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History of Trapezius Palsy Surgeries

Introduction: A paralysis of the trapezius muscle secondary to injury of the spinal accessory nerve is a debilitating condition. If a patient is experiencing symptomatic trapezius palsy that lasts longer than one year, then trapezius palsy surgery is indicated. This study describes the history and evolution of this procedure and its outcomes.

Methods: Journal articles published about trapezius palsy surgeries were found to retrieve details about the various surgical procedures and the patient outcomes for these procedures.

Results: The Eden Lange procedure is the first surgery documented described by Dr. Eden and confirmed by Dr. Lange, consisting of the lateral transfer of the levator scapulae, rhomboid major, and rhomboid minor to stabilize the scapula. The modified Eden-Lange procedure described by Dr. Bigliani was changed from the original by transferring the rhomboid minor cephalad to the scapular spine. Finally, the most recent modification known as triple tendon transfer was described by Dr. Elhassan and has the rhomboid minor transferred to the spine of the scapula which is transferred to the lateral aspect of the spine of the scapula and the rhomboid major is partially folded and transferred to the medial spine of the scapula. The Eden-Lange procedure has a success rate of 50% to 80% based on a variety of sources with the modified Eden-Lange showing around the same if not slightly better results. While based on one paper with a small sample size, the triple tendon transfer is described as having a success rate of around 95%.

Conclusion: While the original and modified Eden-Lange procedure have shown impressive results the triple tendon transfer shows much promise based on the results and biomechanics explanations of Dr. Elhassan. However, more studies are needed due to the limited sample size of the study along with no other studies to verify these results.

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