SUPERFICIAL SPREAD IN BASAL CELL EPITHELIOMA

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ABSTRACT

We are reporting a series of 19 patients with 20 nodular basal cell epitheliomas removed by elliptical surgical excision. Histologic examination of the specimens by serial sections in each case revealed a central nodular growth surrounded by a number of small nests of basalioma cells in connection with the lower surface of the epidermis and the infundibular portion of the pilosebaceous structures. The superficial nests extended as far as 5.5 mm distant from the central nodule. The nodular lesion was completely excised in all cases. However, the peripheral nests extended to the line of excision in 13 of the 20 specimens requiring re-excision of the area. The re-excisional specimens were positive for residual superficial nests in six of the 13 cases.

REPORT OF CASES

Nineteen patients reported were collected during an 18 month period in the dermatopathology laboratory. This series included 16 men and three women. Their ages ranged between 53 to 85 years with an average of 70 years (Table 1). The lesions were located over the face and neck in 9, extremities in 5, trunk in 3 and scalp in 3 instances. The clinical lesions measured from 5 to 20 mm in diameter. Thirteen lesions were 10 mm in size or larger. All lesions were removed by elliptical surgical excision intended for complete eradication. All specimens were divided into 2 mm thick pieces and examined by serial sectioning. The central nodular lesions were either solid, adenoid or pseudocystic in type with the exception of one lesion with a sclerotic pattern. All specimens showed multiple nests

of basalioma cells in connection with the lower surface of the epidermis and the infundibular portion of the pilosebaceious nests extended out at the periphery of the lesion in distances varying from 1.5 to 5.5 mm. Stromal continuity between the central nodule and the peripheral nests of basal cell epithelioma extended to the lateral margins of the surgical specimens in 13 of the 20 lesions. It was therefore advised to have the area wider excised. Additional nests of superficial basal cell epitheliomas were found adjacent to the scar in six of the re-excisional specimens.

COMMENTS

Interaction between the epithelial and the mesodermal components in basal cell epithelioma results in formation of a number of histologic patterns, some of which are of practical importance when treatment approach is decided(1). It is well recognized that the sclerotic and the morphea-like basal cell epitheliomas show no distinctive clinical border and require excision wider than the clinically apparent lesion⁽²⁾. Aggressive and deeply invasive basal cell epitheliomas grow down along the pathway of the cutaneous adnexae, around the blood vessels and the nerve bundles. These may require treatment by microscopically controlled techniques(3). We have identified another pattern of basal cell epithelioma characterized by a clinically recognized nodular lesions with expansion at the periphery by small nests of basalioma cells in connection with the lower surface of the epidermis and the infundibular portion of pilosebaceous structures. These superficial nests extended in an irregular fashion to distances ranging from 1.5 to as much as 5.5 mm from the central nodular lesion. In 11 specimens, the superficial nests showed stromal continuity with the central nodular lesion. In the other nine specimens, stretches of normal dermis separated the superficial nests from the nodular lesion suggesting independent development or multicentric origin. Frequently the pathologist is asked if the lesion is completely excised. However, in these types of tumors, although the nodular lesion may be excised, the superficial component can be seen extending away from this area as far as 5.5

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CASE	AGE/SEX	LOCATION	CLINICAL SIZE OF THE LESSION	HISTOLOGIC TYPE OF BCE	PERIPHERAL EXPANSION OF SUPERFICIAL NESTS	RE-EXCISION
1	85/M	5 mm	Solid	Solid	3 mm Nests No Stromal continuity	Re-excised
2	65/M	Upper Back	15 mm	Solid Pseudocystic	1.5 mm Nests Stromal continuity	Completely Excised
3	56/F	Upper Arm	15 mm	Solid	1.5 Nests mm Stromal continuity	Completely Excised
4	64/M	Right Ear	6 mm	Sclerotic	1.5 mm Nests Stromal continuity	Re-excised
5	75/M	Face	15 mm	Solid Adenoid	4.5 mm Nests No Stromal continuity	Completely Excised
6	78/M	Forearm	12 mm	Solid	3.5 mm Nests No Stromal continuity	Completely Excised
7	69/M	Arm	6 mm	Solid	2.5 mm Nests Stromal continuity	Re-excised
8	75/M	Postauricular	8 mm	Solid	1.5 mm Nests Stromal continuity	Re-excised
9	74/M	Face	7 mm	Solid Adenoid	1.5 mm Nests Stromal continuity	Re-excised
10	80/M	Right Left	15 mm	Solid Pseudocystic	3.5 mm Nests No Stromal continuity	Re-excised
		Left Scalp	18 mm	Solid	3 mm Nests No Stromal continuity	Re-excised
11	68/M	Forearm	20 mm	Solid	4 mm Nests No Stromal continuity	Re-excised
12	75/M	FOREARM	12 mm	Solid Pseudocystic	5.5 mm Nests No Stromal continuity	Re-excised
13	74/M	Upper Back	8 mm	Solid	1.5 mm Nests Stromal continuity	Completely Excised
14	62/M	Face	10 mm	Solid	1.5 mm Nests Stromal continuity	Re-excised
15	82/M	Face	10 mm	Solid	2.5 mm Nests Stromal continuity	Re-excised
16	85/M	Face	10 mm	Solid Adenoid	2.5 mm Nests Stromal continuity	- Re-excised
17	72/M	Scalp	15 mm	Solid	4.5 mm Nests Stromal continuity	Completely Excised
18	73/M	Face	12 mm	Solid	2.5 mm Nests Stromal continuity	Completely Excised
19	53/M	Buttock	15 mm	Solid	3 mm Nests No Stromal continuity	Completely Excised

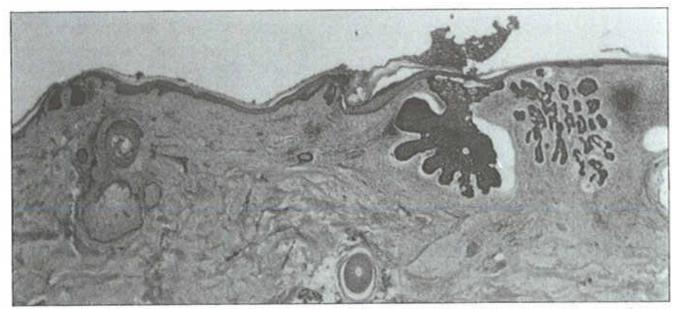


Figure 1. Shows two superficial nests of basal cell Epithelioma distant from the nodular lesion. H & E X 20.

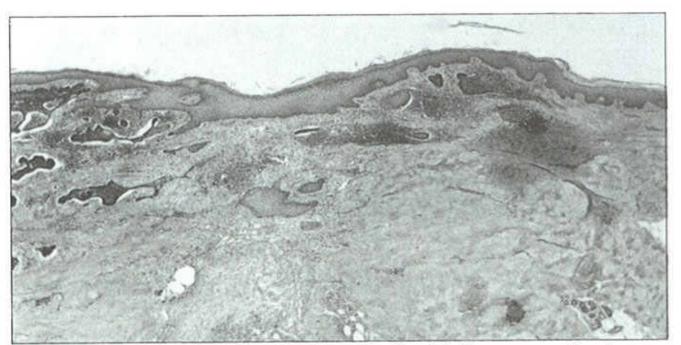


Figure 2. Shows nests of superficial basal cell epithelioma spreading in one side of the nodular lesion. H & E X 20.

mm and with areas of normal dermis without stromal changes to indicate residual basal cell epithelioma. These superficial nests may be responsible for the recurrences of basal cell epithelioma in some instances when a nodular lesion was thought to have been completely excised.

REFERENCES:

- 1. Mehregan AH, Hashimoto K. Pinkus' Guide to Dermatohistopathology. Fifth Edition. Appleton & Lange. E. Norwalk, CT. 1991.
- 2. Hashimoto K, Mehregan AH. Tumors of the Epidermis. Butterworths. Stoneham, MA. 1990.
- 3. Mehregan AH. Aggressive Basal Cell Epithelioma on Sunlightprotected Skin. Report of Eight Cases, One with Pulmonary and Bone Metastases. Am J Dermatopathol 5:221-229, 1983.
- 4. Mehregan AH. The Origin of the Adnexal Tumors of the Skin: A Viewpoint. J Cutan Pathol 12:459-467, 1985.