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IRO REVIEWER REPORT

January 2, 2018

IRO CASE #: XXXX

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:
Ultrasound Aspiration Injection

A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION:
This case was reviewed by a Board-certified Orthopedic Surgeon who is considered to be an expert in their field of specialty with current hands on experience in the denied coverage

REVIEW OUTCOME:

Upon independent review, the reviewer finds that the previous adverse determination/adverse determinations should be:

X Overturned (Disagree)

PATIENT CLINICAL HISTORY [SUMMARY]:
This case involves a XX y/o XXXX who sustained a work-related injury XXXX secondary to XXXX. XXXX was initially diagnosed with right wrist sprain and wrist ganglion. This was treated nonoperatively with medications, activity modifications, stretching, splinting, and multiple injections. At office visit with XXXX, patient complained of right>left wrist pain predominatly over radial wrist. On physical exam, there was tenderness and thickening over the 1st extensor compartment, positive Finkelsteins, positive shuck test, and lacking opposition by 1 cm. Normal pulse. Recommendation was made for stretching and bracing for presumed deQuervain's tenosynovitis.

At followup clinic visit XXXX, 1st dorsal compartment was injected.

At followup clinic visit XXXX, patient reported partial improvement in pain. Exam revealed no tenderness 1st dorsal compartment but positive Finkelsteins test. Full range of motion. Recommendation made for stretching program and medications.

At follow up clinic visit XXXX, patient reported persistent pain. Exam revealed 1st dorsal compartment swelling, +CMC shuck, positive Finkelsteins test. 1st dorsal compartment was again injected.

At follow up clinic visit XXXX, patient reported continued pain. MRI was ordered at that time.

MRI results revealed 7x3x2mm multiloculated probable ganglion cyst in the dorsal soft tissues at proximal pole of capitate. No specific mention was made of volar ganglion in MRI report, however per XXXX interpretation there was a volar fluid collection as well adjacent to radial artery.

At follow up clinic visit XXXX, patient reported continued pain. Exam revealed positive Watsons test, ttp over dorsal and volar CMC, pain distal to scapholunate ligament, fullness dorsal and volar wrist but no discrete palpable ganglion. MRI was reviewed by XXXX. Given small size of fluid collection and inability to palpate for aspiration, the recommendation was made for ultrasound guided aspiration. This case underwent 2 previous adverse determination by XXXX and XXXX. The recommendation was made for noncertification as ODG does not recommend ultrasound guidance for wrist injection.

ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS, AND CONCLUSIONS USED TO SUPPORT THE DECISION:

The ODG does not include specific guidelines for ultrasound guidance in aspiration of wrist ganglions. I reviewed XXXX response letter as well as the included article by XXXX et al. This article cites a 56.7% success rate and a 43% recurrence with this treatment modality. The previous adverse determinations were made on the basis that ultrasound is not needed for wrist injections and that a cyst aspiration can be done by a careful clinician without ultrasound based on anatomic landmarks. I would highlight that this request is not being made for intraarticular wrist injection. Given the small size of the cysts (both volar and dorsal), the inability to palpate, as well as the proximity to the radial artery, aspiration without imaging guidance would incur a risk to the radial artery and would likely be technically difficult. Ultrasound would be beneficial in this situation not only to localize the small ganglions to ensure accurate needle placement, but also to avoid injuring the radial artery. Given the failure of a prolonged, multimodal treatment course and the lack of ODG guidance, attempted aspiration under ultrasound guidance would be the safest and most reasonable treatment recommendation in this situation to avoid the need for surgery. As such, I would disagree with the previous adverse determinations and find this case certified.

A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION: ODG Forearm, Wrist, and Hand (updated XXX), Forearm, Wrist, and Hand (updated XXXX) Ultrasound (diagnostic)

Ultrasound guidance for injections: Not generally recommended. Conventional anatomical guidance by an experienced clinician is generally adequate. Ultrasound guidance for joint injections is not generally necessary, but it may be considered in the failure of the initial attempt at the joint injection where the provider is unable to aspirate any fluid; or the size of the patient's joint, due to morbid obesity or disease process, that inhibits the ability to inject the joint without ultrasound guidance. This systematic review confirms that short-term outcome improvements may be present using ultrasound-guided injection techniques but can confirm no difference in long-term outcome measures using either technique. (Gilliland, 2011) Ultrasound guidance may improve the accuracy of joint injections and reduce procedural pain in some cases, but the data does not support improved clinical outcomes from ultrasound guidance generally for any joint injections, and it should not be a substitute for lack of

clinical skill or experience, so injections can be done by less qualified personnel. US guidance for corticosteroid injection of an inflamed joint (shoulder, elbow, wrist, knee, or ankle) allows a trainee to rapidly achieve higher accuracy than a more experienced clinician, but it does not improve the short-term outcome of joint injection. (Cunnington, 2010) Some areas are difficult to hit with an injection, such as SI joints or pancreatic ducts, but wrist injections should not generally require ultrasound guidance.

Corticosteroid injections

Recommended for Trigger finger/thumb, de Quervain's tenosynovitis, osteoarthritis, and peripheral neuropathy as indicated below. When approval occurs beyond the scope of these guidelines, then only a one-time (not series) injection using lower corticosteroid doses and minimal-to-no intra-articular anesthetic would be advised, also applying to initial injections for recommended indications. Specific conditions are discussed below.

de Quervain's tenosynovitis: Recommended, especially combined with an orthosis. Injection alone is the best therapeutic approach. An 83% cure rate with injection alone was much higher than any other therapeutic modality (61% injection/splint, 14% splint alone, 0% others or nonsteroidal anti-inflammatory drugs [NSAIDs]). (Richie, 2003) (Lane, 2001) De Quervain's tenosynovitis is a common overuse tendon injury of the hand and wrist; corticosteroid injection (CSI) without splinting is the preferred initial treatment (level of evidence, B). Compared with NSAIDs, splinting, or combination therapy, CSI offers the highest cure rate. For most patients, symptoms resolve after a single injection. The CSIs are 83% curable, compared with NSAIDs (14%), splinting (0%), or combination therapy (0%). (Stephens, 2008) A Cochrane systematic review (SR) found only one controlled clinical trial with 18 participants comparing a single injection with methylprednisolone/ bupivacaine with thumb spica splinting. All patients in the CSI group achieved complete relief of pain, whereas none of the patients in the thumb spica group did so. (Peters-Veluthamaningal, 2009) Another SR/meta-analysis (MA) of 5 randomized controlled trials (RCT) confirmed that CSI results in statistically significant resolution of symptoms, pain relief, and functional improvement for de Quervain's. (Rowland, 2015) An SR/MA demonstrated that the combined orthosis/CSI is more effective than either intervention alone. (Cavaleri, 2016) (Huisstede, 2017) □

OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME FOCUSED GUIDELINES

Ultrasound-guided aspiration of wrist ganglions: a follow-up survey of patient satisfaction and outcomes.
Zeidenberg J, et al. Acta Radiol. 2016.

Nield, DV, Evans, DM. Aspiration of ganglia. J Hand Surg Br 1986; 11: 264–264.

Breidahl, WH, Adler, RS. Ultrasound-guided injection of ganglia with corticosteroids. Skeletal Radiol 1996; 25: 635–638.