INTRODUCTION

The coexistence of two different neoplasms in a single lesion is referred to as collision tumor.[1] Whether, the occurrence of these lesions follow a reactive pathology, malignant degeneration, or a spontaneous phenomenon, yet needs to be clearly elucidated. Our case represents a contiguous tumor with a unique combination of pilomatricoma and eccrine syringofibroadenoma (ESFA). Both ESFA and pilomatricoma are appendageal tumors of the skin, involving the eccrine apparatus and hair follicle matrix cells, respectively.[2] Although both represent integumentary tumors, they possess absolutely different features both clinically and histologically. ESFA is a tumor commonly involving the extremities in elderly individuals and presenting as a solitary skin-colored nodule, whereas pilomatricoma characteristically involves the head and neck region and presents as a slow growing solitary and hard nodule. Such a combination has not been encountered earlier and because of an unusual presentation this case warrants mention.

CASE REPORT

A 38-year-old male presented to the Department of Dermatology with complaints of an asymptomatic nodule, he had noticed over the right cheek for the past 2 years. Earlier, the nodule was even smaller in size and had very slowly increased in dimensions to attain the current status [Figure 1]. Clinical examination demonstrated a firm, nontender, and fixed nodule over the upper aspect of the right cheek, measuring 1 cm × 1 cm × 2 cm. On closer inspection, the nodule revealed the presence of a central punctum. With these findings, the possibility of a calcified sebaceous cyst was considered and an excision planned. While excising the nodule, it was found firmly adherent to the adjacent skin. Therefore, an excision biopsy for the nodule was performed, and the specimen sent for histopathologic evaluation. Hematoxylin and eosin stained sections of the biopsy demonstrated the presence of two different tumors [Figure 2]. One of the sections revealed the presence of anastomosing cords composed of scattered ductal structures lined by...
Bubna, et al.: Solitary facial nodule

Figure 1: An asymptomatic nodule seen on the upper part of the right cheek in our patient

Figure 2: A scanner view of the biopsy specimen of the nodule on the right cheek demonstrating the presence of two distinctive pathologies. The lower section demonstrates anastomosing cords composed of cubical cells, and the upper section depicts eosinophilic aggregates of cells. Both these pathologies are present side to side with no reciprocal merging (details of the microscopic findings can only be appreciated under higher magnification)

Figure 3: One section of skin demonstrating the presence of anastomosing cords composed of scattered ductal structures lined by cubical epithelium resembling eccrine ducts and embedded in a fibrovascular stroma (H and E, ×10)

Figure 4: Another section of skin from the same biopsy specimen showing the presence of an outer layer of very few deeply basophilic cells and an abundant inner layer of eosinophilic cells with a persisting nuclear outline giving the characteristic mummified or shadow cell appearance (H and E, ×20)

Figure 5: Section of skin showing the side-by-side presence of eccrine syringofibroadenoma and pilomatricoma with no reciprocal merging (H and E, ×20)

cubical epithelium resembling eccrine ducts, embedded in a fibrovascular stroma [Figure 3]. The other section demonstrated the presence of an outer layer of very few deeply basophilic cells and an abundant inner layer of eosinophilic cells with a persisting nuclear outline giving the characteristic mummified or shadow cell appearance [Figure 4]. Taking this into consideration, a diagnosis of collision tumor composed of pilomatricoma and ESFA was made [Figure 5]. The patient was asked for a regular review. However, he was subsequently lost to follow-up.
DISCUSSION

ESFA and pilomatricoma as a part of collision tumors have been described in the past, though not their concomitant existence. ESFA has been associated with squamous cell carcinoma (SCC)\(^3\)\(^{-7}\) and clear cell acanthoma (CCA) as one of the components in the dual tumor. The occurrence of ESFA with SCC has been more prevalent in literature, and the cases encountered have been summarized in Table 1.

Interestingly, in all these patients, the age group of presentation was above 70 years, except for one case that presented at 62 years and there was no significant gender preponderance. In all cases, it was the extremities that were affected. As far as symptoms were concerned both symptomatic and asymptomatic presentations were encountered. The plausible explanation for histogenesis, however, could not be clearly elucidated. Suggestions stated included, the malignant transformation of ESFA to SCC, reactive pathogenesis of ESFA secondary to the existent SCC and incidental occurrence of the two. Reactive ESFA basically refers to a hyperplastic and hamartomatous transformation of the eccrine ducts secondary to numerous disorders such as diabetes mellitus, leprosy, SCC, nevus sebaceous, erosive lichen planus of the palms and soles, and altered sympathetic nerve function to name a few.\(^8\)

The other combination reported with ESFA was that of CCA in a 58-year-old female.\(^9\) The occurrence of this dual tumor was concluded to be an independent association of both with stasis eczema being the stimulus behind ESFA development. Again, in this case too it was the extremity that was involved. Al-Brahim and Radhi,\(^10\) who reported a series of 3 cases featuring a collision tumor composed pilomatricoma, and cutaneous angiomyxoma (CA) concluded this association to be linked with the development of pilomatricoma from one of the epithelial components

### Table 1: Summary of cases demonstrating the occurrence of eccrine syringofibroadenoma and squamous cell carcinoma in past medical literature

| Author            | Patient details | Patient complaints | Lesion description                                                                 | Site                                                   | Histology                                                                 |
|-------------------|-----------------|--------------------|------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------|
| Kacerovska et al. | 85-year-old male| Asymptomatic       | 2.5 cm×2.5 cm brown-colored nodule with ulceration and surface bleeding and surrounding skin demonstrating actinic damage | Left hand   | Consistent with a collision tumor of ESFA and well differentiated SCC    |
| Schadt and Boyd   | 62-year-old female| Usually asymptomatic with occasional lesional pruritus | 1.5 cm×1 cm flesh-colored nodule with a rough and keratotic surface               | Right lower limb | Consistent with a collision tumor composed of ESFA and SCC               |
| Bjarke et al.\(^{11}\) (a series of 5 cases) | 78-year-old female | Gradual inflammation witnessed of an old birth mark | Pale pink to bright red glistening plaque of size 8 cm×4 cm with a rubbery consistency | Posterior aspect of the left middle finger up to the wrist | Demonstration of ESFA and SCC with interconnections revealing a picture resembling porocarcinoma |
|                   | 76-year-old female | Oozing and inflammation | Psoriasiform plaque of size 4 cm×5 cm with a verrucous surface | Dorsum of the right hand | ESFA with partial SCC, poroma, and porocarcinoma |
|                   | 70-year-old male | Plantar lesions for a duration of 10 years demonstrating partial ulceration and keratosis. History of ectodermal dysplasia well established in this patient | Keratotic plaques of size 6 cm×3 cm on the right heel and 3 cm×2 cm over the left heel | Plantar surface of both feet | ESFA with poroma and SCC |
|                   | 75-year-old male | Slowly growing lesion, asymptomatic | Plaque measuring 1 cm×1 cm in dimensions with crusting and ulceration | Right wrist | ESFA with poroma and SCC |
|                   | 96-year-old male | Slowly growing psoriasiform lesion | 10 cm×12 cm psoriasiform plaque with an embedded 3 cm nodule | Dorsal aspect of the right thigh | ESFA with SCC |
| Lele et al.\(^{12}\) | 91-year-old male | Slowly growing fowl smelling lesion | 9 cm×10 cm exophytic plaque with hyperkeratosis and scaling surrounding the growth | Dorsum of the right foot | ESFA surrounding an SCC |
| Katane et al.\(^{13}\) | 91-year-old female | Asymptomatic reddish dome-shaped nodule | 3 cm×2 cm nodule with keratosis, erosions, and granular surface | Extensor aspect of left forearm | Superficial ESFA and deeper sections showing SCC |

SCC – Squamous cell carcinoma; ESFA – Eccrine syringofibroadenoma
of CA, which was considered to be the primary lesion. However, the possibility of an independent association of the two was also mentioned. The three patients analyzed were 9, 14, and 41 years of age. In all 3 cases, the classical presentation was that of asymptomatic deep nodules overlying which were variable-sized pedunculated papules. Sites involved were anterior chest wall, back, and left arm in the 3 cases described. Our patient’s lesion was on the cheek, a very rare site for the development of ESFA. The reason as to why this dual combination of pilomatrixoma and ESFA occurred again could not be distinctively identified. However, the authors would like to hypothesize two possibilities for the same. Considering the site and age of presentation, the authors perceive pilomatrixoma to have been the primary lesion which secondary to a reactive phenomenon, resulted in the development of ESFA. The other possibility after carefully examining the slide also made us think in terms of an independent occurrence of both, because of the side-by-side arrangement of both tumors without any reciprocal merging. To conclude, this is a domain which remains vastly unexplored, and with detection of more new combinations in these contiguous tumors in future, it would further help in simplifying our attempts to delineate their exact histogenesis.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Lee HC, Tan KW, Chia MW, Sim CS. An unusual collision tumour masquerading as a basal cell carcinoma on the nose. Singapore Med J 2012;53:e267-8.
2. Forbis R Jr., Helwig EB. Pilomatrixoma (calcifying epithelioma). Arch Dermatol 1961;83:606-18.
3. Kacerovska D, Nemcova J, Michal M, Kazakov DV. Eccrine syringofibroadenoma associated with well-differentiated squamous cell carcinoma. Am J Dermatopathol 2008;30:572-4.
4. Schadt CR, Boyd AS. Eccrine syringofibroadenoma with co-existent squamous cell carcinoma. J Cutan Pathol 2007;34 Suppl 1:71-4.
5. Bjarke T, Ternesten-Bratel A, Hedblad M, Rausing A. Carcinoma and eccrine syringofibroadenoma: A report of five cases. J Cutan Pathol 2003;30:382-92.
6. Lele SM, Gloster ES, Heilman ER, Chen PC, Chen CK, Anzil AP, et al. Eccrine syringofibroadenoma surrounding a squamous cell carcinoma: A case report. J Cutan Pathol 1997;24:193-6.
7. Katane M, Akiyama M, Ohnishi T, Watanabe S, Matsuo I. Carcinomatous transformation of eccrine syringofibroadenoma. J Cutan Pathol 2003;30:211-4.
8. Singh N, Chandrashekar L, Shakti P, Thappa DM, Badhe BA, Sylvia MT. Reactive eccrine syringofibroadenomatosis presenting as bilateral plantar hyperkeratosis. Indian J Dermatol 2015;60:403-5.
9. Cota C, Ferrara G, Amantea A, Donati P. Eccrine syringofibroadenoma and clear cell acanthoma: An association by chance? Am J Dermatopathol 2011;33:195-8.
10. Al-Brahim N, Radhi JM. Cutaneous angiomyxoma and pilomatrixoma: A new combination. Ann Diagn Pathol 2010;14:328-30.