Regence

Medical Policy Manual Surgery, Policy No. 135

Ultrasound Guidance for Facet Joint Injection

Effective: December 1, 2023

Next Review: September 2024
Last Review: October 2023

IMPORTANT REMINDER

Medical Policies are developed to provide guidance for members and providers regarding coverage in accordance with contract terms. Benefit determinations are based in all cases on the applicable contract language. To the extent there may be any conflict between the Medical Policy and contract language, the contract language takes precedence.

PLEASE NOTE: Contracts exclude from coverage, among other things, services or procedures that are considered investigational or cosmetic. Providers may bill members for services or procedures that are considered investigational or cosmetic. Providers are encouraged to inform members before rendering such services that the members are likely to be financially responsible for the cost of these services.

DESCRIPTION

A facet joint injection is an injection of a long acting local anesthetic agent and/or steroid into the paravertebral facet joint, medial branch nerve or facet joint nerve. The use of image guidance assists in the precise localization and accuracy of the needle while minimizing the risk of potential harms.

MEDICAL POLICY CRITERIA

The use of ultrasound guidance for facet joint injection is considered **investigational**

NOTE: A summary of the supporting rationale for the policy criteria is at the end of the policy.

CROSS REFERENCES

1. Total Facet Arthroplasty, Surgery, Policy No. 171

BACKGROUND

Facet joints, also called zygapophysial or “Z” joints, are located on the posterior spine on each side of the vertebrae where it overlaps the neighboring vertebrae. The facet joints provide stability and give the spine the ability to bend and twist. They are made up of two surfaces of

the adjacent vertebrae, which are separated by a thin layer of cartilage. Conditions resulting in facet joint pain include but are not limited to spondylosis, spondylolisthesis, arthritis, osteoarthritis, and spondyloarthritis (facet joint arthropathy).

There are two phases of facet joint injection therapy, diagnostic and therapeutic. Diagnostic facet joint injections are used to verify the specific area generating pain prior to management. Therapeutic facet joint injections are administered based on the outcome of a diagnostic injection with the goal of pain relief for a period of time.

The use of image guidance assists in the precise localization and accuracy of the needle injection while minimizing the risk of potential harms. However, imaging modalities, such as fluoroscopy, expose the patient to radiation. Ultrasound-guided facet joint injections can be used as an alternative to fluoroscopy and CT. Ultrasound technology is widely available and does not expose the patient to radiation. However, it has been reported that ultrasound images can be difficult to interpret.

EVIDENCE SUMMARY

Well-designed randomized controlled trials (RCTs) that compare ultrasound guidance to fluoroscopy or computed tomography guided facet joint injections are needed to demonstrate improved net health outcomes with ultrasound-guided injections.

SYSTEMATIC REVIEWS

Agency for Healthcare Research and Quality published a systematic review on pain management injection therapies for low back pain in 2015.[1] The review evaluated the effectiveness of injection therapies according to use of imaging guidance. Only randomized trials were included and the quality (risk of bias) of the studies was assessed using predefined criteria. The studies were rated as poor, fair, or good. One fair quality trial (n=40) by Galiano (2007) was identified that compared CT versus ultrasound-guided injections in patients with chronic low back pain.[2] A single injection of intra-articular facet joint corticosteroid injections with betamethasone and local anesthetic was conducted at one level. There were no significant differences in pain levels between the two groups at six weeks. The overall strength of evidence was rated as low indicating that additional research is needed to confirm these findings.

Wu (2016) published a systematic review comparing lumbar facet injections performed with ultrasound guidance to those performed with CT- or fluoroscopy guidance.[3] Three studies were included,[2, 4, 5] all of which purported to be randomized, but only one (Galiano) described the randomization method. The overall quality of these studies was not rated, though the authors noted that the lack of blinding may have resulted in bias. A meta-analysis of the data for the 202 total participants in these studies was performed. The outcomes assessed included change in pain scores (visual analog scale [VAS]), change in Modified Oswestry Disability scores, and mean duration of the procedure. No statistically significant differences between groups were found for these outcomes. This meta-analysis was limited by the relatively small sample size and the small number of studies included.

RANDOMIZED CONTROL TRIALS

Karkucak (2019) compared ultrasound-guided to blind injections in patients with facet syndrome (n=47).[6] For the blind injections, sites were detected by palpation. VAS was used to

assess pain and the Oswestry Disability Index (ODI) was used to assess disability. After six weeks, both groups had significant improvements in pain, with the ultrasound group showing greater improvement. This group also had significant improvement in mean ODI (-15.8, p=0.006), while the blind injection group did not (p=0.178). The blind injection group had significant improvements in the state-trait anxiety inventory 1 (STAI 1) (-5.0, p=0.003), while the ultrasound-guided group did not (p=0.135). There was no reported blinding of patients or providers regarding treatment group.

Obernauer (2013) published an RCT that evaluated ultrasound-guided versus CT facet joint injections in the middle and lower cervical spine in 40 participants.[7] There were no significant differences between groups for pain relief. Ye (2018) published a similar RCT (n=40) with the same findings.[8]

NONRANDOMIZED STUDIES

Touboul (2022) published an observational, retrospective, single-center study examining the short-term efficacy of injections of lumbar facet joints between ultrasound-guided injections and fluoroscopy-guided injections.[9] Pain VAS, quality of life questionnaires, and information regarding patient complications and side effects were assessed at one month. A total of 371 patients underwent lumbar zygapophyseal joint injections, with 54 patients completing the one month follow-up visit. Of the 54 patients included for analyses, almost half (N=24) received injections under ultrasound guidance. The ultrasound group had significantly longer injection times compared to fluoroscopy (+35 seconds, p=0.007). While both groups saw significantly lower pain VAS at one month, there were no significant differences in the evolution of pain VAS at one month between both groups. Functional disability (EIFFEL) decreased by 2 points in the ultrasound group and 1.5 points in the fluoroscopy group, with no statistical significance between each group. No side effects were reported from either group immediately or at one month post injection. This study is limited by a small sample size, its observational and retrospective design, and short-duration follow-up. Future studies should employ a randomized controlled trial with follow-up greater than one month and increase participant sample size.

PRACTICE GUIDELINE SUMMARY

No clinical practice guidelines were identified that address ultrasound guidance for facet joint injections.

SUMMARY

There is not enough research to show that ultrasound guidance for facet joint injections improves health outcomes. In addition, there are no clinical guidelines that recommend the use of ultrasound-guided facet joint injections. Therefore, ultrasound guidance for facet joint injection is considered investigational.

REFERENCES

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CODES

Codes	Number	Description
CPT	0213T	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with ultrasound guidance, cervical or thoracic; singe level
	0214T	;second level (List separately in addition to code for primary procedure)
	0215T	;third and any additional level(s) (List separately in addition to code for primary procedure)
	0216T	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with ultrasound guidance, lumbar or sacral; single level
	0217T	;second level (List separately in addition to code for primary procedure)
	0218T	;third and any additional level(s) (List separately in addition to code for primary procedure)
HCPCS	None	

Date of Origin: *September 2015*