Development of a nursing intervention with ultrasound to assess patients with Impaired urinary elimination

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Introduction

→Bladder ultrasound is a quick, safe and non-invasive procedure that can be performed at the bedside by nurses.

→Its use by nurses has been described in the literature for over 30 years, with records of its use already in the 1980s (Chadwick, 1989)

→ This intervention can help the assess of patients with ND Impaired urinary elimination, Urinary retention or Urinary incontinence.

→ However, the Nursing Interventions Classification (NIC) doesn't include this nursing care.

Study purpose

→The aim of this study is to propose a nursing intervention using ultrasound to evaluate patients with urinary dysfunction.

Method

→ Was conduced a integrative review based on a Whittemore & Knafl (2005);

→The review guiding question was: "What are the nursing activities for bladder ultrasound?"

→ Four databases was used in search: LILACS, SCOPUS, PubMed and CINAHL.

→ The period of search was June to August 2021.

→ The inclusion criteria for publications was language (english, spanish and portuguese), human sample, available online in full and no time limit was determined.

→ Gray literature was excluded (dissertations, monographs, editorials, letters, etc.)

→ The components of the developed intervention were written based on the Guidelines described by the NIC.

Table 1. Nursing intervention developed

Label: "Ultrasonography: Bladder"
Definition: Performance of ultrasound exams to determine bladder status or position and/or effectiveness of a bladder catheter.
Activities listed:
-   Determine clinical indication for bladder ultrasound imaging (e.g., suspect of urinary retention or assessment of post-void residual volume)
-   Instruct patient and family about examination indications and procedure, its purpose and limitations
-   Apply appropriate protocol for bladder ultrasound evaluation (e.g., assessment of postoperative or postpartum urinary retention, evaluation of decrease in urinary output with or without bladder catheter, post-void residual volume measurement)
-   Select the adequate transducer for bladder examination
-   Identify previous abdominal surgeries, scars, tumors, megalias, ascites, visceral distension or other anatomical features with the potential to confound the bladder evaluation
-   Apply ultrasound gel in the suprapubic region or directly in the transducer
-   Properly position the transducer just above the pubic symphysis
-   Obtain clear picture of bladder and centralize it in the monitor
-   Perform bladder volume measurements, as appropriate
-   Use the colored Doppler function, as appropriate
-   Identify in the ultrasound image the position of distal tip of the urinary catheter, the catheter function and the balloon volume, as appropriate
-   Identify and measure the residual post-void volume with ultrasound after 10 to 20 minutes of emptying the bladder
-   Perform systematic ultrasound bladder assessment, if necessary
-   Discuss bladder evaluation with primary practitioner, consultants and patient, as appropriate
-   Assist patient with removing gel, if appropriate
-   Clean the ultrasound device
-   Document findings of exam, including reason to bladder ultrasound, urinary volume measured, the patient's response to procedure and any particularity founded

Results

→ Initially 328 publications were found (LILACS: 05 publications; PubMed: 156; CINAHL: 70; SCOPUS: 97);

→ Of these publications, 17 were included in the review (LILACS: 01 publication; PubMed: 05; CINAHL: 08; SCOPUS: 03);

→ From these publications, it was possible to identify and develop 19 nursing intervention components (Label, Definition and 17 care activities) – Table 1.

→ The grade of expertise required for this nursing intervention was classified as "Nursing practitioner" and the estimated time for its performance was classified as "15 minutes or less".

Conclusion

→ The developed nursing intervention was approved and will appear in the next edition of the NIC;

→ This will give greater visibility to care that improves outcomes for patients with urinary dysfunction.

References

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