Burden to individual

- Cardiologists can send patients home as their arteries look 'normal'
- Impaired quality of life
- Psychosocial morbidity
- Financial hardship
- Prognosis: Impaired survival (?)

Coronary Flow reserve

- Physiologically, Myocardial Blood Flow increases several-fold in response to an increased myocardial oxygen demand
- CFR is reduced due to stenosis
- In the absence of coronary stenoses, CFR reflects microvascular function
- Ischaemia - obstruction to blood flow in coronary tree

![Diagram of CFR: ratio of hyperaemic MBF to basal MBF]

*Functional is the most common

Disorganised muscle in vessel wall -->

Pathogenesis of Coronary Microvascular Dysfunction

**Structural**
- Lumenal obstruction by microemboli, amyloid or debris
- Remodelling of intramural arterioles (HCM, hypertension)
- Vessel rarefaction (Atherosclerosis, hypertension)

**Functional**
- Endothelial dysfunction
  - Inflammation (Conventional risk factors)
- Poor dilatory capacity
  - Vasoconstriction (microvascular spasm)