TITLE: Human Leukocyte Antigen B27 for the Detection of Spondyloarthropathy: Diagnostic Accuracy, Clinical Effectiveness, and Guidelines

DATE: 13 March 2015

RESEARCH QUESTIONS

1. What is the diagnostic accuracy of human leukocyte antigen B27 (HLA-B27) testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms?

2. What is the clinical effectiveness of HLA-B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms?

3. What are the evidence-based guidelines for HLA-B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms?

KEY FINDINGS

One non-randomized study and one evidence-based guideline were identified regarding HLA-B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2015, Issue 3), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. The search was limited to English language documents published between January 1, 2010 and March 6, 2015. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.
SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Patients with low back pain and no symptoms of spondyloarthropathy (inflammatory back pain ≥3 months duration with age of onset &lt;45 years, peripheral synovitis, enthesitis, dactylitis, psoriasis or uveitis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>HLA-B27 testing</td>
</tr>
<tr>
<td>Comparator</td>
<td>Other tests Testing when symptoms are present</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Diagnostic accuracy Clinical effectiveness (benefits and harms [e.g. false-positives, false-negatives]) Guidelines</td>
</tr>
<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines</td>
</tr>
</tbody>
</table>

HLA-B27 = human leukocyte antigen B27.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

One non-randomized study and one evidence-based guideline were identified regarding HLA-B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms. No relevant health technology assessments, systematic reviews, meta-analyses, or randomized controlled trials were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One non-randomized study\(^1\) and one evidence-based guideline\(^2\) were identified regarding HLA-B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms.

A modelling study\(^1\) examined the predictive value of HLA B27 alone and in combination with other clinical diagnostic criteria for the identification of early axial spondyloarthropathy in patients with chronic back pain and reported that HLA B27 performed better alone than in combination with other clinical items.

The evidence-based clinical guideline for patients with spondyloarthritis published in Spain recommends that HLA-B27 be requested for patients with ankylosing spondylitis (AS), suspected AS, or in cases of diagnostic uncertainty.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses
No literature identified.

Randomized Controlled Trials
No literature identified.

Non-Randomized Studies


Guidelines and Recommendations


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APPENDIX – FURTHER INFORMATION:

Review Articles


