CANADIAN C-SPINE RULE FOR RADIOLOGY IN ALERT AND STABLE TRAUMA PATIENTS

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canadianMVP infographic series

Background

Up to 6x difference in physicians ordering C-spine X-rays

Individual X-rays cost little, but being ordered so often, there is a high systems-level cost

A clinical decision rule could reduce unnecessary imaging

Setting

Conducted from October 1996 to April 1999

Cohort of 10 emergency departments in large community and university hospitals in Canada

8924 patients with blunt trauma to head/neck, stable vitals and GCS 15 were chosen by convenience sampling

Methods

Physicians used a 20 item standardised tool to evaluate patients prior to radiography

The primary outcome was clinically important C-spine injury evaluated by XR, CT, and structured telephone interview

The rule was derived using κ coefficient, logistic regression analysis, and χ2.

Results

Canadian C-Spine Rule

High risk factors

Age ≥ 65
Dangersome mechanism
Extremity paraesthesia

≥1 low risk factor
Simple rear-ended MVC
Sitting position in ED
Ambulatory
Delayed onset neck pain
No midline C-spine tenderness

Actively rotate neck 45 degrees left and right

No radiography, if above NOT all met, radiography needed

Bottom Line

Applying the Canadian C-spine rules to appropriate patients significantly reduces the use of radiography, while not missed clinically important fractures.

REFERENCES:


This infographic was created by Kevin Lam and edited by Alvin Chin.