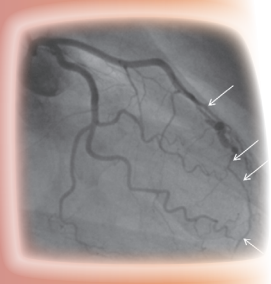
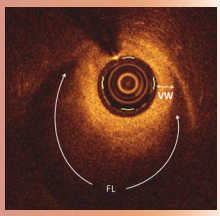


SPONTANEOUS CORONARY ARTERY DISSECTION (SCAD)



Where there is angiographic uncertainty diagnosis can be facilitated by intracoronary imaging with optical coherence tomography (OCT) or intravascular ultrasound (IVUS). Here there is an extensive false lumen (FL) which compresses the remaining vessel wall (VW) leaving a severely restricted true lumen (in this case little bigger than the OCT catheter)

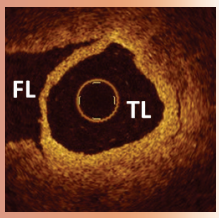
UK/EU research program

The SCAD UK and Europe research portal is an international collaboration of patients, doctors and scientists to undertake research into this condition. This is a transatlantic partnership to improve understanding of all aspects of SCAD between the UK and collaborators at the Mayo Clinic in the USA. The program was launched in response to direct requests from an international group of SCAD-survivors and patients continue to motivate and drive our research.

Some of the SCAD-survivors patient group with Dr R Gulati form the Mayo Clinic and Dr D Adlam from SCAD-UK/EU on a recent meeting in Leicester, UK

Research aims:

- To investigate the underlying pathophysiology of SCAD including potential molecular-genetic mechanisms and evidence of alterations in arterial physiology
- To investigate variations in current clinical (and procedural) management and any associations with outcome which might inform best practice
- To understand the epidemiology and long term outcomes of SCAD, including MACE, recurrent SCAD and the safety of pregnancy following SCAD
- Understanding the psychological impact and medical costs of SCAD in the UK and USA

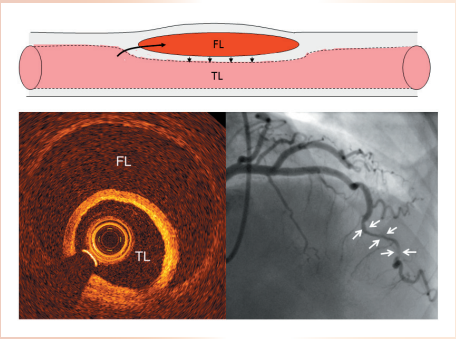


OCT image of more localised SCAD. False lumen (FL), true lumen (TL)

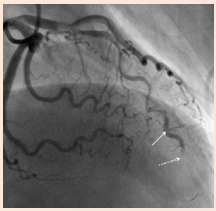
Non-Research aims:

- To provide, where requested, peer support and information for SCAD patients from the UK/EU SCAD survivors group
- To disseminate knowledge of SCAD among UK interventional cardiologists and trainees to enhance recognition of this condition

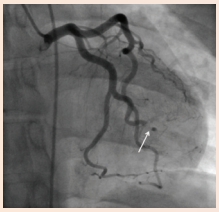
SPONTANEOUS CORONARY ARTERY DISSECTION (SCAD)



SCAD results from the sudden development of an intramural thrombus usually in the outer media. This 'false lumen' (FL) impinges on the 'true lumen' (TL) causing a restriction in coronary blood flow (arrows)



Angiographic diagnosis can be challenging. Sometimes a dissection flap or spiral false lumen can be clearly seen as in this case (sold arrow before occlusion point dotted arrow) but this is often not the case. Suspicion should be raised in young, particularly female patients and those without risk factors, presenting with acute coronary syndromes and especially in peripartum patients



Angiographic appearances of SCAD frequently do not demonstrate a clear flap or dissection plane such as in this young pregnant patient with no atherosclerotic risk factors and otherwise normal coronary arteries

If you or your colleagues are caring for a patient with SCAD, please encourage them to help our research by registering on the SCAD UK/EU portal.

http://scad.lcbru.le.ac.uk/

The study team are also happy to provide information and support for clinicians caring for SCAD patients. Contact -

da134@le.ac.uk

Recommended reading:

1. Tweet MS, Hayes SN, Pitta SR, Simari RD, Lerman A, Lennon RJ, Gersh BJ, Khambatta, S, Best PJ, Rihal CS, Gulati R. Clinical features, management, and prognosis of spontaneous coronary artery dissection. Circulation. 2012 Jul 31;126(5):579-88.
2. Adlam D, Cuculi F, Lim C, Banning A. Management of spontaneous coronary artery dissection in the primary Percutaneous coronary intervention era. J Invasive Cardiol. 2010 Nov;22(11):549-53.
3. Vanzetto G, Berger-Coz E, Barone-Rochette G, et al. Prevalence, therapeutic management and medium-term prognosis of spontaneous coronary artery dissection: results from a database of 11,605 patients. Eur J Cardiothorac Surg 2009;35:250-4.
4. Mortensen KH, Thuesen L, Kristensen IB, et al. Spontaneous coronary artery dissection: a Western Denmark Heart Registry Study. Catheter Cardiovasc Interv 2009;74:710-7.
5. Saw J, Ricci D, Starovoytov A, Fox R, Buller CE. Spontaneous coronary artery dissection: prevalence of predisposing conditions including fibromuscular dysplasia in a tertiary center cohort. JACC Cardiovasc Interv. 2013Jan;6(1):44-52.
6. Roth A, Elkayam U. Acute myocardial infarction associated with pregnancy. J Am Coll Cardiol. 2008 Jul 15;52(3):171-80.