

Neurolemoma

The neurolemoma, sometimes referred to as a benign schwannoma, is a nerve sheath tumor arising from the schwann cell surrounding the axon of peripheral nerves. It affects individuals between the ages of 20 and 50 years and occurs equally in males and females. It is seen most commonly in spinal roots and superficial nerves, especially on the flexor surfaces of both the upper and lower extremities. The lesions are usually solitary but in the case of neurofibromatosis multiple lesions may occur. These benign lesions are slow growing and very rarely cause neurological symptoms or deficit because of their benign behavior. The neurolemoma is typically a round structure attached to the periphery of a nerve whereas the more common neurofibroma is fusiform in shape and is located in the center of a peripheral nerve. Magnetic resonance imaging is the best diagnostic study for this lesion and shows a low signal abnormality on the T1-weighted image and demonstrates a very bright, well-marginated spherical lesion on the T2-weighted image. Histologically, the neurolemoma has a mixture of dense, fibrotic, Antoni A substance mixed with a more mucinous Antoni B substance. In the Antoni A fibrotic tissue, the histological picture is a palisade of schwann cells and a characteristic and almost diagnostic Verocay body creating the appearance of a Japanese lantern. Treatment for this lesion consists of a simple blunt dissection of the tumor from a peripheral nerve where it is located eccentrically and easy to remove without damaging the subadjacent nerve. The lesion has a characteristic yellow color contrasting with the white strand-like appearance of the adjacent nerve. These tumors have a very low recurrence rate and only rarely will convert into a malignant schwannoma.

In patients over the age of 65 years, the neurolemoma will sometimes develop hemorrhagic, cystic changes, taking on the appearance of a hematoma. The lesion can even calcify or form bone as part of a degenerative process, and is sometimes given the name of ancient schwannoma.