

Original Article

Effectiveness of Urinary Care Practices in Emergency Postpartum Period

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Abstract

Background: The incidence of urinary problems increases especially in the first 24 hours after delivery by the effect of several factors. Early diagnosis of urinary-related problems and controlling the factors that increase the risk of occurrence of such problems holds critical importance in enabling a quick recovery of bladder functions after delivery.

Aim: The aim of this study is to determine the effectiveness of practices towards urinary care during emergency postpartum period.

Methodology: 191 voluntary women in postpartum period were included in the research. The research data was collected using "Postpartum Urinary Problems and Care Requirements Evaluation Form". Numeric, percent value and Pearson Chi-square tests were used during data analysis. The results were evaluated with 95% reliability and $p < 0.05$ significance level.

Results: A 74.3% of the participants stated that they experienced urinary discharge problems during postpartum period. The most frequently encountered problem during postpartum period are; pain (98.5%). 53.4% of the participants stated that they were encouraged by caregivers to urinate in their postpartum period, 51.3% stated that their urinary discharge was monitored, 67% and 62.5% respectively stated that their bladder and their perineum was physically evaluated. A statistically significant difference was found among the participants' state of being encouraged to make their first urinary discharge, physical evaluation of their bladder and having perineal cold application, with regard to having urinary discharge-related problems in their postpartum period.

Conclusion: Nurses and midwives and midwives hold a key role in fulfilling the urinary care requirements of women in their postpartum period.

Key words: Emergency Postpartum Period; Urinary Problems; Nursing; Midwifery; Care

Introduction

Urinary problems that lead to maternal morbidity is a frequently encountered situation in obstetric care. The incidence of urinary problems (dysuria, postpartum urinary detention, urinary incontinence, vesicovaginal fistula, uterovaginal prolapsus, etc.) increases especially in the first 24 hours after delivery by the effect of several factors such as undergoing long deliveries, instrumental delivery, epidural anesthesia, perineal trauma, multiparity and urinary catheterization (Ching-Chung et al., 2002; Panayi & Khullar, 2009; Cavkaytar et al., 2014). Groutz et al. (2004) reported that, 45% of women suffered urinary-discharge related problems in

postpartum period. According to the results of another study, 43% of women underwent abnormal flow rates during micturition (Ramsay & Torbet, 1993).

Early diagnosis of urinary-related problems and controlling the factors that increase the risk of occurrence of such problems holds critical importance in enabling a quick recovery of bladder functions after delivery (Musselwhite et al., 2007; Lim, 2010; Tunckıran, 2011). However the conducted researches, indicate that health professionals' awareness regarding the situation is significantly low and less than one fourth carry out postpartum bladder care in accordance with the recommendations of Royal College of

Obstetricians and Gynaecologists (Zaki et al., 2004). At this point, the necessity for professional health caregivers capable of evaluating women with a holistic point of view, and planning-implementing proper initiatives, comes into prominence. Particularly, nurses and midwives hold a key role in holistic evaluation of women in postpartum period and in fulfilling their care requirements (Towle, 2009; Lowdermilk & Perry, 2006; Davidson et al., 2007).

This study aims to determine the effectiveness of urinary care practices in emergency postpartum period.

Methodology

Research Type, Location and Period: The study was carried out as a descriptive research in the gynecology and obstetrics clinic of a university in Central Anatolia Region between the dates February 20 - March 31 2017.

Research Population and Sample: The researchers omitted sample selection and included 191 inpatients in the postpartum clinics of the hospitals between the mentioned dates, that consented to participate in the research.

Data Collection: The research data was collected using "Postpartum Urinary Problems and Care Requirements Evaluation Form". A form was created by the researchers based on expert opinion and preliminary assessment. The questionnaire forms involved 29 questions as to the urinary problems they underwent during the first 24 hours after delivery, the care initiatives they received for tackling these problems, and the effect of these care initiatives on their problems. Researchers can obtain to survey instrument the via authors.

Ethical considerations: This study was approved by the Non-Interventional Clinical Research Ethics Committee (2016-12/13). All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and / or national research committee and with the 1964 Helsinki declaration. Informed consent was obtained from all individual participants included in the study.

Data Analysis: The research data was analyzed using SPSS 14.0. Numeric, percent value and Pearson Chi-square tests were used during data analysis. The results were evaluated with 95% reliability and $p < 0.05$ significance level.

Results

The age average of the participants is 27.0 ± 5.9 and 71.2% are multiparous. 82.2% of the participants experienced vaginal delivery, 25.1% received epidural anesthesia and 17.8% gave multiple birth. 75.9% of the babies were in normal delivery weight. Episiotomy process was implemented on 56% of the women that underwent vaginal delivery. Bladder catheterization was applied on 17.8% of the participants.

A 74.3% of the participants stated that they underwent difficulties during urinary discharge in their postpartum period. The most common problems among women in their postpartum period were determined as; pain (98.5%), burning (97.1%), and refraining from urination (92,9%) (Table 1).

A 53.4% of the participants stated that they were encouraged for urinary discharge in postpartum period, 51.3% stated that their urinary discharge was monitored by caregivers, 67%, and 62.5% respectively stated that their bladder and perineum underwent physical evaluation. 57.6% of the participating women stated that they received perineum care, 31.9% stated that they received cold application on perineum region, and 55% stated that they received support for mobilization. Using the sound of running water was determined to be the most common (14.1%) non-pharmacological method as a catalyst for urination of women in postpartum period (Table 2).

A 75.6% of the women that experienced vaginal delivery made urinary discharge within the first 1-6 hours following the delivery, and 76.4% of the women that experienced caesarian delivery made urinary discharge within the first 1-6 hours after their bladder catheter was removed (Table 3).

No significant difference was found among the participants with regard to having urinary problems in postpartum period, on the basis of their parity, type of delivery, multiple birth history and the weight of the newborn baby. A statistically significant difference was found among the participants with regard to having urinary problems in postpartum period on the basis of experiencing epidural anesthesia, episiotomy, and bladder catheterization, ($p < 0.05$; Table 4).

A statistical significant difference was found among the participants with regard to having urinary problems based on their condition of receiving support to make the first urinary

discharge, physical evaluation of their bladder and receiving perineal cold application ($p < 0.05$; Table 5).

Table 1. Distribution of women by some of their properties regarding urinary system

Properties

Episiotomy History in the Last Delivery (n=157)	N %
Yes	107 (56.0)
No	50 (26.2)
Bladder Catheterization (n=191)	
Applied	34 (17.8)
Not applied	157 (82.2)
As to Whether She Underwent Urinary Discharge Problems After Delivery (n=191)	
Yes I did	142 (74.3)
No, I did not	49 (25.7)
*Problems During Urinary Discharge (n=142)	
Pain	140 (98.5)
The Feel of Burning	138 (97.1)
Refraining From Urination	132 (92.9)
Difficulty in Emptying Bladder	116 (81.6)
Abdominal Distension Feeling	108 (76.0)

**Multiple options were selected; percentages are taken by n*

Table 2. Distribution of the practices related with urinary care of women (n=191)

Properties

Receiving support for urinary discharge in the first 2-6 hours after delivery	N %
I received support	102 (53.4)
I did not receive support	89 (46.6)
Monitoring urinary discharge after delivery	
Monitored	98 (51.3)
Was not monitored	93 (48.7)

Physical evaluation of bladder

Evaluated	128 (67.0)
Was not evaluated	63 (33.0)

Physical evaluation of perineum

Evaluated	119 (62.5)
Was not evaluated	72 (37.5)

Receiving perineum care

Received	110 (57.6)
Did not receive	81 (42.4)

Receiving cold application on perineum

Received	61 (31.9)
Did not receive	130 (68.1)

Receiving support for Mobilization

Received	105 (55.0)
Did not receive	86 (45.0)

Total 191 (100.0)

***The applied non-pharmacological methods**

Using the sound of running water	27 (14.1)
Putting hands in warm water	11 (5.8)
Pouring warm water on perineum	10 (5.2)
Taking warm shower	3 (1.6)

* Multiple options were selected; percentages are taken by

Table 3. Distribution of women based on the time of urinary discharge after delivery (n=191)

Properties**Time of first urinary discharge after NSVD (n=157)**

	N %
Within 1-6. hours after delivery	118 (75.6)
Within 7-12. hours after delivery*	38 (24.4)

Time of first urinary discharge after removal of bladder catheter (n=34)

Within 1-6. hours after foley catheter is removed	26 (76.4)
Within 7-12. hours after foley catheter is removed	8 (23.5)

The women that made their first urinary discharge within 7-12. hours after delivery were given care within the frame of urinary care practices given in Table 2, and none of the women received further urinary bladder catheter application.

Table 4. Participants' condition of having urinary problems after delivery based on some of their properties

Properties	As to whether they had urinary problems			Test Statistics
	Yes I did n=142 Number (Frequency)	No I didn't n=49 Number (Frequency)	Total n=191 Number (Frequency)	
Parity				
Primiparous	45 (31.7)	10 (20.4)	55 (28.8)	$\chi^2 = 2.261$
Multiparous	97 (68.3)	39 (79.6)	136 (71.2)	p=0.133
Type of Delivery				
NSVD	118 (83.1)	39 (79.6)	157 (82.2)	$\chi^2 = 0.306$
Caesarian Delivery	24 (16.9)	10 (20.4)	34 (17.8)	p=0.580
Epidural Anesthesia History				
Yes	35 (29.6)	13 (26.5)	48 (25.1)	$\chi^2 = 0.069$
No	107 (70.4)	36 (73.5)	143 (74.9)	p=0.047
Multiple Birth History				
Yes	22 (15.5)	12 (24.5)	34 (17.8)	$\chi^2 = 2.015$
No	120 (84.5)	37 (75.5)	157 (82.2)	p=0.156
Delivery Weight of Baby*				
2500 g and lower	24 (17.9)	9 (20.5)	33 (18.5)	$\chi^2 = 0.142$
between 2500-4000 g	110 (82.1)	35 (79.5)	145 (81.5)	p=0.706
Episiotomy History				
Yes	80 (72.1)	22 (62.9)	102 (69.9)	$\chi^2 = 1.073$
No	31 (27.9)	13 (37.1)	44 (30.1)	p=0.030
Bladder Catheterization				
Applied	24 (26.9)	10 (20.4)	34 (17.8)	$\chi^2 = 0.306$
Not Applied	118 (73.1)	39 (79.6)	157 (82.2)	p=0.045

χ^2 : Pearson Chi Square Test

*Deliveries with babies weighing 4000 g and higher were not included in the analysis due to their rareness.

Table 5. Participants' condition of having urinary problems in postpartum period based on the urinary care initiatives

Properties	As to whether they had urinary problems			Test Statistic
	Yes I did N (%)	No I didn't N (%)	Total N (%)	
Receiving support for making urinary discharge within the first 2-6. hours after delivery				
I received support	75 (50.8)	27 (58.1)	102 (53.4)	$\chi^2 = 0.076$
I did not receive support	67 (49.2)	22 (41.9)	89 (46.6)	p=0.047
Monitoring of Urinary Discharge				
Was monitored	72 (50.7)	26 (53.1)	98 (51.3)	$\chi^2 = 0.081$
Was not monitored	70 (49.3)	23 (46.9)	93 (48.7)	p=0.776
Physical evaluation of bladder				
Was evaluated	101 (71.1)	27 (55.1)	128 (67.0)	$\chi^2 = 4.232$
Was not evaluated	41 (28.9)	22 (44.9)	63 (33.0)	p=0.040
Physical evaluation of perineum				
Was evaluated	90 (59.2)	29 (63.4)	119 (62.3)	$\chi^2 = 0.273$
Was not evaluated	52 (40.8)	20 (36.6)	72 (37.7)	p=0.601
Receiving perineal care				
Received	84 (53.1)	26 (59.2)	110 (57.6)	$\chi^2 = 0.554$
Did not receive	58 (46.9)	23 (40.8)	81 (42.4)	p=0.045
Receiving cold application on perineum				
Received	41 (28.9)	20 (40.8)	61 (31.9)	$\chi^2 = 2.390$
Not received	101 (71.1)	29 (59.2)	130 (68.1)	p=0.023
Receiving support for mobilization				
Received support	78 (52.8)	30 (61.2)	105 (55.0)	$\chi^2 = 1.040$
Did not receive support	64 (47.2)	19 (38.8)	86 (45.0)	p=0.308

χ^2 : Pearson Chi-square test

Discussion

Urinary problems are widely encountered during postpartum period. Urinary problems are closely associated with epidural anesthesia-related loss of sense, instrumental practices, extended delivery periods, perineal trauma and nulliparity (Teo et al., 2007; Panayi, & Khullar, 2009; Lim, 2010; Cavkaytar et al., 2014; Mulder et al., 2016).

Urinary problems is encountered by 10-15% of women in postpartum period (Perinatal Practice Guidelines, 2010). Thorough evaluation of women's urinary discharge by nurses and midwives are required for prevention of the retention risk. Within the frame of such evaluation, the variables such as the frequency of micturition, the amount of urine, the problems encountered during urination, urinary system infection, the sense of pressure and swelling following urination, increases in body temperature, difficulties in controlling the bladder function or loss of control should be addressed in detail (Postpartum Nursing Care Pathway, 2011; Lowdermilk & Perry, 2006; Davidson et al., 2007). In this study, half of the participants stated that they were encouraged to urinate in their postpartum period and that their urination was monitored by caregivers. According to the recent postpartum care guidelines, encouraging women to urinate within the first two hours following delivery, recording the amount of urine, and evaluation of bladder until 2 spontaneous urination over 200 ml, holds great importance. In addition, the women in postpartum period are expected to make their first urinary discharge in the first 6 hours at most. In case of caesarian deliveries, it should be evaluated whether the foley catheter is at its place once every two hours, in addition to the evaluation of urine color. An hourly urinary discharge of at least 30 ml is considered normal after the removal of foley catheter (NICE, 2006; WHO, 2010).

The loss of sense of discharging bladder associated with epidural anesthesia, over-distention of bladder, increase in the amount of microorganisms in incompletely discharged bladder, foley catheter applications, edeme in uretra associated with neonatal macrosomia, episiotomy during vaginal delivery, applications such as forceps and vacuum have adverse effects on urinary discharge (Liang et al., 2007; Yip et

al., 2014). In this research 1/4 of participating women stated to have epidural anesthesia, 1/5 stated to have bladder catheterization, and more than half stated to have episiotomy experience. Women that have undergone epidural anesthesia, episiotomy and bladder catheterization procedures were found to experience urinary discharge problems at higher rates. The results of a related study indicate that, the factors such as extended second gestational period, episiotomy, perineal laseration and delivery weights higher than 4000 g resulted with postpartum urinary retention development (Cavkaytar et al., 2014). In this research, the most frequently encountered problem among women in postpartum period was determined to be "pain". Development of "disurea" is also likely among women particularly due to perineal trauma or after removal of foley catheter. Groutz et al. (2004) also stated that, the most common urinary problem in postpartum period was pain (64%).

In the literature, applications such as early mobilization, oral analgesia, pouring warm water on perineum, laying hands in water, making bubbles in water with a straw, sitz bath and taking warm shower are recommended for enabling women to feel the urge of micturition against inadequate urinary discharge problems in postpartum period (Perinatal Practice Guidelines, 2010). In this research, 2/3 of the participants stated that they received perineal care from caregivers, had their bladder evaluated, and half of the participants stated that they received support for mobilization in early postpartum period, and 1/3 stated that they received cold application on perineum region. The use of running water sound was found as the most common non-pharmacological method to facilitate urinary discharge. The participants that received support for their first urination after delivery, underwent physical bladder evaluation and received perineal cold application were found to experience urinary discharge problems at comparatively lower rates. The increase in plasma volume in early days of postpartum period necessitates the evaluation of women for bladder distention and urinary retention (Lim, 2010). Perineal care, perineal cold application during the first 12 hours, having sitz bath and application of topical analgesics are also recommended for reducing perineal discomfort and to help relaxation. Women are expected to

make their first urinary discharge within the first six hours after delivery (Lim, 2010; Teo et al., 2007). In the present research, nearly ¼ of the participants stated that, they made their first urinary discharge within the first 7-12. after delivery.

According to clinical guidelines, reevaluation of bladder volume, and consideration of temporary catheterization or foley catheter implementation is required in cases where the patient fails to make first urinary discharge within the first six hours after delivery and in case the attempts for enabling micturation fail (Teo et al., 2007; NICE, 2006; WHO, 2010).

Conclusion

The incidence and pathogenesis of postpartum urinary dysfunctions are yet to be known. In addition, recent studies have focused on the importance of initiatives for urinary care of women in postpartum period. Such care initiatives are helpful in minimization of the negative effects of urinary problems on women. The quality of care initiatives implemented in postpartum period is highly important for recovery of urinary discharge functions. It is also important to equip puerperant women with adequate information to evaluate their urinary discharge and to recognize the situations that require medical evaluation. At this point, nurses and midwives that aid women in postpartum period undertake important responsibilities. Holistic care provided by nurses and midwives can enable well-rounded evaluation of women and early diagnosis and solution of possible problems.

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