

## A Syrinx Can Be Tough on the Shoulders

Neuropathic arthropathy, also called Charot joint, occurs when nerve damage causes a joint to degrade over time resulting in bone destruction, resorption, and deformity. Neuropathic joints are caused by loss of sensation due to diseases such as diabetes, and of interest here, syringomyelia. How often this occurs with syringomyelia is not known, but it is thought to be an uncommon, or even rare, side effect. Because most Chiari related syrinxes are found in the cervical spine, the most commonly affected joint in these cases is the shoulder.

Two Polish researchers, Dr. Wawrzyniak and Dr. Lubiatowski, recently published a review of the available literature on syrinx related neuropathic arthropathy of the shoulder. The review included 39 papers with sixty-five adult patients (71 shoulders total). A majority had shoulder joint damage on only one side of the body (91%). All patients had significant range of motion impairment and 75% had degeneration of the upper arm bone, specifically at the shoulder. Thirteen patients experienced additional deterioration in other joints (e.g. elbow, elbow and wrist, wrist, hand, and elbow and hand). Other commonly reported symptoms were weakness (90%), swelling (79%), pain (70%), and sensory loss (83%).

Fifty-two shoulders were treated through physical therapy, medication, and splinting. With the conservative treatment overall symptoms improved in 32%, were unchanged in 64%, and got worse in 4%. When asked to rate pain improvement, 64% had a reduction in pain, 29% had no change, and 7% said pain worsened.

Eleven patients (12 shoulders) underwent reconstruction or replacement shoulder surgery. Nine individuals experienced substantial pain relief as well as range of motion improvement through either half joint replacement, humeral head resurfacing, rotator cuff repair, or reverse shoulder arthroplasty, when an artificial ball is attached to the shoulder blade. There were two cases where there was no improvement—one notably needed multiple revisions as instability happened repeatedly.

The researchers concluded the physical presentation of syrinx related neuropathic shoulder is messy, progressive, and unpredictable. From their analysis, conservative treatment reduced shoulder pain, but it does not significantly improve range of motion. In comparison, reconstruction or replacement surgery resulted in functional recovery and reduced pain.

**Source:** Wawrzyniak A, Lubiatowski P. Shoulder arthropathy secondary to syringomyelia: systematic review. EFORT Open Rev. 2023 Jan 27;8(1):26-34. doi: 10.1530/EOR-22-0008. PMID: 36705617.

*Conquer Chiari's research updates highlight and summarize interesting publications from the medical literature while providing background and context. The summaries do contain some medical terminology and assume a general understanding of Chiari. Introductory information and many more research articles can be found in the [Conquer Chiari Library](#).*