

EBM

- P:68y/o female, blunt chest injury with multiple fractures, myocardial infarction due to coronary dissection
- I:Surgical intervention-CABG
- C:medical treatment or PCI
- O:mortality

Uptodate

- Key words: blunt injury, coronary dissection, myocardial infarction
- **General approach to blunt thoracic trauma in adults**
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- Myocardial Infarction (MI) - rare complication of blunt chest trauma. Causes include coronary artery dissection and thrombosis. **Left anterior descending artery** appears to be involved most often.
- Screening test: ECG
- Management of MI :controversial .
 - Catheterization with stenting may be the best approach.
 - Thrombolysis, although it may be ineffective and severe bleeding complications may occur
- Echo and cardiac biomarkers - NOT appear to add to the management of the hemodynamically stable

PubMed

- Key word:
 - blunt injury,
 - trauma,
 - coronary artery dissection,
 - myocardial infarction
 - “Not” carotid dissection, aortic dissection, spontaneous, iatrogenic
 - 共66篇,有5篇review article

Review

Open Access

Coronary artery dissection and acute myocardial infarction following blunt chest trauma

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- Spontaneous healing of the vessel has been described with some degree of residual stenosis and without sequelae.
- Fibrinolytic therapy has been given after mild trauma.
- Acute percutaneous intervention (PCI) both without and with stent implantation has been performed with successful revascularization .
- In the **multi-traumatized patient** off-pump coronary artery bypass (**OPCAB**) is probably favourable over on-pump surgery.

World Journal of Emergency Surgery

This Provisional PDF corresponds to the article as it appeared upon acceptance. Fully formatted PDF and full text (HTML) versions will be made available soon.

Dissection of the left main coronary artery after blunt thoracic trauma: Case report and literature review

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- Conservative management includes anticoagulation and observation if they are hemodynamically stable with minimal injuries.
- Thrombolytics can be administered to dissolve clot associated with an intimal injury, but are contraindicated in multiply injured patients.
- Revascularization can be achieved with percutaneous techniques or coronary bypass

- Lesions isolated to the LAD or RCA, and with isolated trauma → percutaneous techniques
- Surgical revascularization :
 - 1) unprotected isolated LMCA disease,
 - 2) contraindication to anti-platelet therapy
 - 3) history of known coagulopathy
 - 4) pregnant women

Author/Journal	Patient age/sex	Mechanism	Injury	Treatment	Outcome
Redondo, et al [11] Am J Emerg Surg. 2009	45 yo F	Motor vehicle collision	LMCA-focal stenotic dissection: RCA dissection	Angioplasty and heparin	Death secondary to intra-abdominal hemorrhage unknown
Goyal, et al [12] Heart. 2009	47 yo M	Motor vehicle collision	LMCA extending to LAD dissection	Unknown (no thrombolytics)	
Harada, et al [8] Ann Thorac Surg. 2002	14 yo M	Motorcycle collision	LMCA dissection with left ventricular aneurysm	Supportive care with surgical patch angioplasty and aneurysmectomy, mitral valvuloplasty and tricuspid annuloplasty 3 weeks later	Discharge to home; doing well 4 years post-operatively
Cini, et al [15] Interact Cardiovasc Thorac Surg. 2008	43 yo F	Spontaneous	LMCA dissection	Surgical revascularization	Discharge home
Rogers, et al Clin Cardiol. 2007	37 yo F (post-partum)	Spontaneous	LMCA with LAD involvement	Surgical revascularization	Discharge home
Hazeleger, et al [5] Circulation. 2001	29 yo M	Tackled in football 2 months prior to arrival	LAD dissection: OM dissection	Stent	Discharge home
Snayna, et al [10] Am J Thorac Cardiovasc Surg. 2007	17 yo M	Unrestrained motor vehicle collision 1 month prior to symptoms	LAD dissection	Surgical revascularization	Discharge home

Korach, et al [9] Interact Cardiovasc Thorac Surg. 2008	40 yo M	Pedestrian struck by automobile	LAD dissection	Surgical revascularization	Discharge home
Leong & Brown [7] Emerg Med J. 2006	50 yo M	Motorcycle collision	LAD dissection	Bare metal stent + angioplasty after thrombolysis	Discharge home
Boland, et al [13] Chest. 1988	32 yo F	Motor vehicle collision at 15 mph 3 days prior to admission	LAD & LCx dissection	Surgical revascularization	Discharge home
Vogiatzis, et al [16] Hellenic J Cardiol. 2010	31 yo F (pregnant)	Spontaneous	LCx dissection	Conservative treatment without revascularization	Discharge home
Greenberg, et al [4] Chest. 1998	35 yo F	Water-skiing 2 days prior to arrival	Circumflex artery dissection with moderate occlusion	Angiogram without intervention	Death due to brain death secondary to Vfib arrest prior to emergency department arrival
De Macedo, et al [17] J Invasive Cardiol. 2009	34 yo M	Spontaneous	RCA dissection	Stent, heparin, clopidogrel, tirofiban, aspirin	Discharge home
Hobelman[6] Emerg Med J. 2006	32 yo M	Elbow to chest in basketball	RCA dissection	Eptifibatide and heparin, stent X2	Discharge home

Answer

- 從前述文章來看,病人是RCA的AMI,且並沒有coagulopathy之異常,因此接受PCI或者是coronary artery bypass graft皆可。