

1768 - The Electronic Version of the Psoriatic Arthritis Screening Questionnaire (EPASQ) Is An Effective Tool in Detecting Patients with Psoriatic Arthritis

Tuesday, October 20, 2009: 9:00 AM - 11:00 AM

Hall D (Pennsylvania Convention Center)

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Presentation Number: 1768

Poster Board Number: 501

Purpose:

Psoriatic arthritis (PsA) is a serious inflammatory disease that can cause significant joint damage, disability and co-morbidities. Early PsA detection and effective treatment may prevent these serious problems. We developed the Psoriatic Arthritis Screening Questionnaire (PASQ) as a tool for reliable diagnosis of PsA in patients with skin psoriasis. In a previous communication (Poster presentation EULAR 2008) we reported that the PASQ was highly sensitive and specific in detecting patients with psoriatic arthritis (PsA) fulfilling the CASPAR criteria A natural next step was to provide an easy to perform electronic version that can be widely distributed and eliminate possible inaccuracies of the diagram scoring.

Objectives: to examine the sensitivity and specificity of an electronic version of the PASQ and validate it against the original paper version.

Method: The electronic version of the PASQ (EPASQ) was developed using Adobe Creative Suite 4 software, and was based on the previous paper version of the PASQ. The EPASQ was programmed to provide a maximum of 15 points. The PASQ contained 10 differently weighted questions as well as a diagram where patients marked where they had or have had pain and or swelling. The same questions were included in the EPASQ in addition to a diagram with 68 joints plus the spine. The diagram and the questionnaire can be electronically marked and automatically scored. Validation was conducted using the questionnaires from 42 patients with confirmed PsA (mean disease duration 12 months). Questionnaires from 12 psoriasis patients without PsA were used as a control. Comparison of scores obtained from the manual and the electronic versions were conducted. A receiver operating curve (ROC) was determined for both the paper version as well as the electronic version using MedCalc® software. Descriptive statistics for both were obtained using SPSS.

Results: The original PASQ, data was collected from 87 patients (58 with established PsA meeting the CASPAR criteria and 29 with psoriasis and no evidence of arthritis). Analysis of the PASQ score [AUC = 0.913, 95% C.I.:

(0.833, 0.963), $p = 0.0001$] yielded an optimal cut-off score of 9, with 86.27% sensitivity and 88.89% specificity. A score of 8 would yield a sensitivity of 91.16% and a specificity of 77.78%.

The electronic (EPASQ) Data was collected from a prospective cohort of 42 patients with early PsA (meeting the CASPAR criteria), and from 12 psoriasis patients without PsA. All but two of the PsA patients scored 8 or more in the paper PASQ. Concordance of the paper and electronic scores was very high with only one patient who scored 7 in the paper PASQ and 11 in the EPASQ. The ROC Curve of the entire group yielded an optimal 97.62% sensitivity and 75.00% specificity for a cut-off score of 7. A cut-off point of 8 yielded a sensitivity of 88.10% while still maintaining a specificity of 75.00%.

Conclusion: The electronic version of the PASQ is a simple self-administered and scored program with a high sensitivity and specificity. It can be an effective tool to screen for early and established PsA patients.

Keywords: diagnosis and psoriatic arthritis

Disclosure: M. M. Khraishi, Abbott Laboratories, 2, Amgen, 2, Wyeth Pharmaceuticals, 2 ; J. Mong, None.