Dressler's Syndrome

Description
This is classically a post-myocardial infarction syndrome, usually occurring two to five weeks after the initial event but it can be delayed for as long as three months. See also the separate article on Complications of Acute Myocardial Infarction.

Dressler's syndrome was first described in 1956. It is characterised by pleuritic chest pain, low-grade fever and pericarditis (autopsy shows localised fibrinous pericarditis), which may be accompanied by pericardial effusion. It tends to follow a benign clinical course. It is thought to be immune-mediated (antiheart antibodies may be present). The reported incidence has been declining in recent years.\(^1\)

The term Dressler's syndrome is often applied to a similar condition of similar aetiology that occurs after cardiotomy for open heart surgery and even sometimes after blunt or penetrating trauma to the chest. Post-pericardiotomy syndrome has been observed after cardiac surgery, percutaneous intervention, pacemaker implantation, radiofrequency ablation and pulmonary vein isolation.\(^2,3,4\)

Epidemiology
The original paper by Dressler in 1956 suggested an incidence of 3-4% of all cases of acute myocardial infarction.\(^5\) It is now much rarer, probably due to modern methods of management of an acute myocardial infarction.\(^6\)

One reason may be that active intervention reduces the size of the infarct.\(^7\) Some have argued that the syndrome has not vanished but rather never really existed as a separate entity.

Risk factors
If a person has had a previous episode, it is more likely to recur. It seems more likely to occur after a large infarct.

Presentation
- It usually presents two to five weeks after the initial episode, with pain and fever that may suggest further infarction.
- The pain is the main symptom, often in the left shoulder, often pleuritic, and worse on lying down.
- There may be malaise, fever and dyspnoea.
- Rarely, it may cause cardiac tamponade or acute pneumonitis.
- A pericardial friction rub may be heard. The typical sound of pericarditis is described as like the sound of boots walking over fresh snow.

Differential diagnosis
The pain may initially suggest a further episode of angina or myocardial infarction. Pleuritic chest pain may also suggest pneumonia or pulmonary embolism.

Investigations
- FBC will show leukocytosis, sometimes with eosinophilia and an elevated ESR.
- Serology may show heart autoantibodies.
- ECG may show ST elevation in most leads without reciprocal ST depression, typical of pericardial effusion.
- Echocardiography shows pericardial effusion.
- MRI scan may show an effusion and, more recently, has been shown to reveal pericardial involvement.\(^8\)
- CXR shows pleural effusions in 83%, parenchymal opacities in 74%, and an enlarged cardiac silhouette in 49%.

Management
- Aspirin may be given in large doses.
- Other non-steroidal anti-inflammatory drugs (NSAIDs) or corticosteroids may be used, especially if there are severe and recurrent symptoms.
- Steroids are particularly valuable where severe symptoms have required pericardiocentesis, and when infection has been excluded.
- In resistant or recurrent cases, colchicine may be useful.
- If there is significant pericardial effusion then pericardiocentesis, involving aspiration of the fluid, may be required to relieve the constriction on the heart.

Complications
Pleuritic pain may be associated with pleurisy and pleural effusion. Significant pericardial effusion can cause cardiac tamponade. Inflammation can result in constrictive pericarditis.

Prognosis
It can follow a relapsing course but the outcome is usually favourable, depending on the nature and severity of co-existing heart disease.

Prevention
It is likely that modern techniques that involve the use of anti-inflammatory drugs such as aspirin have helped to reduce the incidence of this syndrome. Prophylactic use of steroids before cardiac surgery offers no benefit.

Further reading & references
- Guidelines on the diagnosis and management of pericardial diseases; European Society of Cardiology (2004)
- Pasotti M, Prati F, Arbusliti E; The pathology of myocardial infarction in the pre and post interventional era.; Heart. 2006 Apr 18;

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