SNS COLLEGE OF PHARMACY AND HEALTH SCIENCE

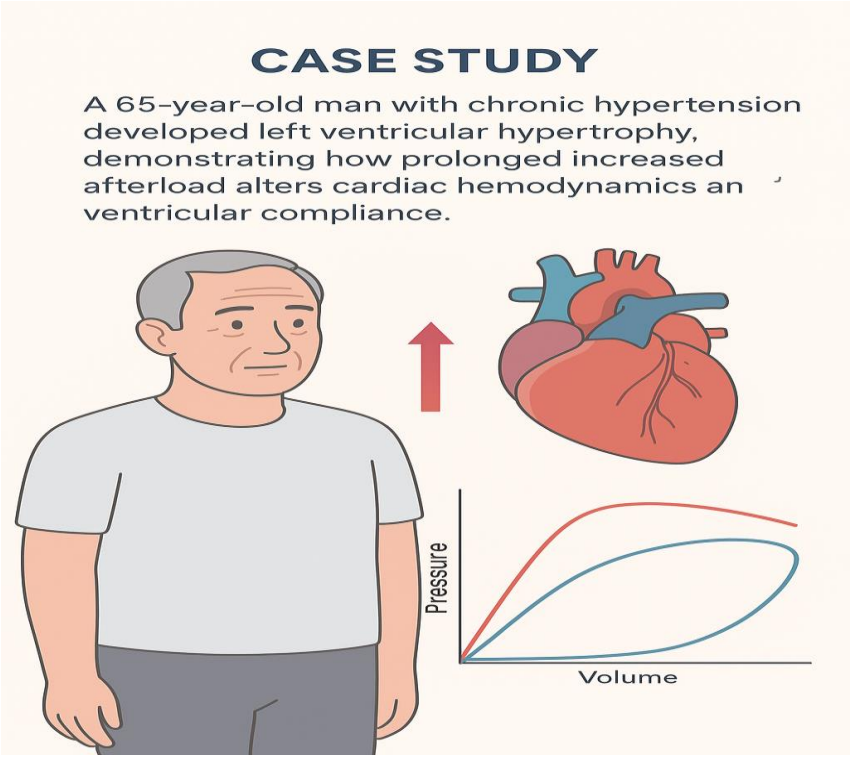
PHARMACOLOGY II **UNIT-1**

TOPIC:HEAMODYNAMICS AND ELECTRO PHYSIOLOGY

Case Study Puzzle Question:

CASE STUDY :1 Chronic Hypertension and Left Ventricular Hypertrophy

A 65-year-old man with chronic hypertension developed left ventricular hypertrophy, demonstrating how prolonged increased afterload alters cardiac hemodynamics and ventricular compliance.



Puzzle: Which chronic condition causes the left ventricle to thicken as it works against persistently elevated arterial pressure?

CASE STUDY :2 Cardiac Surgery and Mean Arterial Pressure Monitoring

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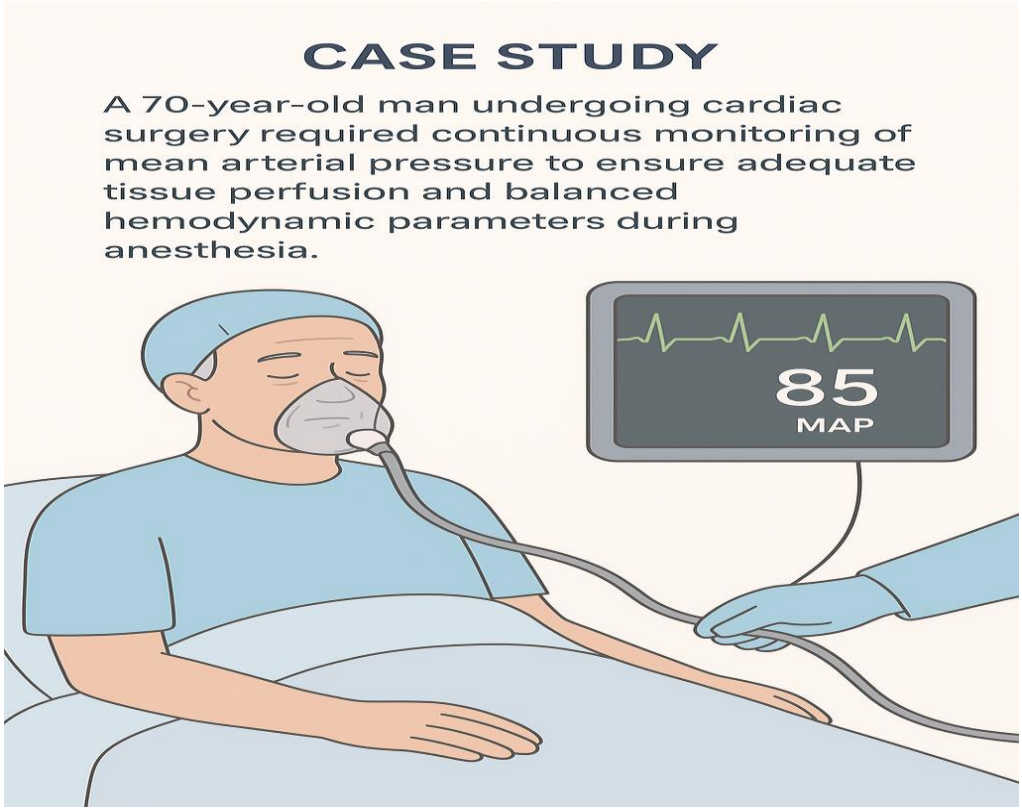
A 70-year-old man undergoing cardiac surgery required continuous monitoring of mean arterial pressure to ensure adequate tissue perfusion and balanced hemodynamic parameters during anesthesia



Puzzle: During anesthesia, which monitored value (often targeted around 65 mmHg) is used as a summary measure to ensure organ perfusion?

CASE STUDY :3 Internal Bleeding and Reduced Cardiac Output

A 28-year-old trauma victim with internal bleeding experienced reduced preload and cardiac output, emphasizing the importance of volume resuscitation in maintaining hemodynamic stability.

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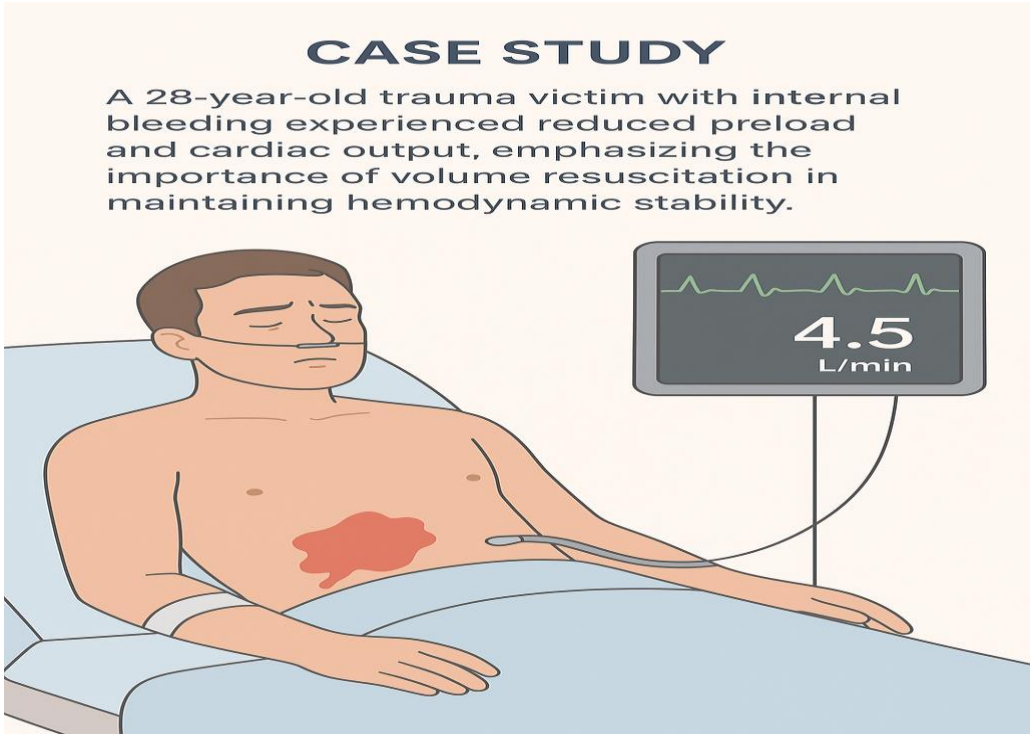

Puzzle: In a bleeding trauma patient, what hemodynamic change occurs first that directly lowers cardiac output?

CASE STUDY :4 Wolff-Parkinson-White Syndrome

A 28-year-old athlete presented with rapid heartbeats, and electrophysiological testing confirmed an accessory pathway causing pre-excitation, which was eliminated through catheter ablation, restoring normal rhythm.

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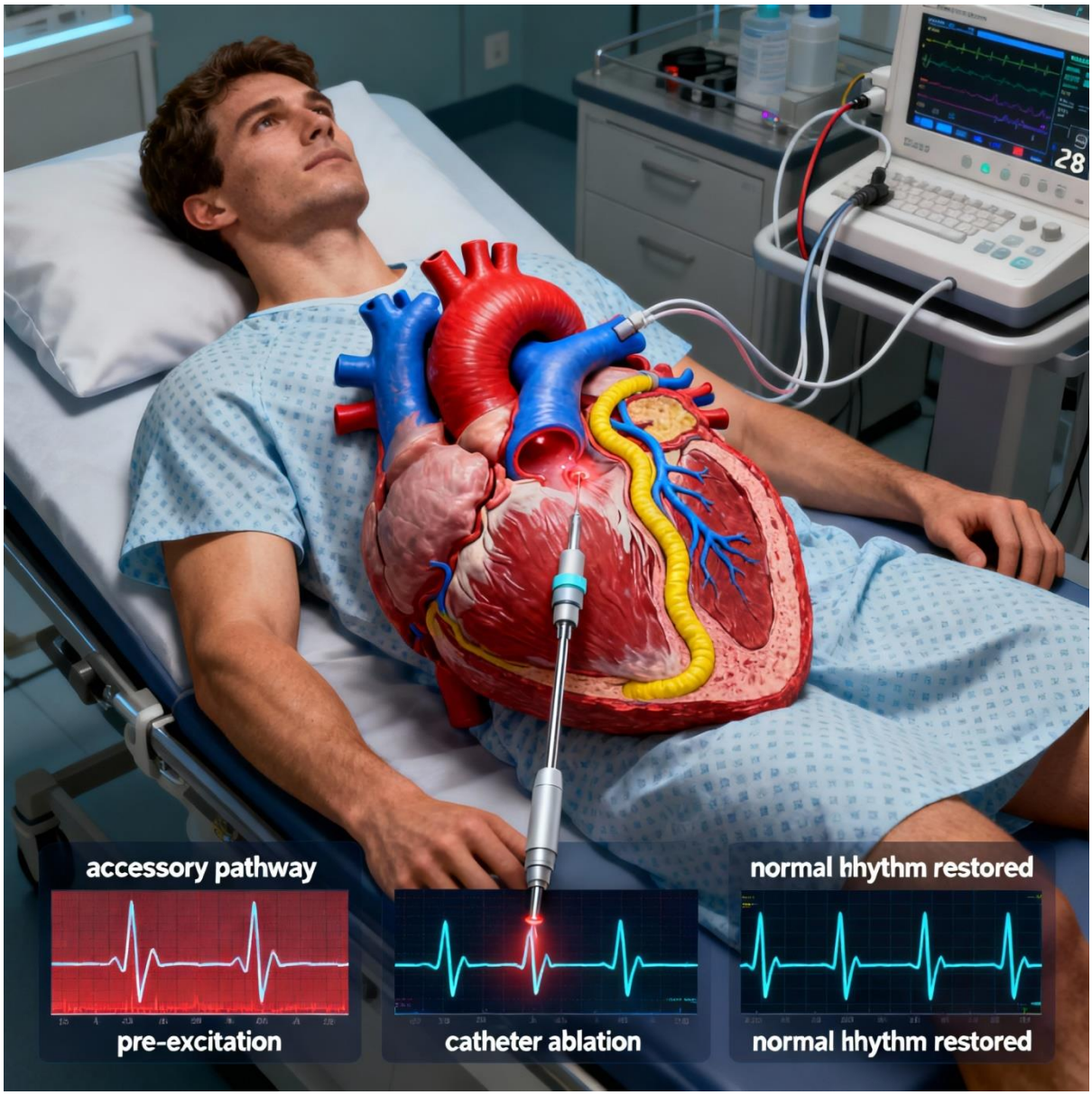

Puzzle: What curative procedure destroys the abnormal conduction tissue causing the arrhythmia

CASE STUDY :5 Atrial Fibrillation Mapping

A 65-year-old male with recurrent palpitations underwent electrophysiological mapping, revealing abnormal electrical circuitsin

the left atrium, and was successfully treated with radiofrequency ablation.

Puzzle: What targeted procedure destroys the abnormal circuits in the left atrium to stop the palpitations?

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