

**SNS COLLEGE OF ALLIED HEALTH SCIENCES COIMBATORE –35**  
**(Affiliated to the Tamil Nadu Dr M.G.R Medical University, Chennai)**  
**B.Sc.,CARDIOPULMONARY PERFUSION CARE TECHNOLOGY**

**1411 – PHARMACOLOGY**

**II YEAR**

**CASE STUDY BASED : ANTIHYPERTENSIVE DRUG PUZZLES**

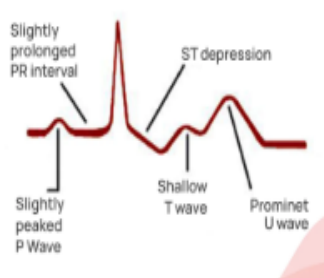
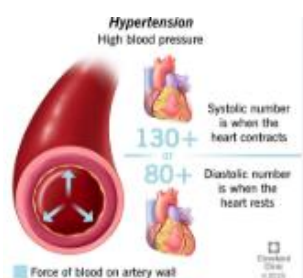
**SCENARIO : RESISTANT HYPERTENSION AND HYPOKALEMIA**

**THE PATIENT:** Mr. Davies, a 70-year-old male with resistant hypertension (BP 145/90 mmHg) despite being on three different antihypertensives at maximally tolerated doses (Lisinopril, Amlodipine, and Hydrochlorothiazide).

**LABS:** Hypokalemia (Potassium 3.2 mEq/L, normal range ~3.5–5.0).

**GOAL:** Add a fourth agent to achieve BP control and address the electrolyte imbalance.

**THE RIDDLE:** Which drug class is the most appropriate fourth-line agent for Mr. Davies, considering his resistant hypertension *and* hypokalemia?



**OPTIONS:**

- **A:** Loop Diuretic (e.g., Furosemide)
- **B:** Direct Renin Inhibitor (e.g., Aliskiren)
- **C:** Centrally Acting Agent (e.g., Clonidine)
- **D:** Mineralocorticoid Receptor Antagonist (MRA) (e.g., Spironolactone)

**EVALUATION & JUSTIFICATION(RUBRICS) :**

| <b>Criterion</b>                    | <b>Marks (out of 10)</b> |
|-------------------------------------|--------------------------|
| <b>Accuracy</b>                     | 4                        |
| <b>Logical Reasoning / Applying</b> | 3                        |
| <b>Conceptual Understanding</b>     | 2                        |
| <b>Presentation</b>                 | 1                        |
| <b>Total Marks</b>                  | <b>10 Marks</b>          |