Entrapment neuropathy

see Peripheral Nerve Entrapment.

Mechanism of injury

Brief compression primarily affects myelinated fibers, and classically spares unmyelinated fibers (except in cases of severe acute compression). Acute compression compromises axoplasmic flow which can reduce membrane excitability. Chronic compression affects both myelinated and unmyelinated fibers and can produce segmental demyelination in the former, and if the insult persists, axolysis and Wallerian degeneration will occur in both types. The issue of ischemia is more controversial [1]. Some contend that simultaneous venous stasis at the site of compression can produce ischemia, which can lead to edema outside the axonal sheath, which may further exacerbate the ischemia. Eventually, fibrosis, neuroma formation, and progressive neuropathy can occur.

Occipital nerve entrapment

Occipital nerve entrapment

Associations

Entrapment neuropathies may be associated with:

1. diabetes mellitus
2. hypothyroidism: due to glycogen deposition in Schwann cells
3. acromegaly
4. amyloidosis: primary or secondary (as in multiple myeloma)
5. carcinomatosis
6. polymyalgia rheumatica
7. rheumatoid arthritis: 45% incidence of 1 or more entrapment neuropathies
8. gout

1)
Neary D, Ochoa JL, Gilliatt RW. Subclinical Entrap- ment Neuropathy in Man. J Neurol Sci. 1975; 24:283–298