



ETIOLOGY OF DEGENERATIVE SHOULDER ARTHRITIS

- 1. **PRIMARY OA:**
 - wear and tear
 - ♀ > ♂
 - Recognized by narrowing of joint space
 - subchondral sclerosis, cysts and osteophytes

Characteristic: Posterior glenoid wear

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- 2. **INFLAMMATORY ARTHRITIS:**
 - Most common form is Rheumatoid
 - Can be associated with osteophytes & osteopenia
 - Characteristic: central glenoid wear
- 3. **POSTTRAUMATIC ARTHRITIS:**
 - secondary, in young pt
 - after trauma, fracture or instability
 - Recurrent dislocation → Dislocation Arthropathy

Walsh G. et al (JSES 2002): Static posterior subluxation may be a reason of early arthritis in young patients

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- 4. **CUFF-TEAR ARTHROPATHY:**
 - patients with massive irreparable RC-tear

Characteristic: proximal migration

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5. CAPSULORRHAPHY ARTHRITIS:

soft tissue imbalance with excessive capsule tightening
usually open procedures with plication (Putti-Platt)
Abnormal deficient ext rotation → posterior wear

6. OSTEONECROSIS (AVN):

Traumatic / non-traumatic

Traumatic: up to 34% in 3 part #s, up to 90% in 4 part #s
almost in all cases with anatomic neck #s

Non-traumatic: Steroids, Renal Osteodystrophy,
alcohol, haematologic disorders

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7. INFECTIVE ARTHRITIS:

rare, immunocompromised patients

8. NEUROPATHIC ARTHRITIS:

rare, Charcot Arthropathy

Treatment of early degenerative shoulder arthritis. How to postpone the T.S.A.

- Is this possible?

How can we delay this?

TREATMENT

- **Goal of the treatment**

→ Decrease of pain
→ Maintain ROM and function



TREATMENT

- **Non operative treatment:**

Depends on : Etiology
Stage of the disease
Severity of symptoms
Age of the patient

TREATMENT

- **Acute setting** → Restriction of Activities
 - NSAID - Analgesics
 - Physical Therapy
- Intraarticular Steroids ?
(age, number & frequency)

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TREATMENT

- **Chronic Phase** → Maintain function through
Physiotherapy
- NSAID ??

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TREATMENT

Intraarticular injections of
Hyaluronate sodium



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TREATMENT

Glucosamine
Chondroitine
Hyaluronic Acid
Hydroxyl-collagen

Efficacy?



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SURGICAL TREATMENT

- Sperling et al (JSES 2004)
“ great care must be exercised, and **alternative methods** of treatment considered, before shoulder replacement arthroplasty is offered to patients age 50 or younger due to the **unsatisfactory results in this age group**”

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• Non-arthroplasty options:

- Arthroscopic debridement with
or without capsular release
- Interpositional arthroplasty
- Resurfacing procedures
(partial /whole head)

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Arthroscopic Debridement

- No randomized studies to favor this procedure,
- Clinical studies: “ may be successful in some patients (young / medically fragile)“
- Not a defined treatment – time buying procedure



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Arthroscopic Debridement

- **Procedure:**
 1. Synovectomy
 2. Removal of loose bodies
 3. Debridement of osteochondral lesions, unstable flap tears
 4. Removal of degenerated and fray labrum
 5. Removal of osteophytes (head, glenoid)
 6. Microfracture / drilling ?
 7. Capsular release ?



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- Flap tear of the humeral head

Microfracture Technique



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Arthroscopic Debridement

7. Subacromial Bursectomy
 - Bony Acromioplasty?
 - Release of AC- Ligament?
 - Very critical part of the whole procedure
 - Any additional pathology must be addressed



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ARTHROSCOPIC DEBRIDEMENT

Click on the link to watch video:

<http://www.youtube.com/watch?v=OB6o9QGtr8E&feature=youtu.be>



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RESULTS

Weistein et al. (Arthroscopy 1994) :

Excellent results in 80% of the pt in f/up of 34 Mo

Safran et al. (AAOS2002) :

Reported on 17 pt with **advanced OA** , (referred for TSA)
Instead , arthroscopic debridement

Post Op: 82% classified as good to excellent in av.24 Mo f/up .
Maximum pain relief in 3 Mo, functional improvement in 6 Mo, results maintain in 78% of the pt in 2-4 years.



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RESULTS

Weber and Kaufmann (AAOS 2004): reported on 36 pt with **severe OA**, underwent arthroscopic debridement survivorship with end point defined as shoulder arthroplasty was 82% at 5 years

- Feldman and Orwin (2003): Study of Arthroscopic debridement **without subacromial bursectomy** : The results seem to deteriorate with longer f/up – 4 years



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RESULTS

- **Conclusion:**

1. Effective treatment option
2. Encouraging early results regarding pain relief and restoration of function in a short-term f/up
3. It is a time buying procedure



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INTERPOSITIONAL ARTHROPLASTY

Biologic glenoid resurfacing
Development in 1988, since then further developed
Glenoid resurfacing with autografts or allografts

Materials: anterior joint capsule, fascia lata
Achilles tendon, lateral meniscus, human dermal



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INTERPOSITIONAL ARTHROPLASTY



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INTERPOSITIONAL ARTHROPLASTY

- **Short-term outcomes :**

- Successful elimination of pain and Restoration of function
- Preservation of joint space is questionable, contradicting reports
- Durability of the graft is unknown

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PARTIAL RESURFACING

Another option for focal chondral lesion (Hill-Sachs)
Early clinical results are favorable, but
Long term results are lacking



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TOTAL SHOULDER RESURFACING



- Copeland Mark III implant
- Bone preserving procedure
- Anatomic procedure
- No intramedullary canal

- Comparable results to conventional stemmed prosthesis

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