Kansas City

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Manipulation under Anesthesia

Policy Number: 8.01.40
Origination: 8/2007
Last Review: 6/2014
Next Review: 6/2015

Policy

Blue Cross and Blue Shield of Kansas City (Blue KC) will not provide coverage for manipulation under anesthesia. This is considered investigational.

When Policy Topic is covered

Not applicable.

When Policy Topic is not covered

Spinal manipulation (and manipulation of other joints, e.g., hip joint, performed during the procedure) under anesthesia, spinal manipulation under joint anesthesia, and spinal manipulation after epidural anesthesia and corticosteroid injection are considered **investigational** for treatment of chronic spinal (cranial, cervical, thoracic, lumbar) pain and chronic sacroiliac and pelvic pain.

Spinal manipulation and manipulation of other joints under anesthesia involving serial treatment sessions is considered **investigational.**

Manipulation under anesthesia involving multiple body joints is considered **investigational** for treatment of chronic pain.

Note: This policy statement does not address manipulation under anesthesia for fractures, completely dislocated joints, adhesive capsulitis (e.g., frozen shoulder), and/or fibrosis of a joint that may occur following total joint replacement.

Considerations

In the absence of a vertebral fracture or dislocation, spinal manipulation under anesthesia is considered **investigational,** regardless of whether it is administered by a physician (i.e., MD or osteopath), chiropractor, physical therapist, or other health provider.

Dislocation versus Subluxation

Spinal manipulation under anesthesia is frequently performed for chronic low back pain related to subluxation, considered investigational, according to the above policy; therefore, a distinction must be made between subluxation and dislocation. According to the chiropractic literature, a subluxation can be defined as a restriction or loss of normal range of motion of the joint causing dysfunction of the spinal motion segment or peripheral joints. A dislocation can be defined as a disruption in the joint integrity. Typically, a subluxation cannot be detected with imaging studies, while a dislocation can.

Description of Procedure or Service

Manipulation under anesthesia (MUA) consists of a series of mobilization, stretching, and traction procedures performed while the patient receives anesthesia (usually general anesthesia or moderate sedation).

Background

Manipulation is intended to break up fibrous and scar tissue to relieve pain and improve range of motion. Anesthesia or sedation is used to reduce pain, spasm, and reflex muscle guarding that may interfere with the delivery of therapies and to allow the therapist to break up joint and soft-tissue adhesions with less force than would be required to overcome patient resistance or apprehension. MUA is generally performed with an anesthesiologist in attendance. MUA is an accepted treatment for isolated joint conditions, such as arthrofibrosis of the knee and adhesive capsulitis. It is also used to treat (reduce) fractures (e.g., vertebral, long bones) and dislocations.

MUA has been proposed as a treatment modality for acute and chronic pain conditions, particularly of the spinal region, when standard care, including manipulation, and other conservative measures have been unsuccessful. MUA of the spine has been used in various forms since the 1930s. Complications from general anesthesia and forceful long-lever, high-amplitude nonspecific manipulation procedures resulted in decreased use of the procedure in favor of other therapies. MUA was modified and revived in the 1990s. This revival is attributed to increased interest in spinal manipulative therapy and the advent of safer, shorter-acting anesthesia agents used for conscious sedation.

MUA of the spine is described as follows: after sedation is achieved, a series of mobilization, stretching, and traction procedures to the spine and lower extremities is performed and may include passive stretching of the gluteal and hamstring muscles with straight-leg raise, hip capsule stretching and mobilization, lumbosacral traction, and stretching of the lateral abdominal and paraspinal muscles. After the stretching and traction procedures, spinal manipulative therapy (SMT) is delivered with high-velocity, short-amplitude thrust applied to a spinous process by hand while the upper torso and lower extremities are stabilized. SMT may also be applied to the thoracolumbar or cervical area if considered necessary to address the low back pain. The MUA takes 15–20 minutes, and after recovery from anesthesia, the patient is discharged with instructions to remain active and use heat or ice for short-term analgesic control. Some practitioners recommend performing the procedure on 3 or more consecutive days for best results. Care after MUA may include 4–8 weeks of active rehabilitation with manual therapy, including SMT and other modalities. Manipulation has also been performed after injection of local anesthetic into lumbar zygapophyseal and/or sacroiliac joints under fluoroscopic guidance (MUJA) and after epidural injection of corticosteroid and local anesthetic (MUESI). (1) Spinal manipulation under anesthesia has also been combined with other joint manipulation during multiple sessions. Together, these may be referred to as medicine-assisted manipulation.

Rationale

The policy was created with an initial literature search in 2002 and updated periodically using the MEDLINE database. The most recent update with literature update was performed through November 11, 2013. Following is a summary of the key literature to date.

Randomized, placebo-controlled trials are considered particularly important when assessing treatment of low back pain, to control not only for the expected placebo effect but to also control for the variable natural history of low back pain, which may resolve with conservative treatment alone. Dagenais et al, in a 2008 comprehensive review of the history of manipulation under anesthesia (MUA) or medicine-assisted manipulation (MAM) and the published experimental literature, noted that there is no research to confirm theories about a mechanism of action for these procedures and that the only randomized controlled trial (RCT) identified was published in 1971 when the techniques for spinal manipulation were different from those used at the present time.(1)

No high-quality RCTs have been identified. A 2013 comprehensive review of the literature describes studies by Kohlbeck et al and Palmieri and Smoyak (described below) as being the best evidence available for MAM/MUA of the spine.(2) Kohlbeck et al carried out a prospective cohort study of 68 patients with chronic low back pain.(3) All patients received an initial 4- to 6-week trial of spinal manipulation therapy (SMT), after which 42 patients received supplemental intervention with MUA and the remaining 26 patients continued with SMT. Low back pain and disability measures favored the MUA group over the SMT-only group at 3 months (adjusted mean difference of 4.4 points on a 100-point scale; 95% confidence interval [CI], -2.2 to 11.0). This difference attenuated at 1 year (adjusted mean

difference of 0.3 points; 95% CI, -8.6 to 9.2). The relative odds of experiencing a 10-point improvement in pain and disability favored the MUA group at 3 months (odds ratio [OR], 4.1; 95% CI, 1.3 to 13.6) and at 1 year (OR=1.9; 95% CI, 0.6 to 6.5.(3) Palmieri and Smoyak evaluated the efficacy of using self-reported questionnaires to study MUA using a convenience sample of 87 subjects in 2 ambulatory surgery centers and 2 chiropractic clinics.(4) Thirty-eight patients with low back pain received MUA and 49 received traditional chiropractic treatment. A numeric pain scale and Roland-Morris Questionnaire were administered at baseline, after the procedure, and 4 weeks later. Average pain scale scores in the MUA group decreased by 50% versus 26% in the traditional treatment group; Roland-Morris Questionnaire scores decreased by 51% and 38%, respectively. The authors concluded that the study supports the need for large-scale studies on MUA and that the assessments are easily administered and dependable.

West et al reported on a series of 177 patients with pain arising from the cranial, cervical, thoracic, and lumbar spine, as well as the sacroiliac and pelvic regions who had failed conservative and surgical treatment.(5) Patients underwent 3 sequential manipulations with intravenous sedation followed by 4 to 6 weeks of spinal manipulation and therapeutic modalities; all had 6 months of follow-up. On average, visual analog scale ratings improved by 62% in patients with cervical pain and 60% in patients with lumbar pain. Dougherty et al retrospectively reviewed outcomes of 20 cervical and 60 lumbar radiculopathy patients who underwent spinal manipulation postepidural injection. After epidural injection of lidocaine (guided fluoroscopically or with computed tomography), methylprednisolone acetate flexion distraction mobilization and then high-velocity, low-amplitude spinal manipulation were delivered to the affected spinal regions. Outcome criteria were empirically defined as significant improvement, temporary improvement, or no change. Among lumbar spine patients, 22 (37%) noted significant improvement, 25 (42%) reported temporary improvement, and 13 (22%) no change. Patients receiving cervical epidural injection reported the following: 10 (50%) significant improvement, 6 (30%) temporary relief, and 4 (20%), no change. The authors noted that this is the first report of the use of spinal manipulation postepidural injection in the cervical spine.(6)

The 1 study of manipulation under joint anesthesia/analgesia (MUJA) found in the literature search had only 4 subjects.(7) Michaelsen noted in a paper published in 2000 that MUJA should be viewed with "guarded optimism because its success is based solely on anecdotal experience."(8)
Searches of the literature using the MEDLINE® database did not find any additional published studies on spinal manipulation under anesthesia involving serial sessions or on manipulation under anesthesia of multiple joints.

Clinical Input Received through Physician Specialty Societies and Academic Medical Centers

In response to requests, input was received from 2 physician specialty societies and 4 academic medical centers while this policy was under review in 2009. While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted. Input from the 7 reviewers agreed that manipulation under anesthesia for chronic spinal and pelvic pain is investigational.

Summary

Scientific evidence regarding spinal manipulation under anesthesia (MUA), spinal manipulation with joint anesthesia, and spinal manipulation after epidural anesthesia and corticosteroid injection is limited to observational case series and nonrandomized comparative studies. Evidence regarding the efficacy of MUA over several sessions or for multiple joints is also lacking. Evidence is insufficient to determine whether MUA improves health outcomes; thus, it is considered investigational.

Practice Guidelines and Position Statements

The American Academy of Osteopathy (AAO) published a consensus statement in 2005 on osteopathic manipulation of somatic dysfunction under anesthesia and conscious sedation.(9) AAO states that manipulation under anesthesia may be appropriate in cases of restrictions and abnormalities of function that include recurrent muscle spasm, range-of-motion restrictions, persistent pain secondary to injury and/or repetitive motion trauma, and is in general limited to patients who have somatic dysfunction which:

1. has failed to respond to conservative treatment in the office or hospital that has included the use of osteopathic manipulative therapy, physical therapy and medication, and/or
2. is so severe that muscle relaxant medication, anti-inflammatory medication or analgesic medications are of little benefit, and/or
3. results in biomechanical impairment which may be alleviated with use of the procedure.

In 2002, the National Academy of Manipulation Under Anesthesia Physicians published guidelines for protocols and standards for MUA, including determining the necessity and frequency of MUA. (10)

Medicare National Coverage

There is no national coverage determination (NCD). In the absence of an NCD, coverage decisions are left to the discretion of local Medicare carriers.

References

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9. American Academy of Osteopathy. Consensus statement for osteopathic manipulation of somatic dysfunction under anesthesia and conscious sedation. American Academy of Osteopathy Journal 2005; 15(2):26-27.
10. National Academy of Manipulation Under Anesthesia Physicians. Purpose statement and protocols and standards. 2002. Available online at: http://www.fcghealth.com/pages/mua_phys_corn_national_namua.htm

Billing Coding/Physician Documentation Information

00640 Anesthesia for manipulation of the spine or for closed procedures on the cervical, thoracic or lumbar spine

22505 Manipulation of spine requiring anesthesia, any region

CPT code 22505 explicitly identifies spinal manipulation under anesthesia. According to the *CPT Assistant*, codes having the descriptor "requiring anesthesia" mean requiring general anesthesia. Therefore, use of CPT code 22505 in conjunction with conscious sedation or regional anesthesia is an inappropriate use of the code. In these instances, CPT codes for chiropractic manipulative treatment (98940-98942) may be used.

When general anesthesia is used, the following anesthesia code would be reported:
00640: Anesthesia for manipulation of the spine or for closed procedures on cervical, thoracic, or lumbar spine.

CPT code 22315 describes closed treatment of vertebral fractures and/or dislocations with or without anesthesia, by manipulation or traction. However, this policy does NOT address the treatment of vertebral fractures or dislocations by manipulation under anesthesia.

ICD-9
The currently available ICD-9 codes do not adequately distinguish between subluxation and dislocation. Chiropractors have used ICD-9 739 (nonallopathic lesion, not otherwise classified) to code for subluxations. This code specifically includes segmental dysfunctions. Chiropractors have also used ICD-9 code 839 (other, multiple, and ill-defined dislocations) to code for subluxations. Use of this code may overlap with a dislocation.

Additional Policy Key Words

N/A

Policy Implementation/Update Information

8/15/07	New policy. This policy was implemented 8/15/2007.
6/1/08	No policy statement changes.
6/1/09	Policy statement clarified; remains investigational. Policy title changed to Manipulation Under Anesthesia for the Treatment of Chronic Spinal or Pelvic Pain (previously was: Spinal Manipulation Under Anesthesia)
6/1/10	No policy statement changes.
6/1/11	Title changed to “Manipulation under Anesthesia” to include joints other than the spine; statements added that MUA over multiple sessions or for multiple joints is considered investigational.
6/1/12	No policy statement changes.
6/1/13	No policy statement changes.
6/1/14	No policy statement changes.