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1. Define constipation and address its clinical management.

Constipation can be defined as difficult defecation characterized by straining while defecating, infrequent stools, a feeling of incomplete emptying, and hard or dry stools. Clinical management for constipation involves increasing the intake of fiber and fluid to bulk and soften the stool in normal transit constipation. However, for slow transit constipation, additional fiber may exacerbate the issue by increasing the size of the stool, making it more difficult to pass (Kamp & Heitkemper, 2022, p. 466). Pharmacological therapy consists of stool softeners for the prevention of constipation, and laxatives, which may be delivered in oral form or via enemas or suppositories. Osmotic laxatives work by pulling water into the bowel while stimulant laxatives act on nerve cells in the bowel wall to increase motility (Kamp & Heitkemper, 2022, p. 469). Medications that may cause constipation should be discontinued if possible. Other lifestyle interventions include exercise and increased mobility, and avoidance of alcohol, caffeine, high sugar, high fat, and processed foods.

2. IAD - You are asked to see a male patient with marked and extensive incontinence associated dermatitis. On assessment you see marked erythema with wet and weepy dermatitis in the perianal and sacral skin. The patient has a recent history of acute CVA affecting the left side of his body complicated by pneumonia and a UTI, and is currently recovering in a long-term acute care facility. Swallow tests for this individual have demonstrated difficulty swallowing; a temporary gastrostomy tube is in place for feedings until oral feedings can safely resume. Diarrhea episodes began a week ago involving 5-6 episodes of liquid stool daily. A Foley catheter is in place with leakage of urine around the catheter.

a. What will your focused assessment consist of?
    i. For incontinence-associated dermatitis, the WOC nurse should assess the location, distribution, and severity of skin damage, as well as the presence of any blisters or satellite lesions. A pain assessment should also be performed.
    ii. To assess urinary bypassing, the WOC nurse should check the position of the tubing and drainage bag to look for potential causes of blockage such as kinked tubing, and investigate whether the catheter is blocked or draining poorly. The nurse should look for the presence of blood clots or gritty substances in the tubing or bag (Newman, 2022, p. 415). A bladder scan can be done to assess residual urine.
    iii. Regarding diarrhea, the nurse may consider potential causes such as initiation of tube feeding after a period of no food (Kamp & Heitkemper, 2022, p. 458), potential infectious causes such as C. difficile given the patient has been on antibiotics, and any laxatives and stool softeners that the patient may have inadvertently been given as part of their medication list.

b. How will you approach the issue of urinary incontinence on a long-term basis?

i. The WOC nurse should consider the goals of the patient's care from the patient, their family, and caregivers. The care team must assess and manage the patient's comorbidities and functional issues that may affect the long-term management of urinary incontinence. For this patient in particular, it is unclear if the indwelling urinary catheter will ever be removed. Cognition, mobility, and caregiver support are integral to the patient's success with toileting programs. If toileting programs are not realistic for the patient, the long-term plan of care may focus on the appropriate use of body-worn absorptive products along with diligent skin care.

c. What initial and ongoing urodynamic testing can be used to track the progress of regular and consistent bladder emptying with minimal break- through leakage?

ii. Postvoid residual measurement

d. How will you approach the issue of fecal incontinence for this person? Will you need to use containment devices? If so, what kind?

iii. The patient at this time is experiencing transient fecal incontinence due to diarrhea and may benefit from a fecal management system to divert and contain the liquid stool. Since the patient has incontinence-associated dermatitis that affects the integrity of the perianal skin, an internal fecal management system can be used.

e. What skin care measures will be needed to correct this problem?

iv. Diligent skin care should be performed after each incontinence episode or for stool leakage around the fecal management system. The perianal skin should be cleansed with a gentle pH-balanced cleanser using a soft, non-linting cloth and patted dry. The urethral meatus and groin should be cleansed twice daily in a similar fashion or with Foley care wipes. A zinc-based moisture barrier cream should be applied to the denuded perianal and sacral skin. The urinary catheter should be stabilized with a securement device.

3. Mixed UI - A female patient reports she has had progressively worsening urine leakage for the last three years. She is a type II diabetic and has three grown children. The pattern of incontinence includes symptoms of stress and urgency. Given her medical history and symptoms, what type of medical management might be helpful to her? What behavioral strategies can you recommend that may reduce the incontinence episodes? Any additional recommendations?

- The patient may benefit from pelvic floor muscle therapy and lifestyle modifications. Behavioral strategies include urge suppression techniques to manage urgency symptoms, and using the Knack maneuver to manage stress incontinence. Dietary modifications include reducing intake of bladder irritants,

avoiding excessive fluid intake of more than 2 L a day, and preventing constipation with adequate fiber and fluid intake. The patient should be counseled regarding the benefit of weight reduction, as well as controlling her diabetes to prevent hyperglycemia which can worsen incontinence by increasing urine production. Additional options for conservative management include pelvic floor muscle therapy with biofeedback, the use of vaginal cones, and bladder training.

4. Condom cath - You are teaching a group of CNAs how to apply an external (condom) catheter. What should be included in this education? How will you evaluate their understanding of what has been taught?

- Education regarding condom catheter placement for CNAs should focus on the importance of using an appropriate size for the patient and the need to cleanse and dry the skin thoroughly prior to application. The limited wear time of 1-2 days should be stressed, as well as contraindications to condom catheter use such as altered mental status (the patient may pull on the condom catheter causing trauma), reduced sensation (the patient may be unable to feel any penile trauma), damaged penile skin, and inadequate penile shaft length. Additionally, the CNAs should be educated to monitor for signs of trauma or skin damage and report appropriately to the RN. Just as with an indwelling catheter, the tubing should be unkinked and a tube securement device may be used. If there is persistent difficulty in keeping the condom catheter on the patient, a different device may be indicated. Evaluation of teaching can be done using the teach-back method, with the CNAs demonstrating the correct application of a condom catheter and being able to teach it back to the WOC nurse.

5. Constipation - 76 year old woman presents with a history of chronic constipation with fecal impaction and leakage of liquid stool. On assessment she denies any sensation of rectal fullness; her anal wink is intact, and her sphincter tone is normal with good voluntary contractility. She eats mostly starches, dairy products, and meats. She does not eat fruits and vegetables because they bother her stomach. She has used OTC laxatives to induce bowel movements with increasing frequency over the last few years. She reports current use of laxatives as being once a week and frequency of bowel movements as one or twice a week "with straining." The leakage began just this week, and she is very upset about it. She says she will "do whatever you recommend" to get her bowels working right again. What are your recommendations?

- Given the patient's history, she may have slow transit constipation with overflow fecal incontinence. It is unclear which OTC laxatives the patient has been taking, but slow transit constipation may not respond as well to stimulant laxatives, and stimulant laxatives may have a long-term adverse effect on GI motility (Kamp & Heitkemper, 2022, p. 469). I would recommend that the patient start taking stool softeners as a preventative measure to soften the stool and try osmotic laxatives that are safer for routine use such as Miralax (polyethylene glycol). The plan of care should be focused on normalizing stool consistency and the patient should be counseled on increasing her activity to promote GI motility, reducing her intake of fatty and processed foods, and eating a balanced diet including adequate fiber and fluid intake. The patient's medication list should be reviewed for any medications that may cause constipation. She may also benefit from pelvic floor muscle therapy and education regarding the optimal posture for defecation.

6. QI / CAUTI - The following prompts relate to quality improvement projects and CAUTI:

a.) Describe the components of a quality improvement project.

a. A quality improvement project includes clearly defined goals ("SMART" goals), the problem being studied and how it can be measured, the intervention, the method of data collection and evaluation, as well as identification of key stakeholders. The QI process reflects the nursing process of assessment, diagnosis (identifying a problem), planning, implementing an intervention, then evaluating the intervention. A successful QI intervention may then be adopted into a permanent process for the institution.

b.) Identify and describe how you would design a QI project using CAUTI as the subject

- I would design a QI project with the goal of reducing the average number of urinary catheter days in a post-surgical care unit during a 6-month period as a measure to prevent CAUTI, by taking the following steps:
  - 1. Assess the unit's current data regarding the duration of urinary catheter use in post-operative patients measured in days.
  - 2. Identify the problem: is the average number of catheter days on the unit higher than the recommended duration of postoperative catheter use to prevent CAUTI? Can the number of catheter days be reduced by promoting the timely removal of unnecessary catheters? I would perform a thorough literature review exploring the association between the number of urinary catheter days and the incidence of CAUTI and also search the literature for similar QI projects in other institutions that have been successful.
  - 3. Identify and involve key stakeholders in the QI project such as the nurse manager, unit charge nurses, and the clinical director.
  - 4. Design and implement the intervention: a nurse-driven protocol (visualized with an algorithm flowchart) for the removal of unnecessary catheters without a physician's order. The protocol may be developed with evidence from the literature and in collaboration with the medical staff. It should also include nursing interventions regarding when to notify the physician, when bladder scans should be performed, and when intermittent catheterization is indicated, as well as documentation requirements.
  - 5. Collect data on the number of urinary catheter days and CAUTI occurrences in the 6-month time period following intervention.
  - 6. Analyze the data and evaluate whether the intervention resulted in a reduction in the number of urinary catheter days, with consideration to any potential confounding variables that may have affected the data.

7. Voiding trial - Mr. J.L. had an indwelling catheter placed for urinary retention secondary to an enlarged prostate. He is started on Finasteride (Proscar), 5 mg once a day to decrease the size of his prostate. Mr. J. L. visits the urologist for a 2 month follow-up for removal of his indwelling catheter and a voiding trial. Explain the purpose of a voiding trial and how you will conduct it.

- The purpose of a voiding trial is to evaluate the bladder's ability to empty fully on its own without the catheter. In this case, the voiding trial will shed light on if the medication, finasteride, has reduced the prostate size adequately to allow unobstructed bladder emptying. A voiding trial is conducted by removing the catheter, then allowing the patient to void naturally in a time period of 6-8 hours. After the patient voids or at the end of 6-8 hours, postvoid residual is measured with a bladder scan. If the patient is unable to void or voids minimally, they may require intermittent catheterization or reinsertion of the indwelling catheter.

8. CIC - The PVR is 425 cc, and the urologist orders clean intermittent catheterization rather than indwelling catheter use. The Finasteride is continued.

a. State the goal of intermittent self-catheterization.

The goal of intermittent self-catheterization (ISC) is to manage neurogenic bladder symptoms without the use of an indwelling urinary catheter.

b. Describe education points to include for an individual performing self-catheterization.

The patient performing ISC should be evaluated for their ability to see and access their urethra. The patient should be educated about the important of adhering to a catheterization routine or schedule that is optimized to their lifestyle and their individual medical needs. Clean technique should be taught to the patient along with the catheterization technique. The WOC nurse should instruct on the proper way to clean and store reusable catheters and how to dispose old catheters. The patient should know about the potential need to try out different types of catheters before finding one that works well for them (Newman, 2022, p. 427). Moreover, the patient should be taught the signs and symptoms of urinary tract infection (UTI), when to call their provider, and when to go to the emergency department.

c. Identify at least three complications that can occur with intermittent self-catheterization.

- ISC can have complications such as UTI, pyelonephritis, and urethral trauma.

d. Describe the action of Finasteride (Proscar) and any other teaching points, such as side effects.

- Finasteride works to shrinks the prostate by blocking the action of dihydrotestosterone, a hormone that stimulates prostate growth. Some side effects of finasteride are decreased libido, erectile dysfunction, and gynecomastia (McVary, 2023).

9. Suprapubic cath - Mr. P.V., 26 years old, has a neurogenic bladder secondary to an accident 3 years ago. He has been managed with an indwelling catheter (ISC was not workable for him secondary to ureteric reflux), is wheelchair bound and sexually active. He is finding intercourse uncomfortable secondary to the indwelling catheter and has discussed insertion of a suprapubic catheter with the urologist. Suprapubic tube (SP) insertion is scheduled for next week.

a. What should be included in the pre-operative teaching of suprapubic catheter insertion?
    a. The patient should be taught that suprapubic catheter insertion is a relatively simple surgical procedure that involves inserting a catheter through the skin and abdominal wall into the bladder. The procedure is generally considered low risk but as with any other surgical procedure has complications of bleeding and infection. After insertion, the suprapubic catheter tract needs to mature as the body forms scar tissue around the catheter (Sheldon & Santos, 2022, p. 146), similar to how an ear piercing heals. Once the tract matures, the catheter will need to be replaced on a routine basis to prevent infection and blockage.

b. Discuss care of the suprapubic tube post-operatively including cleansing, dressing, securing of the catheter, changing of catheter, etc.

- In the post-operative phase, the patient should be taught the signs of infection, bleeding, and strategies for pain management. The patient should cleanse the catheter site daily with warm tap water and pat dry. If there is some drainage from the catheter site, one split gauze may be placed under the bumper. If there is an amount of drainage that requires multiple pieces of gauze or extensive pain, redness, or swelling, the patient should notify their provider. The catheter should be secured at all times using a securing device to prevent movement which can enlarge the tract and lead to urine leakage. The catheter will be replaced routinely, but the length of time between changes depends on the patient's individual time frame to catheter blockage (Newman, 2022, p. 422). The first catheter change will be performed by the provider, and subsequent changes may be performed by a home health nurse.

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