The peculiar arrangement of nuclei in transverse rows in a nerve sheath tumor was first described by Verocay in 1910.

Within the lexicon of dermatopathology, as within any specialty, is terminology that may be unfamiliar to the clinician. One such term is the Verocay body. The usage of this wording becomes even more enigmatic when one considers both the Verocay Body and Verocay body-like structures as it relates to various pathologic entities.

In the August 2011 edition of The American Journal of Dermatopathology, Jag Bhawan and colleagues discuss the various cutaneous neoplasms that may present with Verocay body-like structures (1). A number of heterogeneous tumors have been known to demonstrate this feature, and include epithelial, adnexal, fibrohistiocytic, mesenchymal and melanocytic lesions.

The peculiar arrangement of nuclei in transverse rows in a nerve sheath tumor was first described by Verocay in 1910 (2). This later came to be known eponymously as the Verocay body, referring to the stacked arrangement of elongated, palisading nuclei alternating with anuclear zones composed of cytoplasmic processes (Refer to Case 14, page 4). This observation has stood the test of time as a valuable clue for the diagnosis of nerve sheath tumors.

An unusual skin appendageal tumor with similar alternating areas of epithelial cords and stroma, coined a “rippled pattern”, was described by Hashimoto, et al. Since then, a variety of histogenetically diverse neoplasms have been described to contain this “Verocay body-like” pattern. Non-neural tumors that most frequently exhibit this pattern include trichoblastoma, sebaceous, basal cell carcinoma, dermatofibroma, leiomyoma and very rarely, melanocytic nevi.

The rippled Verocay body-like pattern is often seen in cases of sebaceous. These tumors show a male predominance and an affinity to arise on the scalp (as opposed to the face), when compared with sebaceousomas that lacked this pattern. Within the spectrum of adnexal tumors with a rippled pattern, it is important to make the distinction between sebaceous and trichoblastoma in view of the association of the former with Muir-Torre syndrome.

Considering the close relationship between melanocytes and Schwann cells, it is surprising that only very rarely do nevi (less than 1 of many thousands encountered in dermatopathology services) show the distinctive Verocay body-like structures that are described herein (Refer to Case 9, page 3). This finding may also be seen rarely in cases of malignant melanoma, where the schwannian pattern reflects the protean nature of these lesions.


Summer 2011 Exceptional Pathology Cases

1. Calciphylaxis
   Lindsay Ackerman, MD., Medical Dermatology Specialists
   A. Intra-and extravascular calcification of pannicular vessels.
   B. Overlying dermis often shows necrosis.
   C. Superficial dermal blood vessels often show fibrin thrombi.

2. Mastocytoma
   Mesa, Arizona
   A. Solitary lesions account for 10% or more of childhood mastocytoses.
   B. Sheets of bland, uniform mast cells fill the dermis.
   C. CD117, mast cell tryptase, Giemsa and chloracetate esterase markers are helpful to confirm mast cells.

3. Extramammary Paget’s Disease
   Diana Kesler-La Clair, R.N., F.N.P.-C; Alta Dermatology
   A. Intraepidermal pagetoid cells stain with EMA, CEA, CK7 and other markers.
   B. 25% associated with underlying adnexal carcinoma.
   C. 10-15% associated with internal carcinoma (i.e. rectum, prostate, etc), if perianal 80% association.

4. Lichen Striatus
   Gerrit Henry, D.O., FAOCD; Arcadia Dermatology
   A. A lichenoid infiltrate that occupies three to four adjacent dermal papillae.
   B. Acanthosis with mild spongiosis and associated with lymphocytic exocytosis into the epidermis.
   C. Dyskeratotic cells are present at all levels of the epidermis.

5. B Cell Lymphoma, Diffuse Large Cell
   Mike Higbee, PA-C; Arizona Dermatology
   A. 75 y/o with 4 year history of diffuse large B-cell lymphoma (DLBCL), leg type, now presents with an arm lesion.
   B. Diffuse dermal infiltrate of CD20 positive large, pleomorphic B-cells.
   C. Leg type has an intermediate prognosis and a higher relapse rate than other DLBCL.
7. Rheumatoid Nodule
Goodyear, Arizona
A. Occurs in 20% of patients with rheumatoid arthritis, usually in the vicinity of the joints.
B. Geographic granulomas surrounded by a palisade of elongated histiocytes.
C. Central necrobiotic focus with eosinophilic debris and neutrophils.

8. Angioleiomyoma
Robert Woods, M.D., Scottsdale, Arizona
A. Well-circumscribed spindle cell lesion.
B. Interlacing fascicles/bundles between vascular channels.
C. Muscle markers (Actin, Desmin) may be positive.

9. Nevus with Verocay body-like changes
Chandler, Arizona
A. Alternating pattern of melanocytes and intervening stroma.
B. This pattern may be seen in a variety of heterogenetically diverse neoplasms.
C. Only very rarely identified in melanocytic nevi.

10. Melanoma of soft parts (clear cell sarcoma)
Scottsdale, Arizona
A. Rare tumor arising mainly in adolescents and young adults.
B. Extremities, particularly the lower, are common sites.
C. Course marked by frequent local recurrences and eventual metastasis in many individuals.
11. Intravascular Papillary Endothelial Hyperplasia
Lake Havasu City, Arizona
A. Also known as Masson’s tumor, this lesion is composed of small vessels and papillae lined by a single layer of endothelial cells.
B. A benign lesion which is important to recognize due to its histologic resemblance to angiosarcoma.
C. Considered an unusual histologic variation of an organizing thrombus within a blood vessel lumen.

12. Giant Cell Tumor of Tendon Sheath
Surprise, Arizona
A. Numerous multinucleated cells with up to 60 nuclei.
B. Hemosiderin, histiocytes and lymphocytes are present.
C. A background matrix of eosinophilic collagenous stroma is also present.

13. Radiation Dermatitis
Ruskin R. Lines, III, M.D.; Chandler, Arizona
A. Stromal Fibrosis.
B. Enlarged, atypical-appearing vascular endothelial cells.
C. Stellate, plumb stromal fibroblasts.

14. Plexiform Schwannoma
Xuan Nguyen, M.D., Maricopa County Hospital
A. Multiple small tumor nodules and hypertrophied peripheral nerves.
B. Two tissue types: Antoni A (interlacing fascicles of Schwann cells, forming Verocay bodies) and Antoni B (loose meshwork of macrophages, vessels and Schwann cells.

15. Tinea Capitis
Mesa, Arizona
A. Dermatophyte infection usually presenting as alopecia and scale.
B. Infection often related to diminished host response.
C. T. rubrum is often implicated in the etiology of endothrix infections.