

Innovative device for minimal invasive release of carpal tunnel syndrome

腕隧道症候群是一種常見的手部疾患，伴隨有疼痛、麻木及失能等症狀。保守性治療適用於較初期或症狀較輕的患者。但若症狀較為嚴重或保守療法效果不彰，則需手術治療。傳統手術是於患者手腕掌面垂直劃開約 3-7 公分傷口，並切開壓迫正中神經的支撐韌帶。近年來微創腕隧道手術日益盛行。其優點在於手術傷口疤痕較小，疼痛恢復較快，且可以更早回到工作崗位。然而在有限暴露的情況下，減壓不完全或造成周邊神經肌腱損傷的併發症仍是此種手術之疑慮。本案係一新型腕隧道微創擴張器及保護套件，其特殊設計可於手術施作時保護神經肌腱，符合人體工學便於手術醫師操作，具有縮短手術時間與傷口小等優勢，提供醫師及病人於微創治療腕隧道症候一安全、簡單的方式。

Carpal tunnel syndrome is a common disease presenting hand pain, dysfunction, and paresthesia. Conservative treatment is used for the mild cases, and surgery for the moderate and severe ones, or when the conservative treatment has failed. Open carpal tunnel release is the gold standard surgery, with a short longitudinal volar approach with 5 to 7 cm incision that allows to visualize the complete division of the ligament and release the median nerve. Recently, limited incision techniques for carpal tunnel release are gaining popularity. The main advantages of these techniques are less scar load, less pillar pain, shorter recovery, and return-to-work time.

However, the completeness of release, and risk of neurovascular injury are always a concern. We developed a new instrument including a minimal-invasive expander and knife for single incision release. Besides the advantage of limited incision techniques, the design of this expander can protect nerve and tendon during the operation and be convenient for surgeons. The product allows surgeons and patients a safe and simple way for the treatment of carpal tunnel syndrome.