

Needle parking technique

Interrupted and continuous [suturing](#) are 2 common techniques for [microvascular anastomosis](#) in [cerebrovascular surgery](#). One of the technical complexities of [simple interrupted stitch](#) includes the risk of losing the needle in between interrupted sutures during knot tying, which may result in unnecessary movements and wasted time.

Objective: To report a new needle parking technique for microvascular anastomosis that addresses a needle control problem during interrupted suturing.

Methods: The needle parking technique involves puncturing both vessel walls at the site of the next provisional suture and leaving the needle parked in place while the knots at the first suture are being made. The thread is then cut, the needle is pulled through, and the process is repeated. Illustrative cases in which the needle parking technique was used are presented. We also compared time of anastomosis completion between the conventional interrupted, needle parking interrupted, and continuous suturing techniques during an in vitro study on standardized artificial vessels.

Results: This technique is being used successfully by the senior author for various cerebrovascular bypass surgeries. The in vitro study demonstrated that the needle parking technique can be significantly faster than the conventional interrupted suturing technique and may be as fast as continuous suturing.

Conclusion: [Needle parking technique](#) is a modification of conventional interrupted suturing and solves the problem of losing the needle during knot tying. This technique is simple, prevents unnecessary movements, and may result in a faster anastomosis time ¹⁾.

¹⁾

Mehta SH, Belykh E, Farhadi DS, Preul MC, Kikuta KI. Needle Parking Interrupted Suturing Technique for Microvascular Anastomosis: A Technical Note. Oper Neurosurg (Hagerstown). 2021 Oct 13;21(5):E414-E420. doi: 10.1093/ons/opab280. PMID: 34424326.

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