PERCUTANEOUS VERTEBROPLASTY AND KYPHOPLASTY

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Overview

Conservative treatment for painful vertebral compression fractures includes physical therapy, bed rest, bracing, and analgesics. Approximately two-thirds of patients with symptomatic vertebral compression fractures will improve after 4 to 6 weeks. Percutaneous vertebroplasty and kyphoplasty are minimally invasive procedures that have been developed for the treatment of painful vertebral compression fractures that are refractory to conservative treatment.

In percutaneous vertebroplasty, bone cement (generally polymethylmethacrylate (PMMA)) is injected into a fractured vertebral body under fluoroscopic and or computed tomography (CT) guidance. The cement stabilizes the fracture, relieving pain in most patients, allowing them to discontinue or significantly decrease analgesics and resume normal activity.

Kyphoplasty, also referred to as balloon-assisted vertebroplasty, is an adaptation of vertebroplasty that includes expansion of the collapsed vertebra with an inflatable balloon tamp (thereby restoring the vertebral body height and minimizing the associated kyphotic deformity) prior to the injection of the bone cement.

Complications for percutaneous vertebroplasty and kyphoplasty include cement leakage outside of the vertebral body which has been reported in 30% to 70% of cases (most cases of cement leakage are asymptomatic). Fracture of adjacent vertebral levels following these procedures also occurs. The cause of adjacent fracture is most likely multifactoral and may include the diffuse nature of the disease, and relief of pain with a subsequent return to high levels of physical activity.

Thus far, there is no proved advantage of kyphoplasty relative to vertebroplasty with regard to pain relief, vertebral height restoration, or complication rate. It is possible that both vertebroplasty and kyphoplasty are useful in the treatment of vertebral compression fractures and that certain subgroups of patients may derive more benefit from one particular procedure. Features that might affect choice of procedure include degree of compression deformity, age of the fracture, and the presence of neoplastic involvement. However, benefits of kyphoplasty relative to vertebroplasty in such subgroups currently remain undefined.

Covered Services

Preauthorization by FCHP is required for percutaneous vertebroplasty and kyphoplasty.

FCHP covers percutaneous vertebroplasty and kyphoplasty when there is a documented high degree of certainty through physical exam and diagnostic imaging (e.g., X-ray, MRI, CT, fluoroscopy or bone scan) that pain is being caused by one of the following conditions:

1. Osteoporotic vertebral collapse with persistent debilitating pain which has not responded to standard medical treatment (physical therapy, bed rest, bracing, and non-narcotic analgesics) for at least six weeks.
2. Osteoporotic vertebral collapse requiring hospitalization due to incapacitating pain.
3. Osteoporotic vertebral collapse which has not required hospitalization, but has required narcotics for at least two weeks due to incapacitating pain.
4. Osteolytic vertebral metastasis or myeloma with severe back pain related to the destruction of a vertebral body that does not involve the major part of the cortical bone.
5. Vertebral hemangiomas with aggressive clinical symptoms.

Exclusions

1. Prophylactic percutaneous vertebroplasty or kyphoplasty of a vertebral body or bodies.
2. Percutaneous vertebroplasty or kyphoplasty of more than two vertebral bodies at a time.
3. Percutaneous vertebroplasty or kyphoplasty as a treatment for a healed compression fracture, even when the healed fracture is symptomatic.
2. Percutaneous vertebroplasty or kyphoplasty for the treatment of osteoarthritis, spinal stenosis or herniated disc.

Codes

Codes	Number	Description
CPT	22520	Percutaneous vertebroplasty, one vertebral body, unilateral or bilateral injection; thoracic
	22521	Percutaneous vertebroplasty, one vertebral body, unilateral or bilateral injection; lumbar
	22522	Percutaneous vertebroplasty, one vertebral body, unilateral or bilateral injection; each additional thoracic or lumbar vertebral body
	22523	Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation (e.g., kyphoplasty); thoracic
	22524	Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation (e.g., kyphoplasty); lumbar
	22525	Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation (e.g., kyphoplasty); each additional thoracic or lumbar vertebral body (list separately in addition to code for primary procedure)
	76012	Radiological supervision and interpretation,

Codes	Number	Description
		percutaneous vertebroplasty or vertebral augmentation including cavity creation, per vertebral body; under fluoroscopic guidance
	76013	Radiological supervision and interpretation, percutaneous vertebroplasty or vertebral augmentation including cavity creation, per vertebral body; under CT guidance

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Products to Which This Policy Applies

- FCHP Direct & Select Care
- Fallon Preferred Care (PPO)
- Major Medical
- MassHealth
- Companion Care
- Commonwealth Care
- Fallon Senior Plan™

Committee review dates:

Technology Assessment Subcommittee: 10/25/2005, 11/11/2008, 12/16/2008
Technology Assessment Committee: 04/2001, 06/2002, 01/31/2006, 01/13/2009

IMPORTANT NOTE
Not all services are covered for all products or employer groups. This medical policy expresses FCHP's determination of whether certain services or supplies are medically necessary, experimental or investigational or cosmetic. FCHP has reached these conclusions based upon the regulatory status of the technology and a review of clinical studies published in peer-reviewed medical literature. Even though this policy may indicate that a particular service or supply is considered covered, this conclusion is not based upon the terms of your particular benefit plan. Each benefit plan contains its own specific provisions for coverage and exclusions. Not all benefits that are determined to be medically necessary will be covered benefits under the terms of your benefit plan. Members and their providers need to consult the Evidence of Coverage to determine if there are any exclusions or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and the plan of benefits, the provisions of the benefits plan will govern. However, applicable state mandates will take precedence with respect to fully insured plans and self-funded non-ERISA (e.g., government, school boards, church) plans. Unless otherwise specifically excluded, Federal mandates will apply to all plans. With respect to Medicare and Medicaid members, this policy will apply unless Medicare and Medicaid policies extend coverage beyond this medical policy.