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CASE STUDY OF POTENTIAL PROGRESSION OF MULTIPLE SKIN LESIONS IN ONE PATIENT: EPIDERMAL INCLUSION CYSTS TO PSEUDOEPITHELIOMATOUS HYPERPLASIA TO PILOMATRIX CARCINOMA

80 year old, otherwise healthy, bald AA male presented with multiple skin lesions:

1) 5 cm. nodular lesion (pilomatrix cancer) with central necrosis and drainage of posterior scalp, at point where his cap abraded posterior scalp;
2) 10 cm. long area of inflamed epidermal inclusion cysts at right groin area where underwear abrade skin of medial-proximal thigh; and
3) lesion of pseudoepitheliomatous hyperplasia (prurigo nodularis, clinically) of left upper arm skin at point where short sleeve shirt abraded skin of lateral upper arm.

The location of the these lesions in the same person suggests etiologic factors for development and malignant transformation of lesions in this individual and suggests both inflammatory and solar components in the development of a rare cutaneous cancer:

First, the lesions progress from benign to malignant consistent with increased sun exposure from right groin (benign #2), to arm hyperplastic lesion (#3), and then to posterior scalp cancer (#1);

Second, all three lesion are associated with constant abrasion/contact of skin with underwear edge (#2), shirt sleeve edge (#3), and back of cap on post. scalp, which patient wears constantly (#3). No other skin lesions are present with absence of chronic disseminated conditions such as nodular acne or hidradenitis suppurativa. There are no other solar lesion on exposed face or hands suggesting it is solely the synergistic interaction between abrading clothing and sun exposure that leads to (first) benign inflammatory lesions which then (second) progress sequentially to a premalignant precursor and then (thirdly) a rare cutaneous malignancy. The patient is not diabetic nor does he smoke, and does not have any predilection for other cutaneous disease. Pilomatrix cancers (from hair matrix) are rare (<130 reported cases in world literature(1)) and little is known of their etiology. This patient was successfully treated with wide excision and refused adjuvant radiation; he has no evidence of metastatic disease.

(1)"Pilomatrix carcinoma of the Antecubitum" M. Eckhoff et. al.;Cureus 12(1): e6821. doi:10.7759/cureus.6821