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CORONARY ARTERY BYPASS GRAFT

Surgery on a Beating Heart



MOHD ZAMRIN DIMON

UiTM **Professorial
Lecture**

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CHAPTER 1

INTRODUCTION

1.1 CORONARY ARTERY DISEASE

Coronary artery disease (CAD) continues to remain a major global health issue, standing as the leading cause of morbidity (disease) and mortality (death) since 800 BCE. Homer's *Odyssey* once described a significant number of deaths due to CAD demonstrated by sudden, nontraumatic death (John, 2012). Even in today's modern world, this condition remains the leading cause of death in both developed and developing countries, which is influenced by environmental factors, lifestyle, and genetic background (Malakar et al., 2019).

The main reason is atherosclerosis (hardening of the arteries), a condition in which cholesterol and fatty deposits build up inside the coronary arteries, resulting in decreased blood flow (Benjamin et al., 2019). Adam Hammer discovered these findings in 1876 when he made a significant breakthrough by describing the pathophysiology of CAD (Diodato & Chedrawy, 2014).

Picture a vibrant city where the streets and highways are the arteries that help commuters get to their destinations.

Now, imagine what might happen if that major highway was cut off. The city shudders to a halt; with traffic jams, people get stocked up and rattles in its pace. The city is your body, The highways are your