

Development of Intraspinal Canal Haematoma following Percutaneous Coronary Intervention for Non-ST elevated Myocardial infarction

Ramesh Nadarajah¹, Steven Connor², Sundip Patel¹

¹Cardiology Department, Queen Elizabeth Hospital Woolwich, London

²Neuroradiology Department, Kings College Hospital, London

Introduction

We present a rare case of a spontaneous intradural extramedullary spinal haematoma complicating PCI for NSTEMI.

Case Report

- A 65-year-old man was admitted with a NSTEMI.
- Angiogram showed significant left anterior descending (LAD) and left circumflex (LCX) disease. The patient opted for staged PCI over CABG.
- After PCI to LAD he developed neuropathic pain in a dermatomal distribution down the lateral aspect of his right arm (Figure 1).
- MRI c-spine showed an intraspinal canal haematoma at C5/6 and C6/7 with some compression on the cord (Figure 2).
- No weakness so neurosurgeons opted for conservative management.
- Antiplatelets were continued as he had drug-eluting stents, but heparin was held.
- A repeat scan suggested the lesion was reducing in size so the patient was discharged with analgesia and follow up.

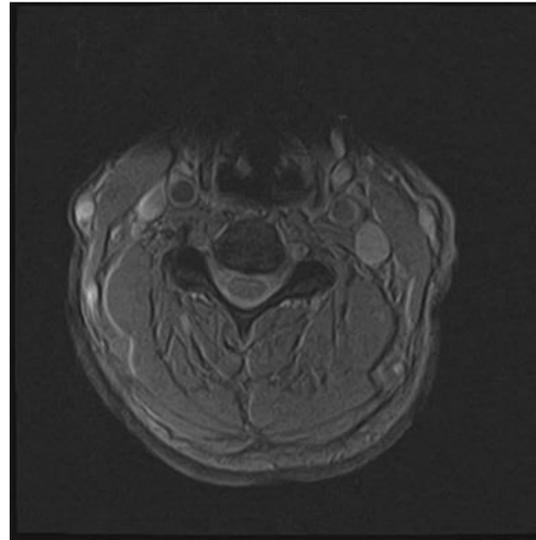


Figure 2: Axial T2-weighted MRI C-Spine showing intraspinal haematoma at C5/6

Discussion

- This is only the second case of a spontaneous intraspinal haematoma complicating PCI.(1)
- Anticoagulant therapy represents the second most common aetiology of intraspinal haematoma.(2)
- 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 cause tearing of spinal vessels.(3)
- If symptoms are stable case reports have shown that haematomas can resolve by stopping anticoagulant treatment.(4)
- 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 precarious balance between bleeding risk during treatment of NSTEMI and prevention of in-stent thrombosis.

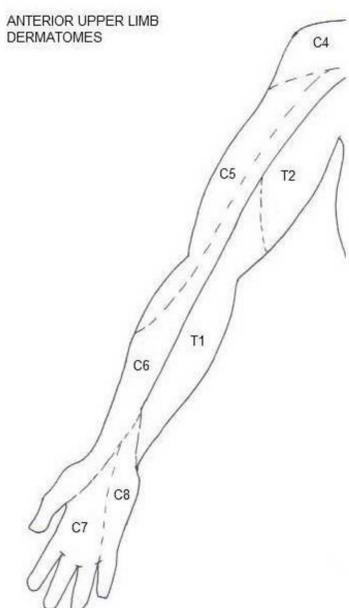


Figure 1: Pain on lateral aspect of upper limb fits with a lesion affecting C5/6

References

1. Yasuhara T, Miyoshi Y, Date I. Development of Cervical Subarachnoid Hematoma Following Coronary Artery Stenting for Angina Pectoris —Case Report—. *Neurol Med Chir.* 51(664).
2. Kreppel D, Antoniadis G, Seeling W. Spinal hematoma: a literature survey with meta-analysis of 613 patients. *Neurosurg Rev.* Springer-Verlag; 2003 Jan 1;26(1):1–49.
3. Park YJ, Kim SW, Ju C II, Wang HS. Spontaneous Resolution of Non-traumatic Cervical Spinal Subdural Hematoma Presenting Acute Hemiparesis: A Case Report. *Korean J Spine.* Korean Spinal Neurosurgery Society; 2012 Sep;9(3):257–60.
4. Subbiah M, Avadhani A, Shetty AP, Rajasekaran S. Acute spontaneous cervical epidural hematoma with neurological deficit after low-molecular-weight heparin therapy: role of conservative management. *Spine J.* 2010 Jul;10(7):e11-5.
5. Domenicucci M, Ramieri A, Ciappetta P, Delfini R. Nontraumatic acute spinal subdural hematoma: report of five cases and review of the literature. *J Neurosurg.* 1999 Jul;91(1 Suppl):65–73.