Spontaneous coronary artery dissection: a complete resolution with medical treatment

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DESCRIPTION

A 28-year-old man, with no risk factors for coronary artery disease (CAD) and with a history of recent anabolic steroid use and intense anaerobic exercise, presented with chest pain, inferior T Wave changes and elevated troponin. A non-ST segment elevation myocardial infarction (NSTEMI) was diagnosed. Coronary angiography revealed spontaneous right coronary artery (RCA) dissection extending from proximal to distal (video 1 and figure 1).

The patient was managed medically with aspirin, clopidogrel and low molecular weight heparin. Repeat angiography after 1 week revealed almost complete resolution of the spontaneous RCA dissection (video 2 and figure 2).

Video 2 RCA coronary angiography after 1 week of medical therapy.

Video 1 RCA coronary angiography: RCA dissection with poor distal flow.

Spontaneous coronary artery dissection is an unusual cause of myocardial infarction in young patients with low risk of atherosclerotic CAD. Causes are unknown, but it has been associated with the postpartum period, renal fibromuscular dysplasia and connective tissue diseases.^{1 2} Management is difficult, however, medical treatment is reported to be effective but percutaneous coronary intervention is associated with poorer outcome.^{1 2} The potential problem during coronary bypass graft surgery is identifying and grafting the true lumen rather than the false lumen.

This case illustrates the success of conservative treatment in cases of spontaneous coronary artery dissection. It also draws attention to the use of

Figure 1 Right coronary artery dissection with double lumen appearance (arrow).

Figure 2 Image of right coronary artery after resolution.

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anabolic steroids and intense anabolic exercise as possible associations with spontaneous coronary artery dissection.

Learning points

- ▶ Consider coronary artery dissection in young patients with acute coronary syndrome.
- ▶ Medical management of coronary artery dissection is effective.
- ▶ Detailed history is important to elucidate risk factors for coronary artery disease.

Contributors ASA wrote the original manuscript and edited the final one, and treated the patient. HI edited the manuscript and participated in the management of the patient. TK is the principal physician in this patient treatment, and edited the manuscript.

Competing interests None.

Patient consent Obtained.

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