

UNIVERSITY OF ESWATINI
FACULTY OF HEALTH SCIENCES
FINAL EXAMINATION DECEMBER 2019
TITLE OF COURSE: HAEMODIALYSIS THERAPY
COURSE CODE: GNS 475

TIME: 2 HOURS

PAGES: 3

MARKS: 75

INSTRUCTIONS:

1. MAKE SURE THAT YOU ARE WRITING THE EXAM FOR THE COURSE IN WHICH YOU ARE ENROLLED.
2. ANSWER ALL THREE (3) QUESTIONS, EACH QUESTION HAS 25 MARKS.
3. START EACH QUESTION ON A NEW PAGE.
4. WRITE LEGIBLY.

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QUESTION 1

Mr P is a 49-year-old married man, insulin dependent diabetes mellitus patient. He presents with diabetic nephropathy resulting in renal failure. He also presents with mild peripheral vascular disease and no overt cardiovascular disease. He is due for haemodialysis.

Data:

- Medication: Tritace (ACE inhibitor)
Norvasc (Ca-Channel blocker)
One Alpha
Titalac
Eprex 2000 iu twice per week
- Hypocalcaemia
- Hyperphosphatemia
- Elevated alkaline phosphate
- Elevated parathyroid hormone
- Hypertension.

1.1 Describe the process of diabetic nephropathy related to the pathophysiological changes resulting in ESRD? (10)

1.2 Explain the significance of an ACE inhibitor as part of the management of Mr P's diabetes. (5)

1.3 What could be possible reasons for diminished response to Eprex? (5)

1.4 Give a physiological description of the causes of Mr P's calcium and phosphate imbalances. (5)

TOTAL = 25 MARKS

QUESTION 2

Mrs. Dlamini is a 45-year-old obese lady in her second trimester of pregnancy. She is brought to your clinic with a severe headache and reduced level of consciousness. She has marked leg oedema and her BP is 158/100 mmHg

- 4.1 What is your approach to her management? Include at least 3 differential diagnoses (10)
- 4.2 Discuss the pathophysiology of pre-eclampsia. (10)
- 4.3 What is your management plan for the future preservation of her kidney function? (5)

TOTAL 25 = MARKS

QUESTION 3

Thabo is brought to Casualty after being assaulted by an unidentified gang of criminals. On examination he has extensive bruising and swollen muscles. His BP is 90/60mmHg and his heart rate is 124 beats per minute.

The attending doctor gives him an injection of diclofenac and admits him for pain control.

The following morning you notice that his urine output over the last 24 hours is only 5ml and is dark.

- 5.1 Discuss possible causes of acute kidney injury in Thabo (5)
- 5.2 Describe the pathophysiology of rhabdomyolysis. Include its effects on the kidneys (15)
- 5.3 Discuss the pathophysiology of non-steroidal drug induced acute kidney injury (5)

TOTAL 25 = MARKS