Abstract:

Title: Inverted follicular keratosis mimicking Basal cell carcinoma - A case report and Review of literature.

Objective: Skin tumours are a challenging group of conditions that can be categorized into those that are commonly seen and easily recognised. But in certain clinical scenarios the diagnosis can be misleading causing unnecessary apprehension and over treatment. In the current article we would like to present one such case where in the lesion clinically simulated malignancy.

Case description: A 76 year old lady presented with a history of swelling in the left cheek for the last 2 years. The swellings were clinically diagnosed to be Basal cell carcinoma for which she underwent excision biopsy with cheek advancement flap cover. Post operatively she did not have any complications. On HPE, the lesion was diagnosed as Inverted follicular keratosis.

Discussion: Inverted follicular keratosis is a benign, asymptomatic, solitary skin lesion, which typically presents in middle aged or older patients, with median age at presentation of 69 years. It is seen mostly on the face with a clinical resemblance to malignancy. Hence it should be carefully evaluated upon and treated with caution to avoid unnecessary aggressive excision that can lead to cosmetic deformity and apprehension among patients.

Keyword: Inverted follicular keratosis, Basal cell carcinoma, malignancy

Inverted follicular keratosis mimicking Basal cell carcinoma - A case report and Review of literature

Introduction: Skin tumours are a challenging group of conditions that can be categorized into those that are commonly seen and easily recognised based on the characteristic site of presentation, size, colour, distribution and symptoms; the rarer ones and those that mimic other diseases pose a diagnostic challenge. Sometimes the clinical diagnosis can be misleading, at times mimicking malignancy.
causing unnecessary apprehension and over treatment. The latter group are diagnosed chiefly by histopathology, immunohistochemistry or other sophisticated diagnostic techniques. In the current article we would like to present one such case where in the lesion clinically simulated malignancy.

Case report: A 76 year old lady presented with a history of swelling in the left cheek for the last 2 years. The lesion was black in colour and was progressively increasing in size. It was not associated with pain, discharge or itching. The swelling was 2 x 2 cm in size and was present over the left cheek, 1 cm below the left lower eyelid [Figure 1].

**Figure.1: Clinical photo of the lesions mimicking Basal cell carcinoma**

Another similar swelling of size 0.5 x 0.5 cm was present over the superomedial aspect of the swelling. There was no history of similar swellings elsewhere in the body. There was no regional lymphadenopathy. A clinical diagnosis of Basal cell carcinoma was made for both the lesions and she was planned for wide local excision with a local flap cover. Both the lesions were excised in toto with a margin of 5 mm. The defect was covered with a local cheek advancement flap. Histopathologic examination of both the swellings showed tumour composed of upward and downward proliferation of squamous and basaloid cells with formation of whorls in foci which were continuous with walls of keratin filled invaginations [Figure 2].

**Figure.2: Microscopic hematoxylin and eosin picture at 50X showing inverted follicular keratosis with squamous eddies (arrows).**

Cellular atypia and mitoses were not significant. The skin adjoining the lesion showed hyperkeratosis, acanthosis and papillomatosis. A diagnosis of Inverted follicular keratosis was made. There was no recurrence during the following one year.

**Figure.3: Post operative clinical photo showing the cheek reconstructed with an advancement flap**
Figure 4: One year follow up photo showing no recurrence.

DISCUSSION:
Inverted Follicular Keratosis was recognised in skin pathology in 1954. Since then several cases have been reported, with discussion of diagnostic confusion with malignant neoplasms, particularly basal cell carcinoma and squamous cell carcinoma both clinically and pathologically. Inverted follicular keratosis is a cutaneous condition and is considered a subtype of seborrheic keratosis. It is also known as basosquamous cell acanthoma. It usually appears as a small, solitary, papillomatous lesion on the face. It is a well-demarcated, keratotic mass, which may appear as an acutaneous horn. The lesion may resemble verruca vulgaris and seborrheic keratosis - many consider it an irritated seborrheic keratosis. The lesions are usually asymptomatic but may be itchy. Inverted follicular keratosis is a benign, asymptomatic, solitary skin lesion, which typically presents in the middle aged or older patients, with a median age at presentation of 69 years. The average age in Mehregan's series was 50 years. The youngest patients in Boniuk & Zimmerman's and Mehregan's, were 17 and 25 years respectively. Men were affected about twice as often as women. About 85% of the lesions were found on the face. Multiple inverted follicular keratoses have been described in Cowden's syndrome. The cheek and upper lip were the sites of predilection, other sites affected being the chin, forehead, eyebrow, nose, and eyelid. Upper or lower lids may also be involved, lesions having a predilection for the lid margins. It is important, in this context, to remember that squamous carcinoma of the lid margins is excessively rare. The trunk is involved uncommonly and the extremities rarely. The duration of the lesion, when known, has varied between six weeks and three years. The lesion usually arises from the infundibular portion of the hair follicle, and can be misdiagnosed with different skin cancers. Generally it can present as chromatic variants, typically from yellow to brown, in relation to the content of melanin. Inverted follicular keratosis is a variant of seborrheic keratosis that can be described with different patterns such as dermatosis papulosa nigra, stucco keratosis, inverted follicular keratosis, large cell acanthoma, lichenoid keratosis, and flat seborrheic keratosis. Differential diagnosis with malignant lesions is mandatory. A pigmented lesion should always be excised in order to exclude its malignant nature. Malignant tumor occurring within seborrheic keratosis is extremely rare; one retrospective study reported that only 0.6% of seborrheic keratosis showed direct contiguity with malignant tumors. The development of a malignant neoplasm in association with seborrheic keratosis was previously identified. Basal cell carcinoma, squamous cell carcinoma and malignant melanoma have been documented to occur within seborrheic keratosis, and Basal cell carcinoma is the most common malignant neoplasm occurring within seborrheic keratosis. The predominant histological subtype of Basal cell carcinoma associated with seborrheic keratosis is the superficial type. A meticulous clinical evaluation following several well-established criteria can be helpful in determining its potential malignant nature. Moreover, dermatoscopic examination, when used by well-trained and experienced physicians, is a valuable adjunct to clinical examination, even if morphological overlap between benign and malignant melanocytic lesions does not always allow a certain clinical diagnosis.
Conclusion:
We conclude that such skin tumours which present in the elderly, especially in the face with a clinical resemblance to malignancy should be carefully evaluated upon and treated with caution to avoid unnecessary aggressive excision that can lead to cosmetic deformity and apprehension among patients.

REFERENCES: