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CONFERENCE ABSTRACT

Bridging the Gap between Symptom Onset and Diagnosis in Axial Spondyloarthritis: an integrated and stratified model for early detection

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Introduction

Axial spondyloarthritis (axSpA) is a systemic inflammatory arthropathy affecting the spine and sacroiliac joints and can also affect the peripheral joints and other body systems. Inflammatory back pain (IBP), associated with axSpA, can be difficult to differentiate from mechanical back pain (MBP) amongst primary care providers. This leads to significant delay in diagnosis, chronic pain and potentially irreversible structural damage in people diagnosed with axSpA. In order to mitigate these factors, a rheumatology inter-professional model of care (MOC) to screen for axSpA was established in Toronto, Canada.

Aims Objectives Theory or Methods

Aim: To evaluate a novel inter-professional MOC to screen for axSpA. Objectives: 1) measure diagnostic delay; 2) measure referral wait times from primary care to rheumatology screen; 3) determine the precision and accuracy of the screening process and 4) determine patient satisfaction with the MOC. Methods: Adults with back pain attending a dedicated community back program (www.isaec.org) underwent primary screening for IBP. Patients meeting IBP criteria were referred for a secondary screen by a physiotherapist with advanced rheumatology training. Precision and accuracy of each screen were measured against the clinical judgement of a rheumatologist with axSpA expertise.

Highlights or Results or Key Findings

In total, 410 patients underwent primary and secondary screening over a 3-year study period. Mean age was 36.9 years (±9.8); 55% were female; average back pain duration was 7 years (±7.2). HLA-B27 was present in 14.4% of patients. Average time from back pain onset to diagnosis for patients with medium or high risk of axSpA (as determined by rheumatologist) was 6.0 years (±6.3). Median wait time from primary to secondary screen was 22 days. AxSpA risk assignment by rheumatologist was 63.6% (MBP or low risk axSpA) and 36.4% (medium or high risk axSpA), with 18.0% of all patients receiving a final diagnosis of axSpA. HLA-B27 performed poorly as an independent screen (sensitivity=28%). The best combination of sensitivity (68%), specificity (90%), positive predictive

value (80%) and negative predictive value (84%) was evident with the secondary screen. A large proportion of patients were satisfied with the model of care (93%).

Conclusions

The inclusion of a secondary screening process utilizing an interprofessional model can shorten time to diagnosis, with high precision and accuracy in patients with axSpA. This unique MOC demonstrates high patient satisfaction, improved access to care and may contribute to increased quality of life in this patient population.

Implications for applicability/transferability sustainability and limitations

The above model of stratified and integrated screening leverages existing human health resources through the optimization of professional scopes of practice. Such integrated models have the potential to improve efficiency and access to appropriate care for patients with a variety of musculoskeletal conditions.