



RESEARCH ARTICLE

GRANULAMATOUS REACTION WITH GIANT CELL IN A NEVUS

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Abstract

Melanocytic nevus is a benign proliferation of the melanocytes. Histological subtypes of nevus include junctional, compound, and intradermal nevi. A 35 year old female presented with a black mole of 1.5 x 1 cm on the right lateral side of the nose since birth. Surgical excision was performed for cosmetic reason. Diagnosis of benign intradermal nevus having chronic granulomatous reaction with giant cells was made. This could be secondary to folliculitis or beginning of regression of nevus. Granulomatous reaction with giant cells in a nevus is an unusual pathological finding. Therefore we believe that it is not uncommon finding and practicing dermatopathologist should be aware of this phenomenon

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INTRODUCTION

Melanocytic nevus results from the benign proliferation of the melanocytes. Clinically these nevi may be flat, elevated, papillomatous, dome shaped or pedunculated in appearance. Histological subtypes include junctional, compound, and intradermal nevi. Granulomatous reaction with giant cells in a nevus is an unusual pathological finding. We are presenting an unusual case of granulomatous reaction with giant cells in a benign intradermal nevus.

CASE HISTROY

A 35 year old female presented with a black mole of 1.5 x 1 cm on the right lateral side of the nose since birth. Surgical excision was performed for cosmetic reason. Grossly, mole was grayish black and firm. Microscopic examination (Figure 1) revealed the presence of small nests of melanocytes in the upper dermis and these cells were found to be present more around the pilosebaceous units. In the deeper zone of the dermis, chronic inflammatory cell infiltrate comprising of lymphocytes and few plasma cells were seen. In addition there were multiple granulomas containing giant cell were found to be present in close relation to the pilosebaceous units. Overlying epidermis was unremarkable. Given above findings the diagnosis of benign intradermal nevus having chronic granulomatous reaction with giant cells was made.

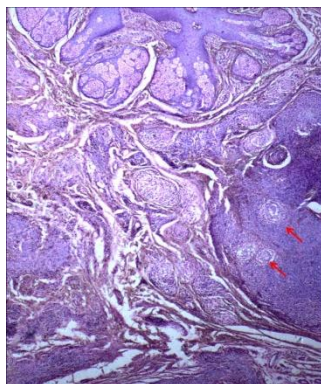


Figure 1: Chronic granulomatous inflammation with giant cells (red arrows) in a benign intradermal nevus (Hematoxylin & Eosin, X100)

DISCUSSION

Melanocytic nevus results from the benign proliferation of the melanocytes. The evolution and regression of nevi correlate with their histologic appearance.^[1] As junctional nevi are more common in children while intradermal nevi are more common in later age groups, these histological subtypes, therefore, may actually represent the transitional stages of their "life cycle"; from junctional nevi to intradermal nevi that may undergo involution. Current case was a dome shaped intradermal nevus.

Foreign body giant cell reaction in relation to benign nevus has been reported to occur as a result of either follicular damage resulting in folliculitis possibly due to trauma or ruptured true epidermal cyst.^{[2][3][4]} These epidermal cyst may develop secondary to the pressure of the nevus cells on the hair follicle causing its obstruction or secondary to strangulation of pilosebaceous follicle by the fibrosis associated with nevus maturation. In a series of ten nevi, mostly from the face and with granulomas associated with the bases of pilosebaceous follicles, Curie et al^[5] have postulated that acute infection of the follicles within the mole resulted in acute inflammation with exposure of hair shaft and stimulation of foreign body reaction. Similarly in our case the granulomatous reaction was intricately associated with pilosebaceous unit and hair follicle therefore follicular damage most probably due to trauma resulting from repeated fiddling with or plucking of hairy projection from their facial nevus might explain this unusual finding of granulomas with chronic inflammation.

In addition, the granulomatous inflammation may be seen as a part of halo phenomenon in a nevus undergoing regression.^[6] A halo nevus, also known as Sutton's nevus or nevus depigmentosa centrifugum, represents a pigmented nevus surrounded by a depigmented zone or halo and is characterized histologically by a chronic inflammatory infiltrate comprising mostly by lymphocytes. Usually it undergoes involution that may extend over a period of several months. Halo phenomenon is a process whereby a melanocytic nevus undergoes regression with or without clinically evident halo. It is well known that cell mediated immunity and to a lesser extent humoral immunity is involved in the development of halo nevus. Clinically halo was absent in our case but the histological presence of chronic inflammation with granulomas containing giant cells may represent beginning of regression.

CONCLUSION

The presence of granulomatous reaction with giant cells in a benign nevus may represent folliculitis or spontaneous regression. And we encountered this uncommon pathology in our practice & believe that a histopathologist should be aware of this unusual finding.

REFERENCES

1. Stegmaier OC. Natural regression of the melanocytic nevus. *J Invest Dermatol* 1959; 32:413-21.
2. Freeman RG, Knox JM. Epidermal cysts associated with pigmented nevi. A combination which may simulate malignant melanoma. *Arch Dermatol* 1962; 85:590-4.
3. Weedon D. Unusual features of nevocellular nevi. *J Cutan Pathol* 1982; 9:284-92.
4. Knox WF, McWilliam LJ, Benbow EW, McMahon RF, Wilkinson N, Bonshek R. Foreign body giant cell reactions and ossification associated with benign melanocytic naevi. *J Clin Pathol* 1993; 46:72-4.
5. Currie AR. On the association of granulomas with simple cutaneous moles and on their relationship to so-called histiocytomas. *Glasgow Med J* 1955; 36:111-6.
6. Denianke KS, Gottlieb GJ. Granulomatous inflammation in nevi undergoing regression (halo phenomenon): a report of 6 cases. *Am J Dermatopathol* 2008; 30:233-5.