Arthroscopic Subacromial Decompression for Shoulder Pain (CSAW):
A Multi-Center Placebo-Controlled Randomized Surgical Trial

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Disclosures – Professor David Beard

- Director of Royal College of Surgeons Surgical Trials Unit – no conflict.
- Oxford: Institutional Grants from Zimmer Biomet (trials) – unrelated - no conflict
- Non Exec Director of PRO-MAPP Ltd (Oxford University Spin Out) - no conflict.

No conflicts with this work
Background: Sub-acromial Decompression for Shoulder Pain

- Decompression
- Removal of spur & tissue to create space

- Scientifically and mechanically appropriate
- Sound rationale
Growth & Variation of Procedure

GROWTH

Without good evidence to support

VARIATION

Rates of Subacromial Decompression and Rotator Cuff Repair per 100,000 population by England PCT 2009/10

7 fold increase
Protocol

- **N=313**
- (51 surgeons, 32 centres)
- 3 group surgical placebo controlled trial
  - ASAD, Arthroscopy, No Rx
- Pain, function, cost effectiveness
- Primary: OSS at 6 months and 1 year
CSAW Design – “double” control

**Group C:** No Rx Control group (Natural Hx)

**Group AO:** Arthroscopy only (placebo intervention)

**Group SAD:** Rx

1. Surgical Rx efficacy
2. Rx Mechanism & accounts for placebo effect
Inclusion Criteria

- Sub-acromial pain >3 months duration
- Intact rotator cuff
- Non-operative management including
  - Exercise therapy
  - At least one steroid injection
- Patient with partial cuff tear not excluded
Trial Profile (Consort)

ASAD = decompression
AO = arthroscopy only

Nb: Some non compliance

N=313
### ITT analysis

<table>
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<tr>
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<th>ASAD</th>
<th>Arthroscopy</th>
<th>NO Rx</th>
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<tbody>
<tr>
<td>6/12</td>
<td>32.7</td>
<td>34.2</td>
<td>29.4</td>
</tr>
<tr>
<td>12/12</td>
<td>38.2</td>
<td>38.4</td>
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**No difference between ASAD and AO**

Small NS diff between No Rx and Surgery: **3.3 pnts**

Inside MCID (4.5 pnts).
Raw Data – as randomised

Oxford Shoulder Score at Baseline / Oxford Shoulder Score at 12 Months

Decompression

Arthroscopy only

No treatment

Notes: Each vertical line indicates one participant. ^ Indicates ending value.
Sorted in OSS at baseline, then by change from baseline order overall.
Dashes and lighter colour indicate surgery was less than 2 month prior to Oxford Shoulder Score.

Per protocol analysis (same conclusion)

Cross-over between groups
23% decompression surgery
42% placebo surgery
12% observation, No Rx

- Limitations:
  - Waiting times
    - 90 days for surgery
    - 82 days for placebo surgery

- Follow up
  - limited to one year
Summary and take home message

- The surgery does not provide benefit by the mechanism we thought it did...
- The benefit of surgery is not as substantial as expected (had hoped for?)

- Impact:
  - Reduce frequency of operation and national variation
  - Tighten indications - later or last option
  - Different consultation with patient – shared decision making

Discoveries only possible with a placebo control design and positive engagement with shoulder surgery community
Acknowledgements

Authors

CSAW Study Group: Marion Campbell, University of Aberdeen, Alison McDonald, University of Aberdeen, Caroline Wilson, University of Bristol, Ben Dean, University of Oxford, Patrick Julier, University of Oxford, Jeremy Lewis, University of London, Richard Gray, University of Oxford, Helen Higham, Oxford University Hospitals NHS Trust

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Philip Ahrens, Royal Free London NHS Foundation Trust (Hampstead), Cheryl Baldwick, North Devon Healthcare NHS Trust, Mark Brinsden, Plymouth Hospitals NHS Trust, Harry Brownlow, Royal Berkshire NHS Foundation Trust, David Burton, County Durham and Darlington NHS Foundation Trust, Muhammad Sohail Butt, The Dudley Group NHS Foundation Trust, Andrew Carr, Oxford University Hospitals NHS Foundation Trust, Charalampos P Charalambous, Blackpool Teaching Hospitals NHS Foundation Trust, Veronica Conboy, Torbay and South Devon NHS Foundation Trust, Lucy Dennell, The Queen Elizabeth Hospital King’s Lynn NHS Foundation Trust, Oliver Donaldson, Yeovil District Hospital NHS Foundation Trust, Steven Drew, University Hospitals Coventry and Warwickshire NHS Trust, Amitabh Dwyer, Hinchingbrooke Health Care NHS Trust, David Gidden, Northampton General Hospital NHS Trust, Peter Hallam, Norfolk and Norwich University Hospitals NHS Foundation Trust, Socrates Kalogranitis, University Hospitals Birmingham NHS Foundation Trust, Cormac Kelly, The Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust, Rohit Kulkarni, Aneurin Bevan University Health Board, Tim Matthews, Cardiff and Vale University Health Board, Julie McBirnie, NHS Lothian, Vipul Patel, Epsom and St Helier Hospitals NHS Trust, Chris Peach, University Hospital of South Manchester NHS Foundation Trust, Chris Roberts, The Ipswich Hospital NHS Trust, David Robinson, Worcestershire Acute Hospitals NHS Trust, Philip Rosell, Frimley Health NHS Foundation Trust, Dan Rossouw, Royal Free London NHS Foundation Trust (Barnet), Colin Senior, Dorset County Hospital NHS Foundation Trust, Bijayendra Singh, Medway NHS Foundation Trust, Soren Sjolin, West Suffolk NHS Foundation Trust, Geoffrey Taylor, Buckinghamshire Healthcare NHS Trust, Balachandran Venkateswaran, The Mid Yorkshire Hospitals NHS Trust, David Woods, Great Western Hospitals NHS Foundation Trust.

Surgical Intervention Trials Unit (SITU), Royal College of Surgeons (England) Surgical Trials Initiative, British Elbow and Shoulder Society (BESS), Oxford Clinical Trials Unit (OCTRU), Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDORMS)