The gliding of peripheral nerves.
Anatomical basis and clinical significance.

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BACKGROUND Compression syndromes of peripheral nerves are well known and have been described for different nerves and
different locations. There are good reasons to believe that at an entrapment site compression alone does not cause the symptoms
but especially in early phases the nerve is stuck at the entrapment site and cannot move.

MATERIAL Cadaver studies to visualize the passive motion of nerves at different sites respectively the motion of other structures
on top of the nerves during typical movements of the extremities.
Macroscopic and microscopic studies of the loose tissue around the nerve outside the epineurium which links the nerve to the
Macro- and microscopic studies of the surgical site in patients with corresponding pain syndromes was carried out and the gliding
tissue studied. Microsurgical neurolysis frequently caused recurrent fibrosis. Gliding tissue flaps were developed and applied in a
series of cases to envelope the nerve after neurolysis

RESULTS The length of the bed of the median nerve from the axilla to the hand differs by about 20% between flexion and
extension [3]. The nerve has to move in longitudinal direction If movement is impaired by fibrosis a pain symptom developed.
In cases of a recurrent fibrosis neurolysis followed be envelopment of the nerve by a specially designed gliding tissue flap provided
freedom of pain.

CONCLUSION By irritation due to various causes the tiny gliding tissue become fibrotic and looses the ability to provide frictionless
gliding of nerves against the surrounding tissues. This fact is painful and causes a pain syndrome. In severe cases an envelopment
of the nerves in a gliding tissue flap is necessary to avoid a recurrent fibrosis.

REFERENCES
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Presented at the 3rd International Fascia Research Congress
April 2012 Vancouver, BC, Canada