

UNIVERSITY OF ESWATINI
FACULTY OF HEALTH SCIENCES

TITLE OF COURSE: PERITONEAL DIALYSIS

COURSE CODE: GNS 470

AUGUST FINAL EXAMINATION 2020

TIME ALLOWED: 2 HOURS

PAGES: 5 (including cover page)

MARKS: 75

INSTRUCTIONS:

1. ASSURE THAT YOU ARE WRITING THE EXAM FOR THE COURSE IN WHICH YOU ARE REGISTERED.
2. ANSWER ALL THREE (3) QUESTIONS.
3. EACH QUESTION CARRIES 25 MARKS.
4. START EACH QUESTION ON A NEW PAGE.
5. WRITE LEGIBLY.

**THIS PAPER IS NOT TO BE OPENED UNTIL THE INVIGILATOR
HAS GRANTED PERMISSION**

QUESTION 1

Mr. P lives with his sister in a 3-bedroom house on a small holding, 100km outside of town. He owns 3 dogs and a cat which sleeps in the bed with him. His hobby is breeding parrots. He is self-sufficient but cannot drive.

Mr P was diagnosed with chronic kidney failure; he was being followed at the Renal Clinic, got sick and was admitted to the male medical ward. The doctor decided to start him on dialysis. Mr. P opted for peritoneal dialysis (PD). A tenckhoff catheter was placed successfully and Mr. P was discharged, he coped well during the break in period. It is now six (6) weeks later and Mr. P comes to the Renal Clinic for a follow-up visit.

His follow up regime:

06:00 - 1.5% 1L

12:00 - 1.5% 1L

18:00 - 4.25% 1L

20:00 - 4.25% 1L

22:00 - drain out to sleep dry

His peritoneal membrane characteristics: Low Transporter membrane

Findings:

Weight 70kg (dry weight 64 kg)

Residual renal output: 800ml/d

Urea: 24mmol/l

Creatinine: 1055mmol/l (was 810mmol/l)

Potassium 7.5mmol/l

Calcium: 1.95 mmol/l

Phosphates: 2.58 mmol/l

Albumin: 22g/l

Hb : 6.8g/dl

Leg oedema

Osvaren before meals

1.1 Explain the purpose of the break-in period. (5)

1.2 What are the characteristics of Mr. P's membrane? (1)

1.3 Taking the patient membrane type into consideration, how would you adjust Mr. P's dialysis regime? Give rationale. (4)

1.4 What aspects would the multidisciplinary team look at to determine if a patient would be a suitable candidate for peritoneal dialysis (PD)? Assess Mr. P's suitability for PD, give rationale. (8)

1.5 Describe the following complications of PD with regard to possible cause, manifestations, and management:

1.5.1 Peritonitis. (5)

1.5.2 Back pain. (2)

TOTAL = 25 MARKS

QUESTION 2

You have a new female 25-year-old patient referred for PD by the Physician at Good Shepherd Hospital because the patient has no means of traveling to the Mbabane Government Hospital for haemodialysis.

Her symptoms include nausea and vomiting, anorexia, pruritis and fatigue. She passes about 500ml of urine daily and is normotensive.

She has recently been married with a man who has grade 5 educational level. She lives in a one-room house with her husband. They have no running water in the house but have access to a community bore hole. She has no formal employment but does subsistence farming.

The cause of her chronic kidney disease is chronic obstructive nephropathy from bilharzia.

2.1 Describe how you would explain to her in simple terms the reason why she needs dialysis as well as how peritoneal dialysis works. (7.5)

2.2 Describe how you would train her on the following given her resource limitations

A. Water preparation

B. Hand washing and room preparation for PD

C. Steps in performing peritoneal dialysis

D. Monitoring of PD fluid drained

E. Safe disposal of PF effluent (10)

2.3 Her husband is concerned that she may not be able to have children because of the peritoneal dialysis and kidney disease.

Describe how you would counsel them regarding this concern, as well as precautions you would advise them to take as a couple. (7.5)

TOTAL = 25 MARKS

QUESTION 3

The Ministry of Health has requested your advice as a Nephrology Nurse on the drafting of a Standard Operating Procedure for Peritoneal Dialysis in Eswatini, as part of the national plan to decentralise Dialysis services.

3.1 Your task is to prepare documentation on the minimum requirements of a safe, and effective PD programme in the 4 regions of Eswatini. Outline 10 key aspects that you would include in your draft. (10)

3.2 Your next task is to describe the essential medication list for patients on peritoneal dialysis. Outline the key medications under each system of the body (e.g. cardiovascular, renal etc) and explain the indication for it. (10)

3.3 Your next task is to organise training for medical practitioners on Peritoneal Dialysis. Describe the equipment you would require for effective training and qualify your reasons. (5)

TOTAL = 25 MARKS