A simplified version of the Walsh clinical prediction rule was accurate for detecting streptococcal pharyngitis


QUESTION: In adults with symptoms of upper respiratory tract infection or sore throat, what is the accuracy of a simplified version of the Walsh clinical prediction rule (CPR) for detecting group A β haemolytic streptococcal (GABHS) pharyngitis?

Design
A cohort study to validate a simplified version of a previously derived prediction rule.

Setting
Primary care clinic of an inner city hospital in New York City, New York, USA.

Patients
171 consecutive walk in patients (mean age 35 y, 77% women) with symptoms of upper respiratory tract infection or sore throat.

Description of prediction guide
All patients were assessed using 5 clinical predictors. The simplified and original Walsh CPRs used similar clinical predictors but different scores: oral temperature (original: 3 points for each degree >36.1°C; simplified: 1 point for >38.3°C), close contact with a person believed to have a streptococcal infection (original: 17 points; simplified: 1 point), cough (original: –7 points; simplified: –1 point), presence or absence of pharyngeal or tonsillar exudates (original: 6 points; simplified: 1 point), and enlarged or tender anterior cervical lymph nodes (original: 11 points; simplified: 1 point). The scoring of the simplified Walsh CPR was modified from the original scoring system used by physicians in their day to day practice, in which they give equal weight to each of the 5 predictors. All patients had throat cultures taken for GABHS pharyngitis.

Main outcome measures
Patient scores and likelihood ratios on the 5 clinical predictors to determine risk of GABHS. The simplified Walsh CPR was scored by giving equal weight of 1 point for all clinical predictors except for the presence of cough, which was assigned a –1 weight because of its association with the absence of GABHS infection. Likelihood ratios and area under the receiver operating characteristic (ROC) curve were calculated for points determining risk of streptococcal pharyngitis.

Main results
39 patients (24%) had GABHS pharyngitis. Both the original Walsh CPR and the simplified version of the Walsh CPR accurately predicted the probability of a positive culture for GABHS pharyngitis (ROC 0.71 v 0.81, p<0.01) (table).

Conclusion
In adults with symptoms of upper respiratory tract infection or sore throat, the simplified version of the Walsh clinical prediction rule was accurate for detecting the presence of group A β haemolytic streptococcal pharyngitis.

*See glossary.
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_Evid Based Med_ 2003 8: 192
doi: 10.1136/ebm.8.6.192

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