Nerve Tape® Study led by Top Surgeons Receives Distinction

In cadaveric nerve repairs, Nerve Tape reduced surgical time while achieving increased repair quality and strength

EDITOR'S CHOICE

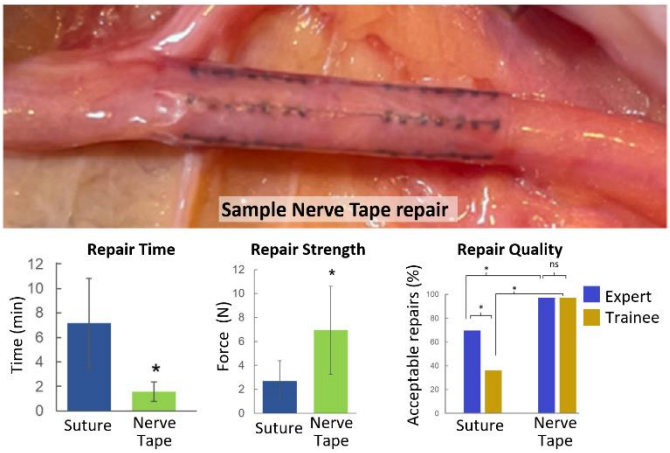
Usability of Nerve Tape: A Novel Sutureless Nerve Coaptation Device

Kyle R. Eberlin, MD,* Bauback Safa, MD,† Rudy Buntic, MD,† Mark S. Rekant, MD,‡ Marc J. Richard, MD,
Joseph F. Styron, MD, PhD,‖ Geetanjali Bendale, PhD,¶ Jonathan Isaacs, MD¶

BioCircuit Technologies, an NIH-supported company in Atlanta, GA, recently announced the publication of an independent study assessing Nerve Tape, the first device for sutureless nerve repair. The publication was distinguished as Editor's Choice within the prestigious Journal of Hand Surgery.

Led by Dr. Kyle Eberlin, Program Director of MGH Harvard Plastic Surgery Residency Program and President-Elect, American Association for Hand Surgery, the study was performed by a team of internationally recognized nerve surgeons and surgeon trainees from top institutions. The surgeons executed 144 cadaveric nerve repairs, comparing the performance of Nerve Tape with traditional microsuture repair techniques. The simulated nerve repairs were assessed based on time, strength, and technical quality.

Nerve Tape provided superior results in all three categories, with repairs being 4.5x faster and 2.7x stronger than microsuture repairs across all groups. Nerve Tape also demonstrated superior repair quality, with 97% of repairs achieving clinically acceptable nerve end alignment. In contrast, this threshold was only reached in 69% and 36% of suture repairs when performed by expert microsurgeons and surgical trainees, respectively.



The publication was designated "Editor's Choice," a distinction awarded to the most clinically impactful studies. The Journal of Hand Surgery is the official journal of the American Society for Surgery of the Hand (ASSH) and is the foremost US journal covering topics related to the diagnosis, treatment, and pathophysiology of diseases and conditions of the hand, wrist, and upper extremity.

An abstract of the study was recently presented by Dr. Eberlin at the 2024 annual meeting of the American Association for Hand Surgery (AAHS), where it was awarded "Outstanding Paper" out of hundreds of submissions and presented within a special session.

About Nerve Tape

Each year, an estimated 1.4 million people in the U.S. suffer traumatic peripheral nerve injury, resulting in paralysis, sensory loss, and chronic pain. Traditional repair techniques require severed nerve ends to be sewn back together with hair-thin suture thread under a microscope - a tedious endeavor with inconsistent results.

Nerve Tape is a sutureless repair device that wraps easily around severed nerve ends for a quick and precise repair. The device is composed of a pro-regenerative biologic wrap embedded with microscopic hooks made of Nitinol alloy. These microhooks attach shallowly but firmly to the outer sheath of the nerve for a safe and strong repair.

Nerve Tape is indicated for the repair of peripheral nerve discontinuities where gap closure can be achieved by flexion of the extremity.

Nerve Tape has received FDA 510(k) clearance, and BioCircuit is working with supply partners in preparation for launch of Nerve Tape in the United States for first human use in early 2024.

About BioCircuit Technologies

Based in Atlanta, GA, BioCircuit Technologies develops and commercializes medical devices for tissue repair and neuromodulation. Designed for precision, ease-of-use, and reliability, these devices enhance surgical efficiency and therapeutic targeting for improved patient outcomes.

In addition to generous funding from the National Institutes of Health, BioCircuit has attracted private financing, including investment from the GRA Venture Fund, Masters Capital, and Alsora Capital.

For more information visit www.biocircuit.com.

Contact Information:

Dr. Isaac Clements

SVP Scientific Affairs & Innovation

BioCircuit Technologies, Inc.

iclements@biocircuit.com