Background

The prevalence of spondyloarthritis (SpA) in patients with inflammatory bowel disease (IBD) ranges from 3.1 - 10%, compared to <1% in the general population, defining IBD patients as high risk for developing SpA.

Patients with suspected SpA can wait between 7-10 years to be diagnosed and begin treatment, making an effective and efficient early detection program a priority for this population.

Traditional referral pathways to rheumatologists are associated with lengthy wait times for non-urgent assessments. Up to 13 weeks on average.

A novel, non-physician based model of care was introduced at Toronto Western Hospital. Patients who had IBD and back pain were assessed by an advanced practice physiotherapist (APP) for SpA.

Purpose

To implement and evaluate a unique screening program for IBD patients with suspected SpA, led by an APP.

The objectives were to measure:
1) Wait times from the day of referral to the day of APP screening.
2) The clinical agreement of screening results between the APP and three rheumatologists with expertise in SpA.
3) Assess agreement for recommendation of MRI between the APP and Rheumatologists.
4) Compare the confidence of clinical judgment between the APP and rheumatologists.

Methods

A description of the care path and referral system used in this study can be seen in Figure 1. Descriptive statistics described clinical characteristics and wait times. Kappa coefficient (k) measured inter-observer agreement and Pearson's Correlation compared confidence of the screening results of the APP and the rheumatologists. Paper patients were reviewed by the rheumatologists, which comprised of clinical and investigative results of patients previously screened by the APP. Bivariate results were based on the analysis between the clinical judgement of the APP and the Rheumatologists.

Figure 1: Care path for SpA Screening Clinic, Including the implementation of an advanced practice physiotherapist-led screening program

Results

A total of 20 patients were referred to the screening program. Most patients were men (55%), and the mean age was 40.9 years ±11.8. The average duration of back pain was 9.8 years; 65% reported no improvement with exercise, while 35% had minimal or disabling back pain.

Comparison of confidence for screening results was 6.0/10 (higher values indicating higher level of confidence) for the APP versus an average confidence level of 6.4/10 for the three rheumatologists (Pearson's r = 0.3).

Table 1: Demographics and clinical characteristics (n=20).

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>APP</th>
<th>Rheumatologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex Male/Female</td>
<td>11/9</td>
<td>13/7</td>
</tr>
<tr>
<td>Age (Mean (STD))</td>
<td>40.85 ±11.83</td>
<td>40.85 ±11.83</td>
</tr>
<tr>
<td>Morning stiffness ≥30 minutes</td>
<td>16/0</td>
<td>16/0</td>
</tr>
<tr>
<td>Morning stiffness &lt;30 minutes</td>
<td>4/16</td>
<td>4/16</td>
</tr>
<tr>
<td>Indeterminate NSAIDs/Disease</td>
<td>1/19</td>
<td>1/19</td>
</tr>
<tr>
<td>Extra-Articular Features</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arthralgia</td>
<td>3/17</td>
<td>3/17</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>2/5</td>
<td>2/5</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>2/5</td>
<td>2/5</td>
</tr>
<tr>
<td>Indeterminate colitis</td>
<td>0/1</td>
<td>0/1</td>
</tr>
</tbody>
</table>

APP vs. Rheumatologist

- Recruitment to Screening (n=20)
- Screening to Referral (n=16)
- Referral to MRI (n=6)

Table 2: APP concordance with Rheumatologists and the final consensus screening results* (n=20).

<table>
<thead>
<tr>
<th>Variables (n=20)</th>
<th>Frequency (%)</th>
<th>Kappa (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP vs. Rheumatologist #1</td>
<td>80.00**</td>
<td>0.52 (0.14-0.92)</td>
</tr>
<tr>
<td>APP vs. Rheumatologist #2</td>
<td>66.67**</td>
<td>0.58 (0.23-0.94)</td>
</tr>
<tr>
<td>APP vs. Rheumatologist #3</td>
<td>66.67**</td>
<td>0.43 (0.01-0.85)</td>
</tr>
<tr>
<td>APP vs. Final Screening Consensus</td>
<td>71.43**</td>
<td>0.53 (0.14-0.92)</td>
</tr>
</tbody>
</table>

*Statistically significant result

APP= Advanced Physiotherapy Practitioner

Conclusion

This screening strategy has the potential to improve access to care and act as a model of care for patients at high risk for SpA. Using an APP to screen for SpA has been demonstrated to reduce wait times, show similar agreement to that of a Rheumatologist and to be in line with the current data reflecting the incidence of SpA in both at risk populations and when using IBD as a screening tool.

Acknowledgements

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