Public health, health services research, and health economics

POS1411

EARLY IDENTIFICATION OF AXIAL SPONDYLOARTHRITIS IN A MULTI-ETHNIC ASIAN POPULATION

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Background: To facilitate earlier diagnosis of spondyloarthritis (SpA), we have previously cross-culturally adapted a self-administered screening questionnaire. **Objectives:** We aimed to improve the sensitivity of this questionnaire as a screening tool by comparing various scoring methods.

Methods: Subjects newly referred to a rheumatology clinic self-administered the questionnaire before seeing a rheumatologist. Identification of axial SpA by the questionnaire using original scoring (Method A) and scoring based on Assessment of SpondyloArthritis International Society (ASAS) inflammatory back pain (IBP) criteria (Method B), ASAS referral criteria (Method C), ASAS classification criteria (Method D) and a combination of ASAS referral and classification criteria (Method E) were compared to classification by the ASAS classification criteria and diagnosis by rheumatologist. Since Methods B-E were based on SpA features, we compared self-reported vs rheumatologist-documented features in subjects with axial SpA.

Results: Of 1418 subjects (age: 54 ± 14 years, female: 73%), 39 were classified as axial SpA cases by classification criteria. Methods A-E yielded sensitivities of 39%, 72%, 67%, 49% and 85%, respectively, among patients newly referred to the rheumatology clinic (Table 1). Rheumatologist-documented clinical SpA features exceeded self-report for IBP (62 vs 44%) and uveitis (15 vs 5%). The reverse was true for arthritis (21 vs 80%), enthesitis (28 vs 33%), dactylitis (3 vs 18%), good response to NSAIDs (33 vs 41%) and family history for SpA (5 vs 10%).

Table 1. Performance of the five scoring methods for the cross-culturally adapted Hamilton axial SpA questionnaire.

Scoring method	Sensitivity (95% confidence interval)	Specificity (95% confidence interval)	Positive predictive value (95% confidence interval)	Negative predictive value (95% confidence interval)
Method A	38.5	93.7	14.7	98.2
Method B	(23.4 – 55.4) 71.8	(92.3 – 94.9) 73.1	(8.5 – 23.1) 7.0	(97.3 – 98.8) 98.9
Method C	(55.1 – 85.0) 66.7	(70.7 – 75.4) 77.8	(4.7 – 10.0) 7.8	(98.1 – 99.5) 98.8
Method D	(49.8 – 80.9) 48.7	(75.5 – 80.0) 74.9	(5.2 – 11.3) 5.2	(98.0 – 99.4) 98.1
Method E	(32.4 – 65.2) 84.6	(72.5 – 77.2) 37.2	(3.2 – 8.0) 3.7	(97.1 – 98.8) 98.8
	(69.5 – 94.1)	(34.6 – 39.8)	(2.5 – 5.1)	(97.5 – 99.6)

Method A: the original scoring defined by the questionnaire developers; Method B: a scoring based on the ASAS IBP criteria; Method C: a scoring based on the ASAS referral criteria; Method D: a scoring based on the ASAS classification criteria for axial and peripheral SpA; Method E: a scoring based on a combination of the ASAS referral and classification criteria.

Conclusion: A self-administered questionnaire scored based on a combination of ASAS referral and classification criteria achieved high sensitivity in identifying axial SpA in subjects referred to a rheumatology clinic. This supports its evaluation as a screening tool for axial SpA in the general population.

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POS1412

IDENTIFYING HIGH-COST DRUGS FOR RARE RHEUMATIC DISEASES IN ROUTINELY COLLECTED NHS DATA. RESULTS FROM A PILOT STUDY OF RITUXIMAB USE IN VASCULITIS USING DATA FROM THE NATIONAL DISEASE REGISTRATION SERVICE AND THE REGISTRATION OF COMPLEX RARE DISEASES-EXEMPLARS IN RHEUMATOLOGY (RECORDER) PROJECT

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Background: Understanding real-world usage of high-cost drugs is crucial to support planning, adoption of innovation and reduce unwarranted variation in treatment. Hospital Episode Statistics (HES) contain diagnoses (coded by ICD-10) and procedures/treatments (coded by OPCS) for all daycase or inpatient care in England. However, OPCS codes are not specific for individual drugs, for example X921 (cytokine inhibitors band 1) includes rituximab (RTX) and 15 other drugs.

Objectives: We aimed to validate the accurate identification of patients treated with RTX for ANCA-associated vasculitis (AAV) using HES data.

Methods: We used data from the National Congenital Anomaly and Rare Disease Registration Service (NCARDRS) at Public Health England and their legal permissions (CAG 10-02(d)/2015). We extracted records from HES of all patients treated at two hospitals during financial year 2018/19 who ever had a coded diagnosis of granulomatosis with polyangiitis (GPA, M313), eosinophilic granulomatosis with polyangiitis (EGPA, M301), microscopic polyangiitis (MPA, M317), polyarteritis nodosa (PAN, M300) or arteritis unspecified (I776). Where people had multiple diagnoses of vasculitis, the most specific was considered their diagnosis. Enabled by data sharing agreements, we reviewed hospital records of those patients to validate diagnoses and whether X921 reliably identified RTX. We report the positive predictive value and sensitivity of the coding for X921 and GPA/EGPA/MPA for identifying people with AAV who are treated with RTX.

Results: At Trust 1 records ever coded with GPA/EGPA/MPA identified 74 people, 69 of whom had AAV confirmed in their medical notes. Among these 74 patients there were 59 episodes coded with X921 procedure codes, of which 56 correctly identified a RTX infusion given for AAV. A total of 64 RTX infusions were given to people with AAV – 3 missed infusions were X921 procedures in patients who had coded diagnoses of PAN or I776 but never GPA/EGPA/MPA and 5 infusions were not coded as X921.

The same analysis at Trust 2 identified 46 people, 44 of whom had AAV confirmed in their medical notes. Among patients identified with AAV there were 17 episodes coded as X921, of which 15 correctly identified a RTX infusion. A total of 23 infusions were given to people with AAV: 4 infusions were X921 procedures in patients who had coded diagnoses of PAN or I776 but never GPA/EGPA/MPA, and 4 infusions were not coded as X921.