair matrix, so that it is not seen in palm or plantar surface, but could present in any other area. Since, few of pilomatrixoma lesions converted to malignant, so that it is better we resect total lesion by surgical excision.
REFERENCES


