

## PERCEPTION OF PAIN AND DISTRESS AMONG HEALTHY WOMEN UNDERGOING URETHRAL CATHETERIZATION

### Hypothesis / aims of study

Indwelling urethral catheterization is a widely performed procedure prior to elective cesarean section and it is usually kept for 12-24 hours after surgery. Common purposes of catheterization are to prevent postoperative urinary retention, reduce the risk of bladder system injury and intra-operative difficulties; however, there are some studies asserting that the routinely use of it is unnecessary in some cases. It is associated with 80% of urinary tract infections (UTIs) moreover pain and distress of this procedure cannot be underestimated. (1)

The objective of study was to determine perception of pain and distress caused by urethral catheterization among women undergoing elective cesarean section and looking for relation between these two factors.

### Study design, materials and methods

A descriptive study was conducted in some University teaching hospitals. We interviewed 100 healthy women who were introduced urethral catheter prior to elective cesarean section. All the participants continued to having indwelling urethral catheters for at least 12 hours after delivery. Only the women who had no urinary complaint (e.g. UTI, etc), before delivery were included.

For assessing pain intension, two scales were used: '0-10 Numeric Pain Rating Scale' and 'Wong-Baker Faces Pain Rating Scale'. Numerical scale was shown to patients to rate pain intension by selecting a number between 0 to 10 on which '0' represented 'no pain' and '10' represented 'the highest imaginable pain' then we wanted the patients to select a face from 6 faces of Wong-Baker scale which describes their pain best (the numbers written below the faces were erased). For assessing distress scores, we used '0-10 Numeric Scale' likewise. Distress was defined as any feeling of discomfort during this procedure. In addition to distress scores, to find out the exact feelings of patients, some Smiley Faces were selected from Smiley Faces Feeling Guide which expresses the possible feelings during urethral catheterization. The included feelings were the senses of embarrassment, anxiety, fear, indifference, disgust or comfort and satisfaction of being catheterized. Data analyze was performed using SPSS ver.13.

### Results

The mean age was 28.39 (range 16-40 years) and the mean weight before cesarean delivery was 74.06 Kg (range 43-110Kg). In 76% of cases the catheter size was 16. 74% were catheterized for the first time. Among the women who were catheterized before, 50% reported more pain in contrast to previous time 20.83% reported no change and 29.17% perceived less pain.

Mean intension of pain was 4.675 (CI 95% 4.135, 5.215). Reported pain according to Numerical scale (mean  $\pm$  SD) was 4.25 $\pm$ 2.746 and according to Faces scale was 5.10 $\pm$ 3.000. Only 6% reported they perceived No pain and 15% had No distress. Distress score was (mean  $\pm$  SD) 4.67 $\pm$ 3.26. 55% of women were embarrassed, 55% were afraid of being catheterized, 46% were anxious about procedure, 15% were disgusted and 15% were indifferent. High percentage of women (64%) declared that they were irritated by the catheter insertion.

Pearson correlation test illustrated that there were significant correlations between mean pain and distress ( $p < 0.01$ ) and between mean pain and weight ( $p < 0.05$ ).

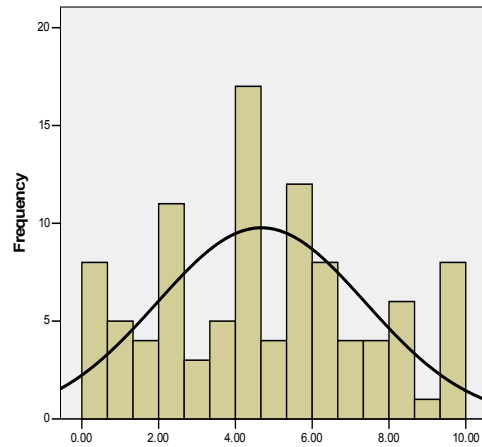
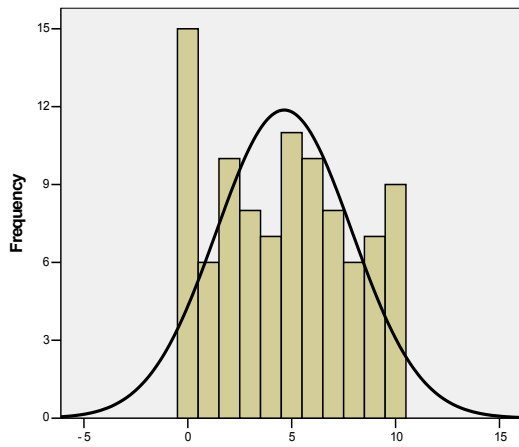
### Interpretation of results

Our results indicate that pain and distress scores during urethral catheterization were high. The most common feelings were embarrassment and fear. There was a meaningful Correlation between pain and distress scores. Distress during insertion of catheter may cause the patient to contract Perineal muscles and it makes the catheter insertion difficult and probably increases the risk of inappropriate placement or urethral injury and perceived pain.

During interview with patients, we realized that they had better understanding about Numerical scale than Faces scale. They couldn't get along well with faces which represented "no pain" and "little pain" because some found it absurd to be laughing or even smiling while catheterized. Besides the Feelings smiley faces were almost unusable in interview and we just asked them about their feelings to get the results. The reason might be scarcity of use of smiley faces in studied society; And also lack of efficient and related smiley faces for feelings (e.g. being disgusted, etc); however, further researches for arranging an efficient, culture-based pain scale is recommended

### Concluding message

High scores of pain and distress during catheterization are not negligible. Since most of the elective surgeries like cesarean section can be performed without urethral catheters in most of the cases, the excessive use of it must be limited. Introduction given to patients before catheterization can reduce distress which leads to reduction of pain; however, more researches must be conducted to support these ideas.



**References**

1. 1. Li L, Wen J, Wang L, Li YP, Li Y. Is routine indwelling catheterization of the bladder for caesarean section necessary? A systematic review. BJOG 2011 Mar; 118:400-9.
2. 2. Chung C, Chu M, Paoloni R, O'Brien MJ, Demel T. Comparison of lignocaine and water-based lubricating gels for female urethral catheterization: a randomized controlled trial. Emerg Med Australas. 2007 Aug;19:315-9.

**Disclosures**

**Funding:** Students research committee, Tabriz University of medical Sciences **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Local ethics committee of Tabriz University of Medical Sciences **Helsinki:** Yes **Informed Consent:** Yes