Development of Intraspinal Canal Haematoma following Percutaneous Coronary Intervention for Non-ST elevated Myocardial infarction: A case report and literature review

R Nadarajah, S Connor, S Patel
Cardiology Department Queen Elizabeth Hospital, UK

Introduction: The authors present a rare case of a spontaneous intradural extramedullary spinal haematoma complicating percutaneous coronary intervention (PCI) for acute myocardial infarction (MI). We review potential aetiologies, pathological mechanisms and treatment options in this challenging subset of patients.

Case Report: A 65-year-old man was admitted with a non-ST-elevated Myocardial infarction (NSTEMI). Angiogram showed significant left anterior descending (LAD) and left circumflex (LCX) disease. After discussion the patient opted for staged PCI over CABG. After the second PCI to LAD he developed severe neuropathic pain down the lateral aspect of his right arm. Magnetic Resonance Imaging (MRI) of the cervical-spine showed an intraspinal canal haematoma at the levels C5/6 and C6/7 with some compression on the cord. He did not develop weakness so neurosurgeons opted for conservative management. Antiplatelets were continued as he had drug-eluting stents (DES) but heparin was held. A repeat scan suggested the lesion was reducing in size and the patient was discharged with analgesia and follow up.

Discussion: This is only the second case in the literature of a spontaneous intraspinal haematoma complicating PCI.(1) Anticoagulant therapy represents the second most common aetiology of intraspinal haematoma.(2) Possible pathological mechanisms include that sudden sharp increases in thoracic pressure elevate intravascular pressure in the spinal subdural space to the extent that it could overcome extravascular pressure and result in the tearing of spinal vessels.(3) If symptoms are stable case reports have shown that haematomas can resolve by stopping anticoagulant treatment.(4) However if neurological status is deteriorating, early neurosurgical intervention gives the best outcomes.(5)

Conclusion: Interventional cardiologists should bear this condition in mind if faced with neurological symptoms after antiplatelets, anticoagulants or PCI. This case also highlights the difficulty in striking the right balance between bleeding risk during treatment of NSTEMI and prevention of in-stent thrombosis.

Image:

Figure: Axial T2-weighted MRI C-Spine showing intraspinal haematoma at C5/6

Biography

Ramesh is a core medical trainee at the cardiology department at Queen Elizabeth Hospital Woolwich, London. This provides management for a broad range of cardiology diagnoses with a particular focus on interventional treatment for angina and acute coronary syndromes. The department is currently focusing on improving services by reducing the number of unnecessary normal coronary angiograms through intelligent application of the latest guidelines. My personal interest is how the use of invasive coronary angiography in the assessment of coronary artery disease might be curtailed by advances in CT coronary angiography.

ramesh.nadarajah@nhs.net