CNA Nephrology Exam Prep workshop

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Overview

- CNA background
- How to study
- Multiple choice exams
- Certification exam
- Practice exam
- CNA Video
Definition of Certification

Certification is the voluntary and periodic process by which an organized professional body (CNA) confirms that a registered nurse has demonstrated competence in a nursing specialty by having met pre-determined standardized criteria of that specialty.
CNA Certification Program overview

- Only national certification program for nurses in Canada
- CNA is responsible for the overall management
- Voluntary, national nursing specialty credential
- Opportunity for RNs to demonstrate competence in a nursing specialty at a national level
CNA Certification Program

- 1st CNA Certification Program exam – Neuroscience nursing in 1991
- Nephrology Nursing Certification exam available since 1993
  - Nephrology stats
    - 2002 – 828
    - 2003 – 877
    - 2004 – 921
    - 2005 – 963
    - 2006 – 1019
    - 2007 – 1052
    - 2008 – 1080

More than 15,200 RNs have valid certification in 17 specialties
## Province/Territory 2008

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* Information suppressed to protect privacy (one to four records)
CNA Certification Program

- In 2008 - 18 bilingual nursing specialty exams
- NEW - Medical-Surgical Nursing - 2010
- Exam offered annually
- Approx 2,000 nurses write exams each administration
- Approx. 80 writing centres, all provinces/territories
- Current administration method – paper-and-pencil
- Offered in French or English
Development of the exam

- Requires many subject matter experts from across Canada (e.g., nephrology nurses)
- National standards for the practice area - foundation for competencies
- Subject matter experts write items
- Each exam question is based on a competency
- Psychometric experts ensure reliability and validity of the exam items
- Final exam approval by certification specialty exam committee
- Translation of English exam into French (translation experts)
- Translation committee ensures accuracy of translation

Exam administration
Eligibility

- Current registration license in Canada as a registered nurse
- Letter of endorsement from supervisor or consultant in the specialty
- Meet experience and education requirements
- Completion of General Application Form, submission of applicable documents and appropriate fees

- CNA Certification Program and Application guide
  - 1 800 450-5206
  - Email: certification@cna-aiic.ca
  - Website: www.cna-aiic.ca, New in 2008 on-line application available (as of Sept/08)
CNA certified nurses can use designation after their name, e.g.,

Florence Nightingale, RN BScN CNeph(C)
Jeanne Mance, Inf., B. Sc. Inf., CNéph(C)
Certification Renewal

- Renewal every 5 years to maintain CNA credential
- Nurses can choose between writing the exam or submitting a record of continuous learning activities earned during the 5-year term
- 100 CL hours required and there are guidelines to assist candidates
- Certification renewal supports the concept of continuing competence
Continuing Competence

Enhancing continuing competence through life-long learning is essential to professional nursing practice… (CNA Joint Position Statement, 2004)

Individual nurses are responsible for demonstrating commitment to continuing competence through life-long learning, reflective practice and integrating learning into nursing practice. (CNA Joint Position Statement, 2004)
Continuing Competence

Continuous learning requires nurses to reflect on their competencies in relation to the changes occurring in society and the health care environment and, as a result of that reflection, **take action** to acquire and develop new competencies. (CNA Joint Position Statement, 2004)
Studying resources to consider

- Online preparation guide – available to all eligible candidates (exam blueprint, specialty competencies, bibliography, sample questions) – **Not** a core-curriculum
- Reference books - CNA bibliography good starting point
- Online practice test (once eligibility established, link given to candidate)
- Mentors list - on website
- Study group list and study group manual available on CNA web-site (Register your study group with CNA)
- Exam blueprint, list of competencies and bibliography available to ALL nurses on CNA web-site
How to study

- Do prep study guide first before studying (use pencil)
- Alone vs Group
  - Begin and end each session with quick review
  - Review notes and text- flash cards, create questions
  - Ask questions (multidisciplinary team)
- Develop a timeline
- What concept competencies are you unfamiliar with (Tx, Peds, PD, hemo)
- Lectures (after lecture study material and review notes)
- Relate knowledge to your own practice
- Other resources
  - Videos, Texts, Buddy with RN
Preparing for multiple choice exams

- Start early – long term memory
- Understand new vocabulary and key definitions
- Brainstorm possible questions
- Practice sample questions
- Refer to CNA certification specialty competencies on a regular basis
Example
CNeph(C) Study Group Agenda

Jan 2 – Presentation – Chronic Kidney Disease
Jan 9 – Patient Assessment Relating to Renal Failure
Jan 16 – Presentation – Anemia
Jan 23 – Acute Renal Failure/Dialysis Adequacy
Jan 30 – Chronic Renal Failure
Feb 6 – Complications of Hemodialysis
Feb 13 – Presentation – Cardiac
Feb 20 – Transplantation
Feb 27 – Transplantation
Mar 6 – Presentation – Bone and Mineral Metabolism
Mar 13 – Peritoneal Dialysis
Mar 20 – Vascular Access
Mar 27 – Pediatrics
April 2 – Pharmacology
April 10 – Wrap up

Thanks to April O’Brien and Katie Nikl
Multiple choice exams

- Cover broader range of content
- Test different levels of thinking
- Variety of realistic and practical situations
- Easier to score

- Approximately 165 – 170 questions
- Stem then four possible answers
Day of the exam

- Eat breakfast
- Allow enough time to get to the location
- Take supplies (snack, water, pencils, erasers)
- Bring identification
- Go to the bathroom
Strategies for taking exams

- Positive thinking
- Listen to announcements
- Read instructions
- Complete all forms accurately
- Budget your time 3.5hrs (210min)/165questions = 1.30 min
- Know the question format
- Read each question carefully
- Choose and record the correct answer
Helpful hints

- Cover up answers before you read the stem
- Anticipate the answer before looking at options
- If you see your anticipated response circle it but read the other responses to be sure one isn’t better. Eliminate all obvious wrong response
- Erase all accidental marks on the score card
- Take time to check your work before handing it in
- If your response isn’t there try to eliminate responses that may be wrong
- Cross out answers that are wrong
Helpful Hints

- If you can’t answer a question in a minute or less note the question but move on come back to it later.
- Transfer all responses to the answer sheet at the same time. Decrease risk of making silly errors
- Common practice (NOT unit specific)
- Guidelines
  - KDOQI
  - Canadian Society of Nephrology, (CSN)
  - Current material within the last 5 years

Not
- Trial practices
- Experimental drugs
Strategies to eliminate possible wrong answers

- Responses that use absolutes are less likely to be correct
- Funny responses are usually wrong
- All of the above is usually correct if you can verify that more than one response is probably correct (NONE on exam) – all the above, a&b, c& d etc are NOT on exam, always stem and 4 possible answers.
- Look for grammatical clues. If the stem ends in “an” the responses probably starts with a vowel.
Strategies to eliminate possible wrong answers

- The longest response is often the correct response (usually loaded with qualifying adjectives and phrases)
- For number answers eliminate the extremes consider the middle ranges
- Echo options if two responses are the opposite to each other chances are one is correct
- CNA has done an excellent job eliminating these cues
Guessing

- Always guess if there is no penalty. (no penalty on CNA exams – so better to guess and answer the question, than to leave blank – 0 mark for unanswered questions)
- Don’t guess if your penalized.
- Use hints from questions you know to answer questions you don’t know.
- Eliminate wrong answers before having to guess.
- Change your answer only when you’re sure the correction is correct. (very important)
Common test-taking errors

- Missed important information in the question
- Misreading the question
- Did not read the entire responses
- Failed to identify key words
- Did not relate question to information in the case study
- Made assumptions (very important)
- Focused on insignificant details and missed key issues
- Selected more than one answer
- Filled in the wrong oval on computer response sheet
Types of questions

- Knowledge
- Application
- Critical thinking
Knowledge

- Tests your cognitive ability to recall learned material and to understand its meaning
- Identify effects of drugs
- Select correct facts, concepts, principles or procedures
- 15 – 25 % of questions
Knowledge Example

- In cardiopulmonary resuscitation which of the following actions should the nurse take first?
In cardiopulmonary resuscitation which of the following actions should the nurse take first?

1. Assess the carotid pulse
2. Verify that the patient is unresponsive.
3. Place the patient on a hard, firm surface
4. Implement the head-tilt, chin lift maneuver.
Knowledge Answer

In cardiopulmonary resuscitation which of the following actions should the nurse take first?

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4. Implement the head-tilt, chin lift maneuver.
Application

- Tests your ability to apply knowledge in providing patient care
- Apply rules, methods and theories
- Identify consequences
- 50 – 60 % of questions
Application Example

- Jamie is a 10 year old boy who received a deep laceration to his scalp when he fell off a play structure. The nurse assesses that Jamie's injury will require suturing by the physician. Which one of the following interventions should be taken by the nurse to promote tissue integrity?
Application Example

Jamie is a 10 year old boy who received a deep laceration to his scalp when he fell off a play structure. The nurse assesses that Jamie's injury will require suturing by the physician. Which one of the following interventions should be taken by the nurse to promote tissue integrity?

1. Allow the laceration to remain open to the air until the suturing can be completed.
2. After cleansing the injury, apply a sterile dressing until the suturing can be completed.
3. Observe the site for 24 hours to assess the extent of injury before preparation for suturing.
4. Leave the original pressure dressing in place for at least three hours to prevent hemorrhage.
Application Answer

Jamie is a 10 year old boy who received a deep laceration to his scalp when he fell off a play structure. The nurse assesses that Jamie's injury will require suturing by the physician. Which one of the following interventions should be taken by the nurse to promote tissue integrity?

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Critical Thinking

- Test your ability to interpret data
- Deal with abstracts
- Evaluate options
- Problem solve
- 20–30% of questions
Critical thinking example

Mrs. Carson, 70 years old, is recovering from day surgery. She has been tolerating oral fluids. At 1600 hours, the nurse goes into Mrs. Carson’s room to discontinue her IV and observes her vomiting. Which of the following interventions is the most appropriate initial action for the nurse to take?
Mrs. Carson, 70 years old, is recovering from day surgery. She has been tolerating oral fluids. At 1600 hours, the nurse goes into Mrs. Carson’s room to discontinue her IV and observes her vomiting. Which of the following interventions is the most appropriate initial action for the nurse to take?

1. Administer an antiemetic and discontinue the IV.
2. Maintain the IV infusion and prepare for possible admission.
3. Continue with discharge plans and make a home care referral.
4. Notify Mrs. Carson’s family that there have been complications.
Mrs. Carson, 70 years old, is recovering from day surgery. She has been tolerating oral fluids. At 1600 hours, the nurse goes into Mrs. Carson’s room to discontinue her IV and observes her vomiting. Which of the following interventions is the most appropriate initial action for the nurse to take?

1. Administer an antiemetic and discontinue the IV.
2. Maintain the IV infusion and prepare for possible admission.
3. Continue with discharge plans and make a home care referral.
4. Notify Mrs. Carson’s family that there have been complications.
Categories

- Renal anatomy and physiology (10 questions)
- Patient assessment relating to renal function (10 questions)
- Renal disorders (30 questions)
- Renal insufficiency (14 questions)
- Renal replacement therapies (77 questions)
- Nursing management of the Palliative Care patient (6 questions)
- Nursing management of the pediatric patient (6 questions)
- Pharmacology (25 questions)
- Alternative therapies (3 questions)
Competencies

- Review list of competencies for nephrology nursing CNA web site, exam prep guide

Examples

I. Renal Anatomy and Physiology
   1.1 The nephrology nurse identifies normal renal anatomy including structure and characteristics of the a) kidney, b) urinary tract, c) renal vasculature.

II. Renal disorders
   3.12 The nephrology nurse identifies the stages, describes the clinical course, implements and evaluates a plan of care in collaboration with the patient in acute renal failure: a) initiating, b) oliguric, c) diuretic or d) recovery stage.

V. Renal Replacement Therapies
   Nursing management of the hemodialysis patient.
   5.22 Describes the principles of hemodialysis
Competencies

V. Nursing management of the transplant client
   5.44c The nephrology nurse collects and reviews data on the potential cadaveric renal donor with respect to diagnostic tests

VII. Nursing Management of the Pediatric Client
   7.4 The nephrology nurse describes the impact of renal failure in children (e.g., nutrition, anemia, activity, socialization, medication, bone density, etc.)

IX. Adjunctive and Complementary Therapies
   9.1 The nephrology nurse is aware of the existence of alternative therapies and medications (e.g., acupuncture, homeopathy, herbal therapy, etc.)
What do I study?

- Do practice questions
  - Where are you struggling?
  - Where are your gaps in knowledge?
  - What are you unfamiliar with?
  - What areas of nephrology are you unfamiliar with?
Practice exam

- 25 questions
- 40 minutes
- Review answers

Case 1

- Mr. Smith, 34 years old, presents to the nephrology outpatient clinic. Mr. Smith informs the nephrology nurse that he had an arteriovenous fistula created in his left forearm 10 days ago.

- Questions 1 to 5 refer to this case.
Question 1

What approach should be considered as conservative management therapy for Mr. Smith?

1. Implement an unrestricted fluid intake.
2. Review his dietary potassium intake.
3. Initiate twice weekly hemodialysis treatments.
4. Implement an unrestricted protein intake.
Question 1
(Knowledge)

1. Conservative management includes fluid restriction to avoid fluid buildup.
2. Restricted potassium in the diet is considered part of normal conservative management.
3. Not conservative treatment, considered active treatment
4. Low protein intake has been proven to slow down the progression of renal failure.
Question 2

What finding is most important for the nephrology nurse to document about the initial assessment of Mr. Smith’s access condition?

1. Patency of access
2. Estimation of the blood flow through the fistula.
3. Access recirculation test results
4. The progression of his fistula arm exercise program.
**Question 2**

*(Application)*

1. Assessment of the bruit and thrill is essential for access assessment.
2. Can only be done via invasive techniques.
3. Would only be done once hemodialysis has been initiated.
4. Fistula arm exercising may not have started yet. Fistula is only 10 days old. Usually starts when sutures are removed (10-14 days).
Question 3

What assessment findings support a nursing diagnosis of infection related to fistula creation?

1. Absence of bruit.
2. Redness at the suture line.
3. Swollen fistula arm.
4. Numbness in the hand of the fistula arm.
Question 3

(Application)

1. Not indicative of infection; fistula may be clotted but not infected.
2. One of the cardinal manifestations of any infection.
3. Can normally occur postoperatively for access creations or insertions, but not indicative that infection is present.
4. Not indicative of an infection, but could indicate circulatory problems.
Question 4

Mr. Smith’s serum creatinine has increased significantly. A decision was made, in collaboration with the nephrologist, to begin hemodialysis within a month. What should the nephrology nurse do?

1. Discuss the long-term complications of kidney disease with Mr. Smith.
2. Reinforce the basic principles of hemodialysis with Mr. Smith.
3. Review the basic anatomy of the kidney with Mr. Smith.
4. Review the pathophysiology of bone disease with Mr. Smith.
Question 4

(Application)

1. Decision has been made for hemodialysis: this sort of discussion not appropriate at this time.

2. Good starting point for education related to hemodialysis.

3. Not a priority at this time. Could be covered later if the patient wants this information.

4. Should be addressed after the patient is comfortable with basics of hemodialysis.
Mr. Smith asks the nephrology nurse if the changes he has recently made in his diet have an impact on the progression of his renal failure. What serum blood level should the nephrology nurse analyze before discussing Mr. Smith’s diet?

1. Sodium
2. Urea
3. Magnesium
4. Aluminum
Question 5
(Application)

1. Sodium is more an indication of fluid balance.
2. Urea is the waste product of protein breakdown and a good indicator of how well the patient is controlling the protein in his diet.
3. Not appropriate to monitor the conservative dietary management of a patient.
4. Not appropriate for the assessment of conservative dietary management.
Ms. Haze, 62 years old, has been on continuous ambulatory peritoneal dialysis (CAPD) for 3 years. Following four episodes of peritonitis in the past 6 months, Ms. Haze had a fistula created and is scheduled to begin hemodialysis tomorrow.

Questions 6 to 8 refer to this case.
Question 6

Ms. Haze has been dialyzing for 2 hours and 15 minutes when she begins to experience chest pain, dyspnea and visual disturbances. Which one of the following clinical assessments should the nephrology nurse include to determine the cause of Ms. Haze’s manifestations?

1. Assess the ultrafiltration rate.
2. Visualize the extracorporeal circuit.
3. Maintain the blood flow rate.
4. Check the dialyzer coefficient
**Question 6**
*(Critical thinking)*

1. Dyspnea is indicative of air embolism, not hypotension. Therefore, ultrafiltration is not a factor.
2. To determine whether air is present in the system.
3. Blood flow rate would not be maintained with air embolism; need to stop immediately.
4. The dialyzer coefficient would not affect the patient in this way.
Question 7

When caring for Ms. Haze, what should the nephrology nurse understand about renin secretion?

1. It is a result of increased pressure in the afferent arteriole.
2. It is a result of increased sodium concentration in the distal tubule.
3. It is a result of sympathetic nervous stimulation.
4. It is a result of the conversion of angiotensinogen to angiotensin I.
Question 7
(Knowledge)

1. It is due to decreased pressure in the afferent arteriole.
2. It is a result of decreased sodium concentration in the distal tubule.
3. Epinephrine and norepinephrine constrict the afferent arterioles and decrease blood flow; renin is secreted in response to the decreased pressure.
4. This is an action of renin, not a stimulus that causes renin secretion.
Question 8

Ms. Haze has been prescribed nifedipine (Adalat XL). What should the nephrology nurse consider when providing instructions to Ms. Haze regarding this medication?

1. It is a vasoconstrictor and is substantially removed by hemodialysis.
2. It is a calcium channel blocker and may decrease peripheral vascular resistance.
3. It is a beta blocker and may cause postural hypotension.
4. It is an angiotensin-converting enzyme (ACE) inhibitor with a prolonged plasma half-life in renal failure.
Question 8
(Knowledge)

1. It is calcium channel blocker, not a vasodilator.
2. It may cause regression of left ventricular hypertrophy, improving diastolic dysfunction.
3. It is a calcium channel blocker, not a beta blocker.
4. It is a calcium channel blocker, not an angiotensin-converting enzyme inhibitor.
Case 3

Mrs. Chin, 64 years old, had a peritoneal catheter inserted 2 weeks ago. She arrives at the home dialysis unit for training.

Questions 9 to 13 refer to this case.
Question 9

When teaching Mrs. Chin about exit-site care, what information should the nephrology nurse provide?

1. The importance of daily showers.
2. The use of daily antibacterial ointments.
3. The manifestations of exit-site infection.
4. Daily sterile exit-site care with povidone-iodine (Betadine Topical Preparations)
Question 9
(Application)

1. Daily showers are not recommended until the site has completely healed (4-8 weeks)
2. Ointments are only used if prescribed by the physician.
3. Patients must be aware of manifestations so that therapy can be initiated.
4. Exit site care need not be sterilized daily.
Question 10

What manifestations of hypovolemia should the nephrology nurse discuss with Mrs. Chin?

1. Increased weight and hypotension
2. Decreased weight and hypertension
3. Bradycardia and hypertension
4. Tachycardia and hypotension
Question 10
(Application)

1. Weight loss will occur.
2. Hypotension will occur.
3. Tachycardia and hypotension will occur.
4. Hypotension and tachycardia will occur.
Question 11

Mrs. Chin has been started on a renal multivitamin. Why should Mrs. Chin use this medication?

1. Fat-soluble vitamins are lost in the dialysate.
2. Vitamin deficiencies are due to poor intake.
3. Water-soluble vitamins are lost in the dialysate.
4. Vitamin deficiencies are due to decreased absorption rates.
Question 11
(Application)

1. Water soluble vitamins are lost in dialysate.
2. This is not the best answer.
3. Correct answer.
4. Vitamin deficiencies can be caused by interference with absorption by some drugs.
Question 12

Mrs. Chin returns to the clinic for her first monthly visit. Blood work reveals that her potassium level is 3.0mmol/L. What should the nephrology nurse do?

1. Ask the physician to order intraperitoneal potassium chloride.
2. Advise Mrs. Chin to eat more bananas and oranges.
3. Review the use of supplemental high-potassium foods with Mrs. Chin.
4. Instruct Mrs. Chin to return for blood work in one week.
Question 12
(Application)

1. The nephrology nurse should report the potassium levels, but intraperitoneal medications are an added risk.
2. Mrs. Chin needs to know how many oranges and bananas to eat.
3. The first choice should always be to increase potassium in the diet. The dietitian is more qualified to recommend amounts. Need to review first.
4. Treatment changes need to be immediate.
Question 13

Mrs. Chin reports that she is eating well but continues to lose weight. Her serum albumin is reported at 29g/L. What should the nephrology nurse do initially?

1. Recommend protein supplements
2. Transfer Mrs. Chin to hemodialysis treatments.
3. Collect a 24 hour urine sample for protein.
4. Alter the peritoneal dialysis prescription.
Question 13
(Critical thinking)

1. If a patient cannot ingest the necessary protein, then oral enteral supplements should be tried first.
2. Supplements should be tried first.
3. The patient most likely loses proteins across the peritoneal membrane.
4. Altering the prescription will not decrease protein losses.
Mr. Crane, 67 years old, received a renal transplant 3 weeks ago. He asks the nephrology nurse why he must have his blood checked so often. Which one of the following responses would be most appropriate?

1. “Your cyclosporine levels need to be checked because high levels may harm your new kidney”
2. “I will consult with your physician regarding a decrease in the number of times your blood needs to be checked.”
3. “Your Imuran may increase your white blood cell level”.
4. “As long as you have your transplant, we will need to check your blood frequently”.

Question 14
Question 14
(Application)

1. Cyclosporine is potentially nephrotoxic in large doses; monitoring is by serum blood levels.
2. This is inappropriate; there are standards set for blood levels.
3. Incorrect information
4. Blood collection decreases over time.
Kyle, 2 years old, received a cadaveric renal transplant 2 weeks ago. His serum creatinine has risen sharply and he is febrile. Which of the following statements accurately describes the acute rejection process for Kyle?

1. Acute rejection is primarily humorally mediated (B lymphocytes). The onset is gradual.
2. Acute rejection is primarily humorally mediated (B lymphocytes). The onset is sudden.
3. Acute rejection is primarily cellular mediated (T lymphocytes). The onset is sudden.
4. Acute rejection is primarily cellular mediated (T lymphocytes). The onset is gradual.
Question 15  
(Critical thinking)

1. This defines hyperacute rejection.
2. Relates to hyperacute rejection.
3. Acute rejection is cellular mediated and is treatable.
4. Rejection is treatable, but graft may not be lost.
Question 16

Mr. Scott, 47 years old, is on peritoneal dialysis. He states that he has swelling in his scrotum. What condition should the nephrology nurse suspect?

1. Inguinal hernia.
2. Dialysate leak
3. Prostate problem
4. Urinary tract infection
Question 16
(Critical thinking)

1. Wrong position considering manifestations
2. Normally seen in the early stage of peritoneal dialysis.
3. No symptoms of prostate problems.
4. No symptoms of urinary problems
Mr. Labelle, 45 years old, has been on hemodialysis for 3 months. Over the last few treatments, he reports malaise, weakness, mental confusion, dyspnea and peripheral edema. The nephrology nurse notes frequent hypotension during ultrafiltration. What is the most probable cause of these manifestations?

1. Hyperkalemia
2. Pericarditis
3. Pericardial effusion
4. Pericardial tamponade
Question 17
(Critical thinking)

1. Not classic manifestations of hyperkalemia (except weakness).
2. Manifestations generally include chest pain, fever and pericardial rub.
3. These are typical manifestations of pericardial effusion. No rub: fluid separates pericardial membranes.
4. Not a typical manifestation of tamponade
Mr. Black, 58 years old, is on continuous ambulatory peritoneal dialysis (CAPD). His most recent peritoneal equilibration test shows that his peritoneal membrane has high ultrafiltration transport characteristics. What manifestations is he most likely to exhibit?

1. Problems with fluid overload
2. Poor appetite
3. Problems with dehydration
4. Hypotension
Question 18
(Critical thinking)

1. Patients with high ultrafiltration transport characteristics have rapid absorption of glucose and dissipation of the osmotic gradient and, therefore, problems with fluid removal.

2. Patients with high ultrafiltration transport characteristics tend to have good urea and creatinine clearance and, therefore fewer uremic symptoms (e.g., loss of appetite).

3. Have problems with fluid overload not dehydration.

4. Have problems with fluid overload therefore hypertension not hypotension.
Question 19

What medical test is routinely used to determine the suitability of an individual as a living donor for kidney transplant?

1. Renal arteriography
2. Abdominal CT scan
3. Renal biopsy
4. Pulmonary function test
Question 19
(Knowledge)

1. Renal arteriogram shows whether or not the vessels of a kidney are suitable for donation.
2. Abdominal scans offer no information that would help in assessing suitability for kidney donation.
3. Allergy testing offers no information that would help in assessing suitability of kidney donation.
4. Pulmonary function tests offer no information that would help in assessing suitability for kidney donation.
Question 20

Mrs. Caulfield, 76 years old, has been taking naproxen (Naprosyn) 500 mg b.i.d. for the past month to treat her rheumatoid arthritis. Which one of the following manifestations should lead the nephrology nurse to suspect nephrotoxicity?

1. Decreased urine output
2. Decreased appetite
3. Hematuria
4. Increased shortness of breath.
Question 20
(Application)

1. Not an indicator of nephrotoxicity.
2. Incorrect
3. Is a manifestation of nephrotoxicity of naproxen.
4. May be due to other contributing factors.
Mr. Fry is on peritoneal dialysis using a 2.5% solution. During a clinic visit, he states that he needs to drink more. His weight has decreased and he is hypotensive. What should the nephrology nurse do?

1. Talk to Mr. Fry about the complications of excess fluids.
2. Suggest that Mr. Fry changes the dextrose solution to 1.5% to help decrease his thirst.
3. Suggest that Mr. Fry increase his kilojoules intake to increase his weight.
4. Suggest that Mr. Fry decreases the number of his exchanges to decrease output.
1. Excess fluids may cause complications, but he is thirsty because he is dehydrated.
2. The higher concentration of dextrose is taking off too much fluid, as shown by a decrease in blood pressure and an increase in thirst.
3. Weight loss is caused by fluid loss.
4. Not a true statement.
Question 22

What statement best describes the etiology of altered red blood cell production with renal failure?

1. Blood loss occurs in hemodialysis patients only.
2. There is a decreased stimulus for red blood cell production due to an increase of erythropoietin
3. The decreased survival time of red blood cells is due to an increase in uremic toxins
4. Preformed antibodies from transfusions alter red blood cell production.
Question 22

(Knowledge)

1. Blood loss can be related to hemodialysis as well as frequent blood sampling. However, blood loss is not the cause of altered red blood cell production.

2. Decrease stimulus for red blood cell production is due to a decrease, not an increase, of erythropoietin production by the diseased kidney.

3. An increase in uremic toxins decreases the survival time of red blood cells.

4. This statement is true about a decrease in hemoglobin but not a decrease in production of red blood cells.
Question 23

Mr. Coston, 62 years old, arrives for his regular dialysis appointment with shortness of breath, chest pain and a BP of 100/58 mmHg. He states that he slept in a chair last night. His predialysis urea level is 40 mmol/L. The nephrologist has detected a pericardial friction rub. What should the nephrology nurse anticipate?

1. Consult the cardiology department and arrange for admission before initiating hemodialysis.
2. Initiate aggressive hemodialysis after a chest x-ray to determine pulmonary edema.
3. Initiate aggressive hemodialysis using minimal amount of heparin sodium (Hepalean).
4. Delay dialysis until the electrocardiogram results are available.
Question 23
(Critical thinking)

1. Mr. Coston is exhibiting manifestations of pericarditis and requires immediate hemodialysis with minimal heparin. This could be considered later.

2. Hemodialysis is required. An x-ray can be done at a later date.

3. Aggressive dialysis with minimal heparin is the most important plan at this time to minimize the symptoms of pericarditis.

4. An ECG is not particularly helpful to determine pericarditis.
Question 24

What is the likely cause of metabolic acidosis in renal failure?

1. The kidney’s inability to excrete hydrogen ions
2. Increased production of ammonia by the kidney
3. Excessive loss of hydrochloric acid from the stomach
4. Decreased rate of pulmonary respirations
Question 24  
(Knowledge)

1. Correct answer.
2. Decreased production of ammonia by the kidney.
3. Not related to renal failure.
4. It is not a cause of metabolic acidosis.
Mrs. Miller, 66 years old, was admitted to the intensive care unit following the resection of an abdominal aortic aneurysm. Mrs. Miller develops acute tubular necrosis. What should the nephrology nurse consider when explaining the oliguric phase of acute renal failure to Mrs. Miller’s family?

1. It begins when the kidney is first injured.
2. It usually last 5 to 15 days.
3. The manifestations of azotemia will diminish
4. The most common cause of death is infection
Question 25
(Knowledge)

1. This is the initiating stage.
2. Correct information.
3. This is the diuretic stage.
4. The most common cause of death is from cardiac arrest due to hyperkalemia.
How did you do?

- Strengths
- Areas of improvement
- Re evaluate study plan
Resource Material

- List of commonly used books:
  - Available next year Amgen modules linked through CANNT website.
    - Current within last 5 years
Funding

- **Employer**

- **Canadian Nurses Foundation (CNF)**
  - Each year, two bursaries, to cover certification fees, offered for each specialty area. Contact 613 237-2133

- **Government**
  - Provincial specific. See web sites. Contact chief nursing officer.
  - See CNA web site extensive provincial lists

- **CANNT**
  - ISPD Bursary (certification and re-certification)
Perusing Baccalaureate?

- Institutions offering credit for certification
  - Eastern Canada –
    - Dalhousie, Memorial of NF, Moncton, St Francis Xavier,
  - Central Canada-
    - McMaster, Ryerson, Western Ont., Ottawa, Windsor, Laurentian, Sherbrooke, Lakehead
  - Western Canada-
    - Athabasca, Brandon, Thompson Rivers, UBC, Lethbridge, Northern BC, Sask.. Victoria, and Okanagan College.
Recertification

- 100 contact hours in five years
- Nephrology related
- Make a plan (20 hours/yr)
- Keep records
  - In services
  - Presentations
  - Conferences
  - Committees
Questions

2010 EXAM: Saturday, 17 April 2010
Application DEADLINE: 16 October, 2009

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Phone: 1-800-450-5206
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