

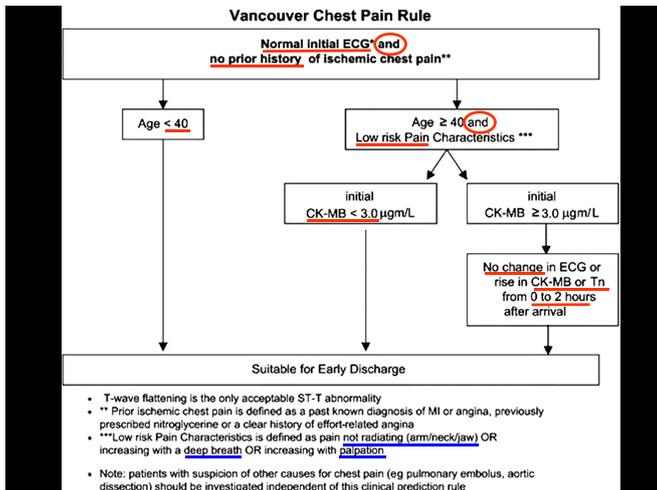
Validation of the Vancouver Chest Pain Rule: A Prospective Cohort Study

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背景

- Acute coronary syndrome (ACS) 佔所有胸痛的15~20%
- 2% 的病人會因誤診而離開急診；更多無ACS的病人卻進行了不必要的檢查及治療。
- Vancouver Chest Pain Rule
 - 辨認出可以在2個小時內安全離開急診的病人
 - 錯過少於2%的ACS病人



研究目的

- (在另外一個國家的急診室)驗證其敏感度及特異度以區別低風險的急性胸痛族群。

方法

- Jan ~ July 2009
- 納入標準: ≥ 25 歲 + 主述為急性胸痛(悶)
- 排出標準: < 25 歲, 外傷引起, 過去30天內已加入該臨床試驗
- 主要結果: 急診後30天內發生ACS

Table 4
Performance of the Vancouver Very-low-risk Chest Pain Prediction Rule Among the Study Patients

Rule	Outcome		Total (n)
	With ACS (n)	No ACS (n)	
Dischargeable (n)	4	288	292
Non-dischargeable (n)	78	223	301
Total (n)	82	511	593
Performance statistics		95% CI	
Sensitivity (%)	95.1	(88.0-98.7)	
Specificity (%)	96.3	(92.0-98.7)	
Positive predictive value (%)	25.9	(21.0-31.0)	
Negative predictive value (%)	98.6	(96.5-99.6)	
Positive likelihood ratio	2.18	(2.0-2.4)	
Negative likelihood ratio	0.09	(0.03-0.23)	

Table 3
Frequency Distribution of Patients With Very-low-risk Chest Pain (N = 292)

Groups	N (%)	With ACS (n)
Group 1*	67 (22.9)	0
Group 2†	185 (63.4)	4
Group 3‡	40 (13.7)	0

CK-MB = creatine kinase-myocardial band isoenzyme; ECG = electrocardiogram.

*Group 1: Patients below 40 years old, with normal primary ECG, and with low-risk chest pain without history of ischemic chest pain.

†Group 2: Patients over 40 years old, with normal primary ECG, low-risk chest pain, and no history of ischemic chest pain with normal primary CK-MB level.

‡Group 3: Patients over 40 years old, with normal primary ECG, low-risk chest pain, no history of ischemic chest pain, and CK-MB over normal level who had no dynamic changes in ECG and no rise in CK-MB level 2 hours after arrival.

結論

- ↓ Sensitivity, ↑ Specificity

討論

	Sen.	Spe.	Difference
Vancouver Chest Pain Rule	98.8 (95.1)	32.5 (56.3)	Troponin at 2 hours
Hess et al.	100	20.9	Troponin-alone

- 2個病人有high initial troponin 2-VD
- 1個病人有dynamic EKG-changes 2-VD
- 1個病人1星期後 1-VD

- 早期測量troponin及CK-MB可以使Sensitivity提升3%

討論

- 限制：↓普遍性、Performance bias、經濟效因不明