PHYSIOTHERAPISTS’ ABILITY TO DIAGNOSE AND MANAGE PATIENTS WITH SHOULDER DISORDERS IN AN OUTPATIENT ORTHOPAEDIC CLINIC: PRELIMINARY RESULTS FROM A CONCORDANCE STUDY

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Introduction

- **Long wait times** for orthopedic care (10 ½ months):
  - 18 weeks for consultation
  - 24 weeks for treatment

- 50 TO 80 % OF PATIENTS REFERED TO ORTHOPEDIC SPECIALISTS ARE NOT SURGICAL CANDIDATES

- Could physiotherapists initiate conservative treatment faster?
  - *Lack of evidence for advanced practice physiotherapy*
Objectives

1/ ESTABLISH **DIAGNOSTIC, SURGICAL TRIAGE AND TREATMENT AGREEMENT** BETWEEN PHYSIOTHERAPISTS AND ORTHOPEDIC SURGEONS WORKING IN AN ORTHOPEDIC SHOULDER CLINIC.
Objectives

1/ ESTABLISH DIAGNOSTIC, SURGICAL TRIAGE AND TREATMENT AGREEMENT BETWEEN PHYSIOTHERAPISTS AND ORTHOPEDIC SURGEONS WORKING IN AN ORTHOPEDIC SHOULDER CLINIC.

2/ COMPARE PATIENT SATISFACTION.
Methods

CROSS-SECTIONAL STUDY

New orthopedic patients (shoulder)

Physiotherapist

Satisfaction

Orthopedic surgeon

Diagnosis

Surgical triage

Conservative treatment plan

Diagnosis

Surgical triage

Conservative treatment plan
Methods

Descriptive statistics

New orthopedic patients (shoulder)

Raw proportion of agreement and inter-rater agreement coefficient (Kappa/PABAK)

Satisfaction

Diagnosis

Surgical triage

Chi-squared test

Conservative treatment plan

Student t-test

Satisfaction
Results

Descriptive statistics

n=42
51.6 yrs
43%
Symptoms >1yr = 79%
Results

| TABLE 1: DIAGNOSTIC AGREEMENT BETWEEN PHYSIOTHERAPISTS AND ORTHOPEDIC SURGEONS (n=42) |
|--------------------------------------------------------|-------------------------------|-----------------|
|                                                        | Raw agreement proportion† (%) | Inter-rater coefficient‡ (95% CI) |
| Overall diagnostic agreement                           | 36/42 (86)                    | 0.80 (0.66-0.94) |
| Rotator cuff pathology                                  | 18/20 (90)                    | 0.86 (0.61-0.97) |
| Shoulder instability                                    | 8/8 (100)                     | 1.00 (0.83-1.00) |
| Gleno-humeral pathology                                | 2/4 (50)                      | 0.81 (0.55-0.95) |
| Acromio-clavicular pathology                           | 3/3 (100)                     | 1.00 (0.83-1.00) |
| Adhesive capsulitis                                     | 3/4 (75)                      | 0.90 (0.68-0.99) |
| Other§                                                   | 2/3 (67)                      | 0.86 (0.61-0.97) |

†Orthopedic surgeons’ diagnoses were used as reference (gold standard).
‡Cohen’s kappa and prevalence-adjusted bias-adjusted kappa values.
§Diagnoses that could not be classified in one of the 5 previous categories were placed in this category.
## Results

**TABLE 2: AGREEMENT OF SURGICAL MANAGEMENT BETWEEN PHYSIOTHERAPISTS AND ORTHOPEDIC SURGEONS (n=42)**

<table>
<thead>
<tr>
<th>Surgical management</th>
<th>Raw agreement proportion † (%)</th>
<th>Inter-rater coefficient ‡ (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical management</td>
<td>32/42 (76)</td>
<td>0.57 (0.26-0.79)</td>
</tr>
</tbody>
</table>

†Orthopedic surgeons’ recommendations were used as reference (gold standard).
‡Prevalence-adjusted bias-adjusted kappa values.
Results

<table>
<thead>
<tr>
<th>Treatment Recommendations</th>
<th>MDs approach (%)</th>
<th>APPs approach (%)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice and education</td>
<td>10/38 (26)</td>
<td>20/38 (53)</td>
<td>0.019*</td>
</tr>
<tr>
<td>Physiotherapy or exercise program</td>
<td>18/38 (47)</td>
<td>20/38 (53)</td>
<td>0.65</td>
</tr>
<tr>
<td>Injections</td>
<td>14/38 (37)</td>
<td>16/38 (42)</td>
<td>0.64</td>
</tr>
<tr>
<td>NSAIDs</td>
<td>3/38 (8)</td>
<td>4/38 (11)</td>
<td>0.69</td>
</tr>
</tbody>
</table>

MDs = orthopedic surgeons, APPs = advanced practice physiotherapists, NSAIDs = nonsteroidal anti-inflammatory drugs.

*p<0.05
### TABLE 4: COMPARISON OF PATIENT SATISFACTION BETWEEN PHYSIOTHERAPISTS AND ORTHOPEDIC SURGEONS (n=41)

<table>
<thead>
<tr>
<th></th>
<th>Mean value for MDs (SD)</th>
<th>Mean value for APPs (SD)</th>
<th>Mean difference (SD)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient satisfaction</td>
<td>85.1 (20.2)</td>
<td>86.3 (17.1)</td>
<td>1.2 (5.7)</td>
<td>0.77</td>
</tr>
</tbody>
</table>

SD= standard deviation, MDs= orthopedic surgeons, APPs= advanced practice physiotherapists.

† Satisfaction was measured using a modified visit-specific satisfaction instrument (VSQ-9, /100), a higher score signifies higher satisfaction.
Discussion

- OUR RESULTS DEMONSTRATE THAT PHYSIOTHERAPISTS:
  - Adequately diagnose
  - Adequately triage surgical candidates
  - Give more advice and education
  - Maintain patient satisfaction

- These results are consistent with the literature.
Limitations

- Only one clinic is included in this analysis
- Evaluation order was not randomized
- Cohort of secondary care patients with chronic symptoms
Conclusions

- Overall, our data supports advanced practice physiotherapy models of care.
- More studies are needed: increase generalizability of results
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