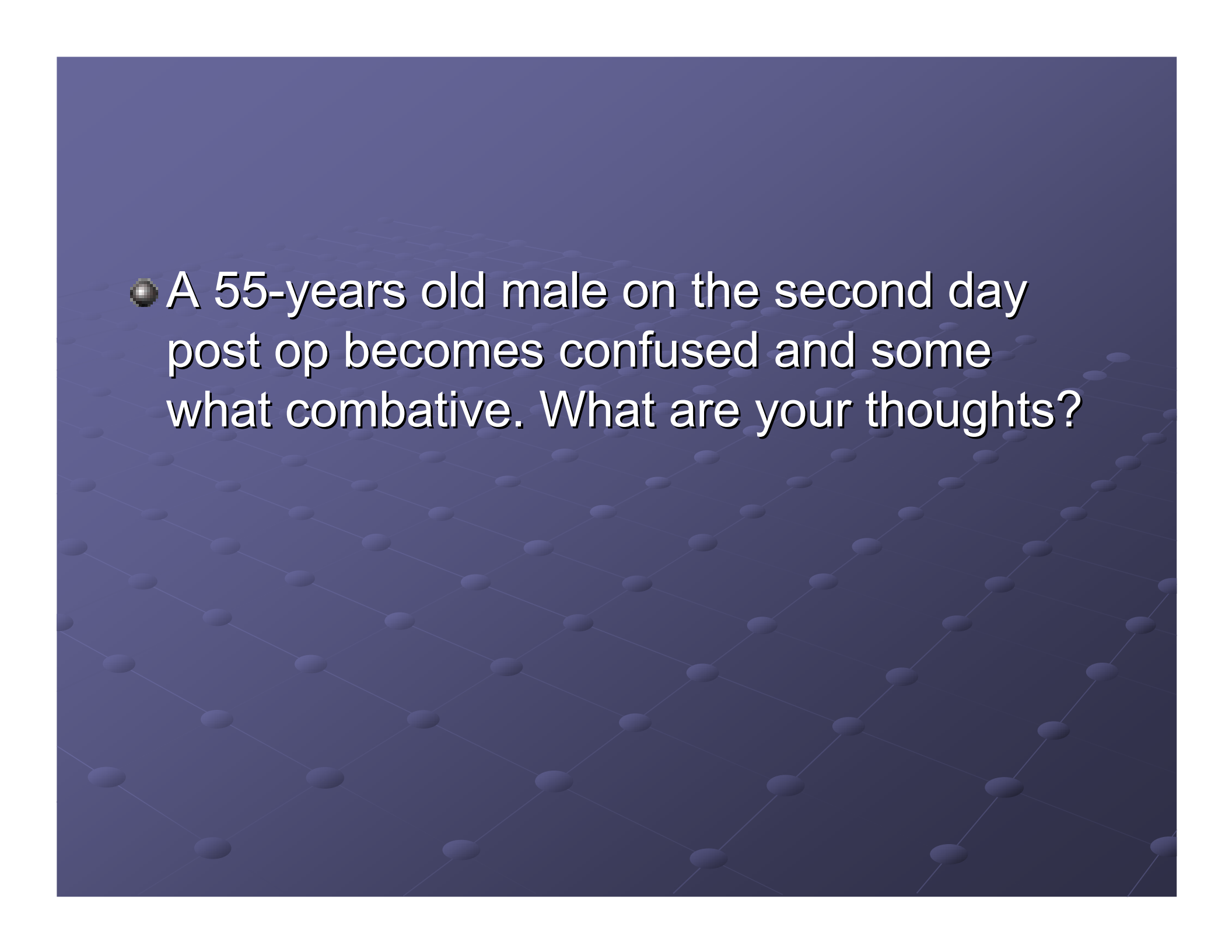


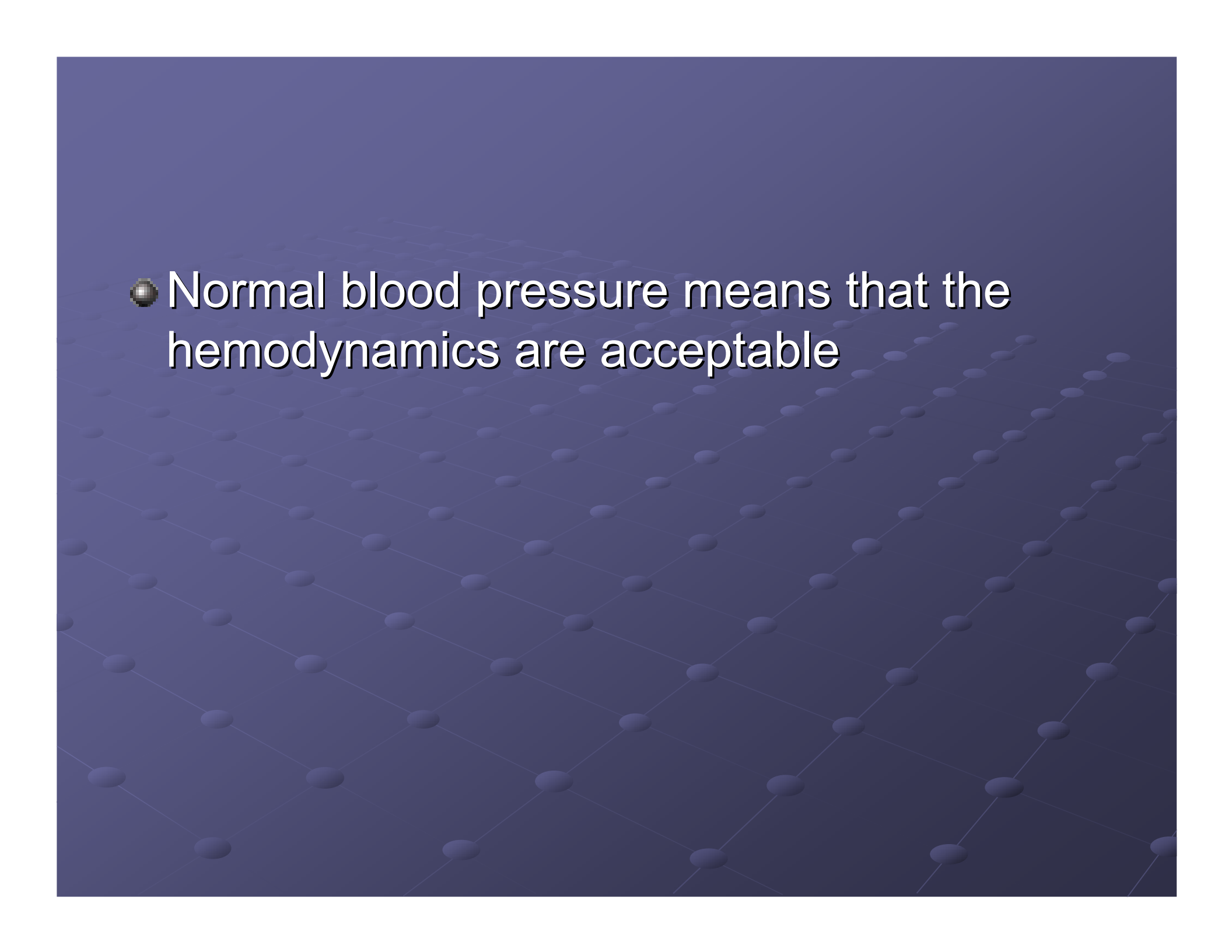
Preview of Cardiac Drugs in ICU Lecture

**Ahmed Alsaddique
Associate Professor of
Cardiac Surgery**

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- A 55-years old male on the second day post op becomes confused and somewhat combative. What are your thoughts?



● Assessment of patients before you decide to start inotropes. Where do you begin?



● Normal blood pressure means that the hemodynamics are acceptable

- Blood pressure alone is an inadequate guide, since it could be maintained within normal range, even when circulating blood volume is reduced by 20 to 30%.
- Normal blood pressure can also be maintained by vasoconstriction.

Parameters of stable hemodynamics include:

- A. Urine output of 0.5 to 1.0 ml/kg /hr
- B. Normal heart rate
- C. Adequate capillary filling
- D. Normal sensorium

The beta receptors

- Divided into beta-1 receptors found in the heart muscle
- Beta-2 receptors found in the bronchial and vascular smooth muscles
- There is also a sizable population of beta-2 receptors in the myocardium

Bisoprolol (Concor)

- It is indicated in the management of mild to moderate hypertension and angina pectoris.
- 5 mg should be taken once a day in the morning, either on an empty stomach or with breakfast.

Actions

- Is a commonly used drug
- Decreases heart rate especially in AF
- Positive inotropic effect
- It has a narrow therapeutic – toxic margin

Calcium

- Calcium chloride (CaCl_2) increases mean arterial blood pressure
- No effect on the cardiac index.

Calcium

- Small doses of CaCl_2 may be useful to increase the systemic vascular resistance (SVR)
- To treat hypocalcemia
- To treat calcium channel overdose,
- It is not recommended as an inotrope.

Review

- A drug that has the same dose both intravenously and orally

Review

- An ionotrope that causes bradycardia

Review

- An drug that increases blood pressure but does not raise cardiac index.
- What is cardiac index?

- **In a mechanically ventilated patient with an PaO₂ of 95% appropriate treatment of decreasing mixed venous oxygen saturation (SV_{O₂})**

Measures to increase SV_{O_2}

- A- Albumin infusion
- B- Blood transfusion
- C- Decreased the respiratory rate
- D- Decreasing the tidal volume
- E- Increasing the inspired oxygen concentration

Mixed venous Saturation SV_{O_2}

- Treatment of decreasing mixed venous oxygen saturation must focus on:
 - A- increasing venous return
 - B- & or decreasing airway pressure
- In the absence of hypoxia increasing inspired oxygen concentration will not significantly increase the SV_{O_2}