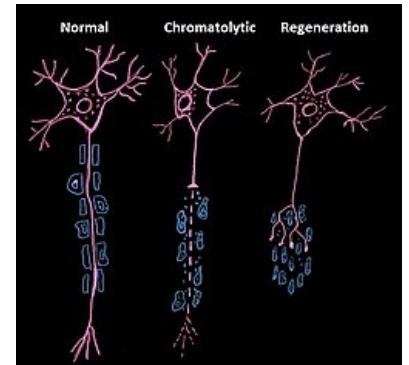


Waller degeneration and regeneration

The **endoneurium** surrounds the axons, they are connected into **fascicles**, each fascicle is bordered by a **perineurium**, the nerve itself composed of fascicles is surrounded by an **epineurium**.

- **Waller's degeneration**: after the axon is severed, there is detachment from the cell body and degeneration of its distal stump.
- **Waller regeneration**: the cell body reacts to the separation of the axon by producing structural proteins, the new axon grows at a rate of approx. 1 mm/day and tries to connect with the original effectors or receptors. Then there is the formation of myelin sheaths and functional regeneration.
- If the severed nerve is not connected, a **amputation neuroma** is formed on the proximal stump, which is very sensitive to touch and percussion (Tinel's sign, for example, it is also in carpal tunnel syndrome).



Degeneration and regeneration of a nerve fiber

Links

Related Articles

- Neuron
- Peripheral nerve (preparation)
- Peripheral nerve injury

References

- SAMEŠ, M. *Neurochirurgie*. 1. edition. Jessenius Maxdorf, 2005. ISBN 80-7345-072-0.