Clinical Policy: Radial Head Implant

Reference Number: LA.CP.MP.148 Coding Implications
Date of Last Revision: 7/2022 Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description
Radial head implant, or arthroplasty, was developed for the treatment of complex radial head fractures, and severe arthritic conditions causing radial head joint destruction.

Policy/Criteria

I. It is the policy of Louisiana Healthcare Connections that radial head implants are medically necessary when meeting the following:

A. Has one of the following indications:

1. Type III comminuted fractures of the radial head or fracture is deemed irreparable intraoperatively; or
2. Radiographic evidence of radial head joint destruction, too far advanced to benefit from radial head excision and synovectomy, with demonstrated resistance or failure of conservative medical treatment;

B. Has none of the following contraindications:

1. Untreated or unresolved elbow sepsis within the past 12 months;
2. Previous fascial or other interpositional arthroplasty, or previous hinged arthroplasty with the use of a capitellocondylar implant;
3. Excessive bone loss on either side of the joint or poorly functioning flexor or extensor mechanism.

II. It is the policy of Louisiana Healthcare Connections that radial head implants are not medically necessary for any other indications than those specified above.

Background
Radial Head Fractures
Radial-head and -neck fractures are common and occur in about 30% of elbow fractures. The following modified Mason classification is frequently used to describe the fractures[1,2]:

- Mason Type I – nondisplaced fractures (displacement < 2 mm);
- Mason Type II – displaced fractures > 2 mm;
- Mason Type III – comminuted fractures in which bone is broken, splintered or crushed into a number of pieces. Treatment includes excision, operative fixation and replacement arthroplasty;
- Mason Type IV – radial head fracture associated with elbow fracture/dislocation.

Immediate orthopedic evaluation is necessary for any individual with an open fracture, neurovascular compromise, or fracture dislocation. Immediate reduction is critical in patients who present with a radial-head or -neck fracture and elbow dislocation. The longer the joint is allowed to remain dislocated, the more difficult the reduction and the greater the risk of avascular necrosis. [2-4]

Studies
The peer-reviewed evidence for optimal management of Mason type III radial head fractures is unclear since there is difficulty performing randomized controlled trials due to the small numbers of these types of fractures. Type III comminuted fractures often do poorly with open reduction internal fixation, especially when there are more than three fragments. Additionally, there is a risk of posterior interosseous nerve injury with the procedure. Although many of the studies related to radial head implants are small, these types of prostheses are noted as an acceptable option in cases of Type III comminuted fractures. Many of these fractures will have a ligamentous injury between the radius and ulna shaft in the forearm, which are termed Essex-Lopresti injuries. Excision of a radial head fracture that has an associated Essex Lopresti injury will cause very significant shortening and wrist morbidity. [5-8]

The radial head implant is also beneficial in patients with rheumatoid arthritis with radiographic evidence of joint destruction, which is too far advanced to benefit from radial head excision and synovectomy. In patients with rheumatoid arthritis, arthroplasty should be considered only after conservative medical treatment has failed; this would include pharmacologic therapy consisting of combinations of salicylates, nonsteroidal anti-inflammatory drugs, disease modifying antirheumatic drugs, and/or glucocorticoids for 3-6 months. [9]

In summary, multicenter, long-term, evidence-based, peer-reviewed studies or clinical trials would be helpful to assess the benefits and/or problems associated with radial head implants. [1] Additional randomized control trials for the management of Mason type III fractures are needed to fully evaluate the benefits and long-term clinical outcomes of radial head implants.[6]

Coding Implications
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CPT® Codes	Description
24366	Arthroplasty, radial head; with implant

HCPCS Codes	Description
N/A	

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Code	Description
M06.821	Other specified rheumatoid arthritis, right elbow
M06.822	Other specified rheumatoid arthritis, left elbow
S52.121 (A-S)	Displaced fracture of head of right radius
S52.122(A-S)	Displaced fracture of head of left radius

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Converted corporate to local policy.	08/15/2020	
References reviewed and updated. Replaced "member" with "member/enrollee" in all instances	1/22	1/22
Updated background with no impact on criteria. References reviewed and updated. Specialist reviewed.	7/22	9/26/22

References

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6. Miller G, Humadi A, Unni R, Hau R. Surgical management of Mason type III radial head fractures. *Indian J Orthop*. 2013;47(4):323-332. doi:10.4103/0019-5413.114907
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Important Reminder

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