

Neurology: Neurochemistry, Neuropharmacology and Neurosciences

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A Possible Role of Endoneurial Fibroblast-Like Cells in the Resolution of Endoneurial Oedema Following Nerve Crush Injury

Endoneurial oedema is a salient feature of all types of neuropathy. Its elimination is crucial during the complications of nerve recovery. The objective was to study a possible role of the endoneurial fibroblasts in the resolution of nerve edema. Forty-two albino male rats aged between 30 and 40 days (weight 200 g to 250 g) were used in this study. The left sural nerves of 36 rats were subjected to crush injury at one to three-week intervals with six animals per interval. The right and left sural nerves of the remaining six rats were used as controls. At the end of the second week after crush injury, the **endoneurium** showed channel-like spaces that were lined by fibroblast-like cells and collagen bundles that contained degenerated myelin, and were connected to the subperineurial spaces. Flattened fibroblast-like cells were arranged in several layers in the subperineurial, forming barrier-like cellular sheets localizing to the endoneurial oedema in the space. **Fibroblast-like cells** also wrapped around the regenerating nerve fibres with their branching cytoplasmic processes. During the third week, the flattened fibroblast-like cells formed nearly continuous cellular sheets in the subperineurial spaces. Macrophages were frequently observed between these cellular barrier-like sheets and in the **subperineurial**. The endoneurial fibroblast-like cells form barrier-like cellular sheets that probably localise the endoneurial oedema in the subperineurial space. It also appear to create endoneurial channel-like spaces containing degenerated myelin and endoneurial oedema, which may be helpful in **localizing** and resolving such oedema.



Wagih G. Elbarrany & Wardah A. Elasmari
Faculty of Medicine- Umm Al-Qura
University- Makkah- KSA.

Biography:

Wagih Gamal Eldin Abd Elghany Elbarrany is presently working as a Faculty of Medicine in Umm Al-Qura University, at Makkah, **Kingdom of Saudi Arabia**. He has 25 years of experience in the field and now he has retired. His research interest is **Neurology and Neuroscience**.

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