The beneficial role of arthroscopy in the investigation of wrist disorders: A retrospective evaluation of 125 cases

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Wrist arthroscopy

- Useful investigation in defining the patterns, combinations and extent of soft tissue and bony injuries which frequently are more extensive than clinically suspected

Adolfsson 1992
Kelly & Stanley 1990
North & Mayer 1990
Indications

- intra-articular fractures
- wrist lavage
- synovectomy
- ganglionectomy
- distal ulnar shortening
- loose body removal
- degenerative arthritis
- repair of the TFCC
- resection arthroplasty
- septic arthritis
- interosseous ligament repair

But what is the actual benefit?
Study design

- Retrospective review of 125 patients with wrist pathology
- Correlation of clinical and radiological diagnosis with arthroscopic findings
- Investigation of how beneficial was the arthroscopic procedure for either diagnostic or therapeutic purposes

**Group I**
preoperative clinical and/or radiological diagnosis

**Group II**
normal physical or radiological findings

**Group III**
established diagnosis

[Arthroscopy for]

- Confirmation, therapeutic purposes
- Diagnostic purposes
- Staging, preop planning
Material

- 125 consecutive wrist arthroscopies (19 = Olympion)
- Seven year period (2004-2011)
- 49 male, 76 female
- Mean age at operation 38 years (range 17-64 years)
- 57 patients (45.6%) had a documented previous injury
- 320 conventional diagnostic tests and 456 imagine studies!

<table>
<thead>
<tr>
<th>Group I</th>
<th>preoperative clinical and/or radiological diagnosis</th>
<th>94 patients (75.2%)</th>
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</thead>
<tbody>
<tr>
<td>Group II</td>
<td>Pain, but normal physical or radiological findings</td>
<td>12 patients</td>
</tr>
<tr>
<td>Group III</td>
<td>established diagnosis</td>
<td>19 patients</td>
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Surgical technique
Surgical technique
How beneficial the arthroscopy was…

- **Group I**: when the pre-operative diagnosis was changed, excluded or limited in such a way that the management was changed.

- **Group II**: when a diagnosis was established (valuable when an intra-articular pathology corresponded to the patient symptoms).

- **Group III**: when the pre-operative planning was changed.

- **Therapeutic arthroscopy** was considered worthwhile when the procedure could be technically performed, independently of the ultimate outcome.
Results

- **Group I:** Arthroscopy was beneficial in 51/94 patients (54%) from in whom the pre-operative diagnosis was changed or augmented sufficiently to alter subsequent management.

- **Group II:** A beneficial arthroscopy establishing a definitive diagnosis was conducted for 9/12 patients (75%)

- **Group III:** Arthroscopy was of benefit to 14/19 patients (74%) for whom the subsequent definite management plan was modified.

- For all groups, arthroscopy was deemed of benefit when a therapeutic intervention was successfully conducted, independently of the ultimate outcome. There were 66/125 (53%) such patients.
Results

Group I (preop diagnosis)
Group II (no diagnosis)
Group III (established diagnosis)
therapeutic arthroscopy

Patients

- Group I: 54%
- Group II: 75%
- Group III: 74%
- Therapeutic Arthroscopy: 53%
Speculations…

9/12 (25%) of the patients in Group II (no diagnosis) had a normal arthroscopic appearance (9.4 investigations per patient!!!)
- work compensation, malingering, simulation?
- undiagnosed chronic wrist pain?

31/51 (61%) arthroscopies in Group I where the pre-operative diagnosis was changed or augmented sufficiently to alter subsequent management, revealed significant unsuspected intra-articular pathology
- unrelated to the clinical findings or misdiagnosed?
Conclusion

- These data demonstrate the importance of wrist arthroscopy both as a diagnostic and therapeutic tool in the management of wrist disorders.

- A thorough clinical examination is still the best way to reach the diagnosis.

- Correlation of the unexpected arthroscopic findings with the symptoms of the patient to avoid over-treatment.

- Useful tool in preoperative planning when a diagnosis is already exist.
Thank you