CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

EVIDENCE SUMMARY

Elbow Osteoarthritis

title: “Elbow Osteoarthritis” slug: elbow-osteoarthritis region: elbow audience: patient mesh_terms: [“Osteoarthritis”, “Elbow Joint”, “elbow OA”, “post-traumatic elbow arthritis”] article_count: 128 model_used: Qwen3.6-35B-A3B-Q8_0.gguf generated_at: ‘2026-06-14T15:35:15+00:00’ key_articles: - title: “Outcomes of Elbow Arthroscopic Osteocapsular Arthroplasty” ref_num: 1 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jhsa.2015.11.018 year: 2016 - title: “Management of Elbow Osteoarthritis” ref_num: 2 evidence_tier: paper evidence_level: 5 doi: 10.2106/jbjs.e.00568 year: 2006 - title: “Capsulectomy and Debridement for Primary Osteoarthritis of the Elbow Through a Medial Trans-Flexor Approach” ref_num: 3 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jhsa.2011.07.018 year: 2011 - title: “Elbow Arthritis: Current Concepts” ref_num: 4 evidence_tier: paper evidence_level: 5 doi: 10.1016/j.jhsa.2009.02.019 year: 2009 - title: “Arthroscopic debridement in the treatment of patients with osteoarthritis of the elbow, based on computer simulation” ref_num: 5 evidence_tier: paper evidence_level: 4 doi: 10.1302/0301-620x.96b2.30714 year: 2014 - title: “Surgical Options for the Arthritic Elbow” ref_num: 6 evidence_tier: paper evidence_level: 5 doi: 10.1016/j.jhsa.2007.12.022 year: 2008 - title: “Surgical management of osteoarthritis in the shoulder and elbow” ref_num: 7 evidence_tier: paper evidence_level: 5 doi: 10.1016/j.jht.2022.02.002 year: 2022 - title: “The prevalence of elbow osteoarthritis in Japanese middle-aged and elderly populations: the relationship between risk factors and function” ref_num: 8 evidence_tier: paper evidence_level: 3 doi: 10.1016/j.jse.2018.02.049 year: 2018 - title: “Midterm outcomes and survivorship of arthroscopic elbow debridement: a comparison of posttraumatic versus primary degenerative osteoarthritis” ref_num: 9 evidence_tier: paper evidence_level: 3 doi: 10.1016/j.jseint.2021.07.018 year: 2022 - title: “Primary Osteoarthritis of the Elbow: Current Treatment Options” ref_num: 10 evidence_tier: paper evidence_level: 4 doi: 10.5435/00124635-200802000-00005 year: 2008 - title: “Severe Elbow Arthropathy in a Patient with Congenital Afibrinogenemia” ref_num: 11 evidence_tier: paper evidence_level: 4 doi: 10.2106/jbjs.i.00149 year: 2010 - title: “Revision radiocapitellar arthroplasty by mismatched implant components – A salvage option: A report of two cases with a minimum three-year follow-up” ref_num: 12 evidence_tier: paper evidence_level: 4 doi: 10.1177/17585732241297152 year: 2024 - title: “Kinematic Changes in Elbow Osteoarthritis: In Vivo and 3-Dimensional Analysis Using Computed Tomographic Data” ref_num: 13 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jhsa.2013.02.006 year: 2013 - title: “Global trends in indications for total elbow arthroplasty: a systematic review of national registries” ref_num: 14 evidence_tier: paper evidence_level: 2 doi: 10.1302/2058-5241.5.190036 year: 2020 - title: “Elbow Arthritis: Current Concepts” ref_num: 15 evidence_tier: paper evidence_level: 5 doi: 10.1016/j.jhsa.2012.12.037 year: 2013 - title: “Arthroscopic Debridement for Primary Degenerative Osteoarthritis of the Elbow Leads to Significant

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Improvement in Range of Motion and Clinical Outcomes: A Systematic Review" ref_num: 16 evidence_tier: paper evidence_level: 1 doi: 10.1016/j.arthro.2017.08.247 year: 2017 - title: "Serial Changes in Clinical Outcomes After Arthroscopic Osteocapsular Arthroplasty for Primary Elbow Osteoarthritis: A Medium-term Follow-up Study" ref_num: 18 evidence_tier: paper evidence_level: 4 doi: 10.1177/23259671231162398 year: 2023 - title: "Open debridement and radiocapitellar replacement in primary and post-traumatic arthritis of the elbow: a multicenter study" ref_num: 19 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jse.2011.08.071 year: 2012 - title: "Osteoarthritis of the elbow: Results of arthroscopic osteophyte resection and capsulectomy" ref_num: 20 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jse.2007.04.005 year: 2008 - title: "Outcomes After Hemiarthroplasty of the Elbow for the Management of Posttraumatic Arthritis: Minimum 2-Year Follow-up" ref_num: 22 evidence_tier: paper evidence_level: 4 doi: 10.5435/jaaos-d-18-00055 year: 2019 - title: "How Does the Subchondral Bone Density Distribution of the Distal Humerus Change Between Early and Advanced Stages of Osteoarthritis?" ref_num: 23 evidence_tier: paper evidence_level: 3 doi: 10.1097/corr.0000000000002921 year: 2023 - title: "Radiocapitellar prosthetic arthroplasty: a report of 6 cases and review of the literature" ref_num: 24 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jse.2014.01.042 year: 2014 - title: "Reliability testing of two classification systems for osteoarthritis and post-traumatic arthritis of the elbow" ref_num: 25 evidence_tier: paper evidence_level: 3 doi: 10.1016/j.jse.2014.10.015 year: 2015 - title: "Functional Outcomes Following Interposition Elbow Arthroplasty Using Fascia Lata Graft for Post-Traumatic Elbow Osteoarthritis Without Ligament Reconstruction: A Minimum 3-Year Follow-Up Study" ref_num: 26 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jhsg.2024.05.002 year: 2024 - title: "Treatment of osteoarthritis of the elbow with open or arthroscopic debridement: a narrative review" ref_num: 27 evidence_tier: paper evidence_level: 5 doi: 10.1186/s12891-018-2318-x year: 2018 - title: "Primary Elbow Osteoarthritis: An Updated Review" ref_num: 28 evidence_tier: paper evidence_level: 4 doi: 10.1111/j.1758-5740.2010.00089.x year: 2011 - title: "Arthroscopic osteocapsular arthroplasty for advanced-stage primary osteoarthritis of the elbow using a computed tomography–based classification" ref_num: 29 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jse.2019.09.036 year: 2020 - title: "Patient and Procedure Specific Variables Associated with Revision or Removal of Radial Head Arthroplasty" ref_num: 30 evidence_tier: paper evidence_level: 1 doi: 10.1016/j.jse.2020.01.061 year: 2020 - title: "The Clinical Impact of Different Approaches to Osteocapsular Debridement for Primary Osteoarthritis of the Elbow: A Systematic Review" ref_num: 31 evidence_tier: paper evidence_level: 2 doi: 10.1016/j.jse.2020.01.060 year: 2020 - title: "Lateral elbow ligament reconstruction for posterolateral rotatory instability: 10 years follow-up in 32 patients" ref_num: 32 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jseint.2022.12.009 year: 2023 - title: "Radiographic changes at the elbow in primary osteoarthritis: A comparison with normal aging of the elbow joint" ref_num: 33 evidence_tier: paper evidence_level: 3 doi: 10.1016/j.jse.2006.08.005 year: 2007 - title: "Identifying the Location and Volume of Bony Impingement in Elbow Osteoarthritis by 3-Dimensional Computational Modeling" ref_num: 34 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jhsa.2013.03.035 year: 2013 - title: "Bony landmarks guided mapping of the osteophytes of the elbow osteoarthritis patients: a three dimensional computed tomograph based study" ref_num: 36 evidence_tier: paper evidence_level: 3 doi: 10.1186/s13018-025-06145-9 year: 2025 - title: "Arthroscopic and open debridement in primary elbow osteoarthritis: a systematic review and meta-analysis" ref_num: 37 evidence_tier: paper evidence_level: 1 doi: 10.1302/2058-5241.5.190095 year: 2020 - title: "Arthroscopic débridement for primary osteoarthritis of the elbow: analysis of preoperative factors affecting outcome" ref_num: 38 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jse.2014.01.009 year: 2014 - title: "Heterotopic ossification after the Outerbridge-Kashiwagi procedure in the elbow" ref_num: 39 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.jse.2007.06.018

year: 2008 - title: “Combined posterolateral and posteromedial rotatory instability of the elbow” ref_num: 40 evidence_tier: paper evidence_level: 4 doi: 10.1016/j.injury.2007.01.039 year: 2007 - title: “Total Elbow Arthroplasty: Surgical Technique” ref_num: 42 evidence_tier: paper evidence_level: 5 doi: 10.1016/j.jhsa.2009.02.021 year: 2009 - title: “Natural History of the Elbow Bony Architecture in Patients With Obstetric Brachial Plexus Injury and the Association With Flexion Contractures” ref_num: 44 evidence_tier: paper evidence_level: 4 doi: 10.5435/jaaos-d-17-00110 year: 2018 - title: “Impact of Ulnar Collateral Ligament Tear on Contact Pressure and Contact Area in the Posteromedial Compartment of the Elbow (SS-39)” ref_num: 46 evidence_tier: paper evidence_level: 5 doi: 10.1016/j.arthro.2013.03.046 year: 2013 - title: “Editorial Commentary: Arthroscopic Elbow Arthritis Treatment With Osteocapsular Debridement Yields Favorable Results: On Second Thought, the Elbow Isn’t That Unforgiving” ref_num: 47 evidence_tier: commentary evidence_level: 5 doi: 10.1016/j.arthro.2020.10.029 year: 2021 - title: “Are bone bruises a possible cause of osteochondritis dissecans of the capitellum? a case report and review of the literature” ref_num: 50 evidence_tier: case_report evidence_level: 5 doi: 10.1007/s00402-005-0018-0 year: 2005 - title: “Effectiveness of radiographs and computed tomography in evaluating primary elbow osteoarthritis” ref_num: 51 evidence_tier: paper evidence_level: 1 doi: 10.1016/j.jse.2021.04.001 year: 2021 - title: “Editorial Commentary: Open Versus Arthroscopic Elbow Osteocapsular Arthroplasty” ref_num: 56 evidence_tier: commentary evidence_level: 5 doi: 10.1016/j.arthro.2019.02.004 year: 2019 synthesis_version: “v2” verifier_status: skipped

Overview

- Nonoperative treatment is the first step in the early management of elbow osteoarthritis [2].
- Elbow arthroscopic osteocapsular arthroplasty is a safe and efficacious treatment for patients with mild to moderate osteoarthritis [1].
- Arthroscopic osteocapsular arthroplasty can be recommended for its favorable overall treatment outcomes for elbow osteoarthritis [29].
- Arthroscopic debridement for primary degenerative osteoarthritis of the elbow results in statistically significant and clinically relevant improvement in elbow range of motion and clinical outcomes with low complication and reoperation rates [16].
- Computer simulation studies recommend arthroscopic debridement in the surgical management of patients with osteoarthritis of the elbow [5].
- Open and arthroscopic debridement procedures are safe and effective in the treatment of elbow osteoarthritis [27].
- Capsulectomy and debridement for primary osteoarthritis of the elbow through a medial trans-flexor approach is associated with a low rate of complications and is safe and effective [3].
- Shoulder arthroplasty is a reasonable option for select patients with osteoarthritis [7].
- Elbow arthroplasty remains a poor option for active patients due to high rates of complications and limited durability [7].

- Total elbow replacement is a viable option for severe arthropathy in patients with congenital afibrinogenemia, achieving satisfactory results with no complications [11].
- The indications for total elbow arthroplasty are broadening, with use for acute trauma and osteoarthritis becoming increasingly common [14].
- Elbow hemiarthroplasty is an option for young or active patients with end-stage posttraumatic arthritis who are unwilling to accept activity limitations, though high rates of revision surgery and revision to total elbow arthroplasty occur [22].
- Interposition elbow arthroplasty using fascia lata graft for post-traumatic elbow osteoarthritis without ligament reconstruction provides favorable surgical outcomes with high satisfaction rates among young patients [26].

Anatomy & Pathophysiology

- Osteophytic change occurs predominantly in the ulnohumeral compartment of the elbow [33].
- Joint space narrowing more frequently affects the radiocapitellar articulation [33].
- Normal kinematics was preserved in the osteoarthritic elbow with a normal radiocapitellar joint [13].
- Three-dimensional computational models identified unique regions of impingement, such as between the radial head and a posterior capitellar osteophyte in extension [34].
- An increase in carrying angle is associated with radial deviation of stress [23].
- Deficiency of the ulnar collateral ligament (UCL) increased contact pressure within the posteromedial compartment of the elbow with an associated decrease in the contact area [46].
- Elbow ligament reconstruction effectively restores stability and limits progression to osteoarthritis in the long term [32].
- Both posterolateral and posteromedial rotatory instability must be addressed surgically to restore elbow stability [40].
- Heterotopic ossification should be considered in patients with a mechanical block to function after injury to the elbow or surgery [39].
- Flexion contracture is not primarily related to bony changes of the elbow [44].

Classification

- The prevalence of elbow osteoarthritis is 55.0% in respondents aged 40 years or older [8].
- The symptomatic prevalence of elbow osteoarthritis is 22.6% in respondents aged 40 years or older [8].
- Older age is a significant risk factor for elbow osteoarthritis [8].
- Male sex is a significant risk factor for elbow osteoarthritis [8].
- A history of elbow trauma is a significant risk factor for elbow osteoarthritis [8].
- Primary osteoarthritis of the elbow is characterized by relative preservation of articular cartilage [10].

- Primary osteoarthritis of the elbow is characterized by maintenance of joint space [10].
- Primary osteoarthritis of the elbow is characterized by hypertrophic osteophyte formation [10].
- Normal kinematics is preserved in the osteoarthritic elbow with a normal radiocapitellar joint (OAN group) [13].
- Both the BM and HR classification systems demonstrated substantial intraobserver and interobserver reliability for evaluating radiographic severity of post-traumatic arthritis and primary osteoarthritis of the elbow [25].
- The bony landmarks classification system effectively delineated osteophyte distribution in elbow patients [36].

Clinical Presentation

- Nonoperative treatment remains the first step in the early management of elbow osteoarthritis [2].
- Nonsurgical management may provide relief in early stages of elbow arthritis [15].
- The appropriate treatment for elbow arthritis depends on the etiology, severity, patient age, and functional demands [4].
- Surgical treatment for elbow arthritis is based on disease etiology, severity of degeneration, and patient age [6].
- Treatment of elbow arthritis must be individualized based on etiology, severity, patient age, and functional demands [15].
- The prevalence of elbow osteoarthritis was 55.0% in respondents aged 40 years or older [8].
- The symptomatic prevalence of elbow osteoarthritis was 22.6% in respondents aged 40 years or older [8].
- Older age is a significant risk factor for elbow osteoarthritis [8].
- Male sex is a significant risk factor for elbow osteoarthritis [8].
- A history of elbow trauma is a significant risk factor for elbow osteoarthritis [8].
- Primary osteoarthritis of the elbow is characterized by relative preservation of articular cartilage and maintenance of joint space with hypertrophic osteophyte formation [10].
- Primary elbow osteoarthritis predominantly affects middle-aged men undertaking heavy manual work [28].
- Primary elbow osteoarthritis presents with pain, limited movement, and potential ulnar nerve symptoms [28].
- Arthroscopic treatment of elbow osteoarthritis addresses pathologic processes associated with arthritis of the elbow [20].
- Arthroscopic treatment of elbow osteoarthritis is indicated for pain at motion extremes [15].
- Total elbow arthroplasty is indicated for pain throughout the arc of motion in elbow arthritis [15].

Investigations

- Nonoperative treatment remains the first step in the early management of elbow osteoarthritis [2].
- Primary osteoarthritis of the elbow is unique due to relative preservation of articular cartilage and maintenance of joint space with hypertrophic osteophyte formation [10].
- Osteophytic change occurs predominantly in the ulnohumeral compartment of the elbow, whereas joint space narrowing more frequently affects the radiocapitellar articulation [33].
- An increase in carrying angle is associated with radial deviation of stress [23].
- Both the BM and HR classification systems demonstrated substantial intraobserver and interobserver reliability for evaluating radiographic severity of post-traumatic arthritis and primary osteoarthritis of the elbow [25].
- CT has greater sensitivity than radiographs for the detection of osteophytes and loose bodies in primary elbow osteoarthritis [51].
- Three-dimensional computational models identified the locations and volumes of bony impingement in patients with osteoarthritis of the elbow and highlighted unique regions of impingement, such as between the radial head and a posterior capitellar osteophyte in extension [34].
- Normal kinematics was preserved in the osteoarthritic elbow with a normal radiocapitellar joint (OAN group) [13].
- The authors recommend performing an MRI if healing does not occur by a reasonable time despite successful bony healing to assess potential cartilage damage [50].

Treatment

NON-OPERATIVE MANAGEMENT

- Nonoperative treatment remains the first step in the early management of elbow osteoarthritis [2].
- Nonsurgical management may provide relief in early stages of elbow arthritis [15].

SURGICAL DECISION-MAKING AND INDICATIONS

- The appropriate treatment for elbow arthritis depends on the etiology, severity, patient age, and functional demands [4].
- Surgical treatment for elbow arthritis is based on disease etiology, severity of degeneration, and patient age [6].
- Treatment of elbow arthritis must be individualized based on etiology, severity, patient age, and functional demands [15].
- Primary elbow osteoarthritis predominantly affects middle-aged men undertaking heavy manual work, presenting with pain, limited movement, and potential ulnar nerve symptoms [28].

ARTHROSCOPIC AND OPEN DEBRIDEMENT

- Elbow arthroscopic osteocapsular arthroplasty (AOA) is a safe, efficacious treatment for patients with mild to moderate osteoarthritis [1].
- Capsulectomy and debridement for primary osteoarthritis of the elbow through a medial trans-flexor approach is associated with a low rate of complications and is safe and effective [3].
- Arthroscopic debridement is recommended in the surgical management of patients with osteoarthritis of the elbow based on computer simulation [5].
- Elbow arthroscopic debridement for primary degenerative osteoarthritis results in statistically significant and clinically relevant improvement in elbow range of motion and clinical outcomes with low complication and reoperation rates [16].
- Open and arthroscopic debridement procedures are safe and effective in the treatment of elbow OA [27].
- Arthroscopic osteocapsular arthroplasty can be recommended for its favorable overall treatment outcomes for elbow osteoarthritis [29].
- Osteocapsular debridement is an effective surgical treatment option for patients with symptomatic primary elbow osteoarthritis who have failed conservative management [30].
- Osteocapsular debridement is an effective surgical treatment option for patients with symptomatic primary elbow osteoarthritis who have failed conservative management [31].
- Surgical debridement is an effective treatment for the disabling symptoms of primary elbow OA with an acceptable complication rate [37].
- Arthroscopic debridement for elbow osteoarthritis provides satisfactory pain relief, improvement of elbow motion, and good functional outcome [38].
- Osteocapsular debridement, a non-arthroplasty option, proves to be safe and effective in treating patients with elbow arthritis [47].

TOTAL ELBOW ARTHROPLASTY

- Shoulder arthroplasty is a reasonable option for select patients with osteoarthritis, whereas elbow arthroplasty remains a poor option for active patients due to high rates of complications and limited durability [7].
- Total elbow replacement is a viable option for severe arthropathy in patients with congenital afibrinogenemia, achieving satisfactory results with no complications [11].
- The range of indications for total elbow arthroplasty is broadening, with use for acute trauma and osteoarthritis becoming increasingly more common [14].
- Total elbow arthroplasty is a surgical option for pain throughout the arc of motion in elbow arthritis [15].

INTERPOSITION ARTHROPLASTY

- Interposition elbow arthroplasty using fascia lata graft for post-traumatic elbow osteoarthritis without ligament reconstruction provides favorable surgical outcomes with high satisfaction rates among young patients [26].

Complications

- Elbow arthroplasty remains a poor option for active patients due to high rates of complications and limited durability [7].
- Total elbow arthroplasty has an acceptable complication rate [42].
- Total elbow replacement is a viable option for severe arthropathy in patients with congenital afibrinogenemia, with no complications reported in the case [11].

Recovery

- Nonoperative treatment is the first step in the early management of elbow osteoarthritis [2].
- Treatment of elbow arthritis must be individualized based on etiology, severity, patient age, and functional demands [15].
- Nonsurgical management may provide relief in early stages of elbow arthritis [15].
- Surgical options for elbow arthritis range from arthroscopic debridement for pain at motion extremes to total elbow arthroplasty for pain throughout the arc of motion [15].
- Elbow arthroplasty remains a poor option for active patients due to high rates of complications and limited durability [7].
- Elbow arthroscopic osteocapsular arthroplasty (AOA) is a safe and efficacious treatment for patients with mild to moderate osteoarthritis [1].
- Arthroscopic debridement provides satisfactory elbow function and improvement in pain with little chance of reoperation at midterm follow-up for both posttraumatic and primary degenerative osteoarthritis [9].
- Clinical outcomes for primary elbow osteoarthritis patients undergoing arthroscopic OCA improve from preoperative assessment to short- and medium-term follow-up [18].
- Range of motion (ROM) decreases between short- and medium-term follow-up after arthroscopic OCA for primary elbow osteoarthritis [18].
- Open and arthroscopic treatment yields similar results in experienced hands, though patients may experience some degree of recurrence or motion loss [56].
- Capsulectomy and debridement through a medial trans-flexor approach is associated with a low rate of complications and is safe and effective for primary osteoarthritis of the elbow [3].
- Most patients undergoing open debridement and radiocapitellar replacement have an uneventful postoperative course, painless elbow joint, and satisfactory functional recovery at short-term follow-up [19].
- Radiocapitellar prosthetic arthroplasty largely preserves elbow kinematics and stability [24].
- Revision radiocapitellar arthroplasty by mismatched implant components is a salvage option that improved Mayo elbow performance scores from poor to good/excellent with no signs of implant failure at a minimum three-year follow-up [12].

- Elbow hemiarthroplasty is an option for young or active patients with end-stage posttraumatic arthritis who are unwilling to accept activity limitations, though high rates of revision surgery and revision to total elbow arthroplasty occur [22].
- Elbow ligament reconstruction effectively restores stability and limits progression to osteoarthritis in the long term [32].

Key Evidence

- [L4] Elbow AOA is a safe, efficacious treatment for patients with mild to moderate osteoarthritis. (10.1016/j.jhsa.2015.11.018)
- [L5] Nonoperative treatment remains the first step in the early management of elbow osteoarthritis. (10.2106/jbjs.e.00568)
- [L4] This approach is associated with a low rate of complications and is safe and effective for the treatment of primary osteoarthritis of the elbow. (10.1016/j.jhsa.2011.07.018)
- [L5] The appropriate treatment for elbow arthritis depends on the etiology, severity, patient age, and functional demands. (10.1016/j.jhsa.2009.02.019)
- [L4] The study recommends this technique in the surgical management of patients with osteoarthritis of the elbow. (10.1302/0301-620x.96b2.30714)
- [L5] Surgical treatment for elbow arthritis is based on disease etiology, severity of degeneration, and patient age. (10.1016/j.jhsa.2007.12.022)
- [L5] Shoulder arthroplasty is a reasonable option for select patients with osteoarthritis, whereas elbow arthroplasty remains a poor option for active patients due to high rates of complications and limited durability. (10.1016/j.jht.2022.02.002)
- [L3] The prevalence of elbow OA was 55.0% in respondents aged 40 years or older, with a symptomatic prevalence of 22.6%; older age, male sex, and a history of elbow trauma were identified as significant risk factors. (10.1016/j.jse.2018.02.049)
- [L3] Patients with either pathology can expect satisfactory elbow function and an improvement in pain with little chance of reoperation at the midterm of the follow-up duration. (10.1016/j.jseint.2021.07.018)
- [L4] Primary osteoarthritis of the elbow is unique due to relative preservation of articular cartilage and maintenance of joint space with hypertrophic osteophyte formation. (10.5435/00124635-200802000-00005)
- [L4] The patient achieved satisfactory results with no complications, demonstrating that total elbow replacement is a viable option for severe arthropathy in this rare condition. (10.2106/jbjs.i.00149)
- [L4] At a minimum of three-year follow-up, both cases improved from poor to good and excellent Mayo elbow performance scores with no signs of implant failure on standard radiographs. (10.1177/17585732241297152)
- [L4] Normal kinematics was preserved in the osteoarthritic elbow with a normal radiocapitellar joint (OAN group). (10.1016/j.jhsa.2013.02.006)

- [L2] The range of indications for total elbow arthroplasty is broadening; total elbow arthroplasty for acute trauma and osteoarthritis is becoming increasingly more common. (10.1302/2058-5241.5.190036)
- [L5] Treatment of elbow arthritis must be individualized based on etiology, severity, patient age, and functional demands; nonsurgical management may provide relief in early stages, while surgical options range from arthroscopic debridement for pain at motion extremes to total elbow arthroplasty for pain throughout the arc of motion. (10.1016/j.jhsa.2012.12.037)
- [L1] Elbow arthroscopic debridement for primary degenerative osteoarthritis results in statistically significant and clinically relevant improvement in elbow range of motion and clinical outcomes with low complication and reoperation rates. (10.1016/j.arthro.2017.08.247)
- [L4] Serial assessment of patients with primary elbow OA who underwent arthroscopic OCA showed that the clinical outcomes improved from preoperative assessment to short- and medium-term follow-up, although ROM decreased between short- and medium-term follow-up. (10.1177/23259671231162398)
- [L4] Most patients had an uneventful postoperative course and have shown a painless elbow joint, with satisfactory functional recovery at short-term follow-up. (10.1016/j.jse.2011.08.071)
- [L4] This procedure addresses the pathologic processes associated with arthritis of the elbow and was safe and effective in this series. (10.1016/j.jse.2007.04.005)
- [L4] Elbow hemiarthroplasty is an option for young or active patients with end-stage posttraumatic arthritis who are unwilling to accept activity limitations, though high rates of revision surgery and revision to total elbow arthroplasty occur. (10.5435/jaaos-d-18-00055)
- [L3] An increase in carrying angle is associated with radial deviation of stress. (10.1097/corr.0000000000002921)
- [L4] The procedure largely preserves elbow kinematics and stability. (10.1016/j.jse.2014.01.042)
- [L3] Both the BM and HR classification systems demonstrated substantial intraobserver and interobserver reliability for evaluating radiographic severity of post-traumatic arthritis and primary osteoarthritis of the elbow. (10.1016/j.jse.2014.10.015)
- [L4] It provides favorable surgical outcomes with high satisfaction rates among young patients with elbow osteoarthritis. (10.1016/j.jhsg.2024.05.002)
- [L5] However, from the data we obtained the open and arthroscopic debridement procedures seem to be safe and effective in the treatment of elbow OA. (10.1186/s12891-018-2318-x)
- [L4] Primary elbow osteoarthritis predominantly affects middle-aged men undertaking heavy manual work, presenting with pain, limited movement, and potential ulnar nerve symptoms. (10.1111/j.1758-5740.2010.00089.x)
- [L4] Arthroscopic osteocapsular arthroplasty can be recommended for its favorable overall treatment outcomes for elbow osteoarthritis. (10.1016/j.jse.2019.09.036)
- [L1] Osteocapsular debridement is an effective surgical treatment option for patients with symptomatic primary elbow osteoarthritis who have failed conservative management. (10.1016/j.jse.2020.01.061)
- [L2] Osteocapsular debridement is an effective surgical treatment option for patients with symptomatic primary elbow osteoarthritis who have failed conservative management. (10.1016/j.jse.2020.01.060)

- [L4] Elbow ligament reconstruction by the technique of O'Driscoll et al effectively restores stability and limits progression to osteoarthritis in the long term. (10.1016/j.jseint.2022.12.009)
- [L3] Osteophytic change occurs predominantly in the ulnohumeral compartment of the elbow, whereas joint space narrowing more frequently affects the radiocapitellar articulation. (10.1016/j.jse.2006.08.005)
- [L4] Three-dimensional computational models identified the locations and volumes of bony impingement in patients with osteoarthritis of the elbow and highlighted unique regions of impingement, such as between the radial head and a posterior capitellar osteophyte in extension. (10.1016/j.jhsa.2013.03.035)
- [L3] The bony landmarks classification system effectively delineated osteophyte distribution in elbow patients. (10.1186/s13018-025-06145-9)
- [L1] Surgical debridement is an effective treatment for the disabling symptoms of primary elbow OA with an acceptable complication rate. (10.1302/2058-5241.5.190095)
- [L4] Arthroscopic debridement for elbow osteoarthritis provides satisfactory pain relief, improvement of elbow motion, and good functional outcome. (10.1016/j.jse.2014.01.009)
- [L4] Its presence should be considered in patients in whom there is a mechanical block to function after injury to the elbow or surgery. (10.1016/j.jse.2007.06.018)
- [L4] Both directions of instability must be addressed surgically to restore elbow stability. (10.1016/j.injury.2007.01.039)
- [L5] Total elbow arthroplasty has become a successful reconstruction for painful destructive arthritis about the elbow with an acceptable complication rate. (10.1016/j.jhsa.2009.02.021)
- [L4] This indicates that flexion contracture is not primarily related to bony changes of the elbow. (10.5435/jaaos-d-17-00110)
- [L5] Under the conditions tested, deficiency of the UCL increased contact pressure within the posteromedial compartment of the elbow with associated decrease in the contact area. (10.1016/j.arthro.2013.03.046)
- [Commentary] Osteocapsular debridement, a non-arthroplasty option, proves to be safe and effective in treating patients with elbow arthritis, making the elbow more forgiving than previously thought. (10.1016/j.arthro.2020.10.029)
- [Case_report] The authors recommend performing an MRI if healing does not occur by a reasonable time despite successful bony healing to assess potential cartilage damage. (10.1007/s00402-005-0018-0)
- [L1] CT has greater sensitivity than radiographs for the detection of osteophytes and loose bodies in primary elbow osteoarthritis. (10.1016/j.jse.2021.04.001)
- [Commentary] Open and arthroscopic treatment yields similar results in experienced hands, but patients may have some degree of recurrence or motion loss. (10.1016/j.arthro.2019.02.004)

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