Indonesian Journal of Applied Health (IJAH)
p-ISSN: 0000-0000 e-ISSN: 0000-0000
Volume 1 , Number 1, June 2024
https://ojs.poltekkes-malang.ac.id/index.php/IJAH/index

THE EFFECTIVENESS OF ADMINISTERING DEEP BREATH TOWARD PAIN LEVELS ON PATIENTS POST SURGERY

Marsaid [1 (CA)], Nurul Hidayah [2], Naya Ernawati [3]
[1,2,3] Department of Nursing, Poltekkes Malang Ministry of Health
Correspondence author's email (CA): nsmarsaid@poltekkes-malang.ac.id

Abstract
Pain is a physiological response arising from one of the postoperative actions. Postoperative actions caused by actual tissue damage make the healing process disrupted. One of the nursing actions for pain management in a non-pharmacological way is administering the deep breathing. This study aims to determine the differences in the effectiveness of pain levels before and after the administration of deep breathing for patients who have TURP surgery at Mardi Waluyo Blitar Hospital. The study design used the quasi-experimental method with the pretest-posttest approach in one group. The sampling technique used was purposive sampling with a total of 10 respondents and treated by controlling a deep breath. The test used is a paired t-test with. The results showed that the treatment was effective in reducing pain levels in patients with TURP Surgery. The effectiveness of controlling deep breath giving p-value = 0.000 with the mean of pain level decreasing about 2.1. That means the use of controlling deep breath treatment can be used as an alternative to reduce the pain of post-TURP surgery.
Keywords: *Transurethral Resection of the Prostate (TURP), Pain Intensity, Controlling Deep Breath*

INTRODUCTION

Benign Prostatic Hyperplasia (BPH) is something growth tak - malignant stroma and glands epithelium prostate causes gland prostate enlarged (McPhee, 2012). According to (Labus, 2016), Benign Prostatic Hyperplasia (BPH) is common simultaneously with aging . There is no cause for Benign Prostatic Hyperplasia (BPH). is known . Changes in hormonal status are very important , decreasing relative androgen levels to estrogen levels stimulate hyperplasia glands and stroma (i Made Nasar, 2010). Prostate enlargement causes narrowing of the lumen of the prostatic urethra, thereby obstructing urine flow. This situation causes an intravesical increase in all parts of the bladder to the two openings of the ureters, so that due to high pressure it causes backflow of urine in the bladder into the ureters and causes vesico-ureteral reflux. Vesico-ureteral reflux causes hydroureter, hydronephrosis and ultimately kidney failure (Purnomo, 2011). The histological prevalence of BPH increases from 20% in men aged 41-50 years, 50% in men aged 51-60 years to more than 90% in men aged over 80 years (Cooperberg MR, 2013).

The high incidence of BPH in Indonesia has placed BPH as the second largest cause of morbidity after stones in the urinary tract. In 2013 in Indonesia there were 9.2 million cases of BPH, of which men over 60 years old suffered. In East Java, 672,502 cases of BPH were found in 2013 (Riskesdas, 2013). Meanwhile, the prevalence of BPH sufferers who underwent TURP surgery at Mardi Waluyo Blitar Regional Hospital from March to May 2022 was 154 cases of TURP surgery (IBS Medical Record Notes at Mardi Waluyo Blitar Regional Hospital, 2019).

The best long-term management for BPH patients is surgery, because administration of other non-invasive therapeutic drugs takes a very long time to see success. One of action most surgeries performed on BPH patients is surgery Transurethral Resection of Prostate (TURP). TURP is procedure surgery with enter resectoscopy through urethra For excision gland obstructed prostate . Procedure TURP surgery causes wound upcoming surgery secretes pain mediators and causes painful post surgery (Purnomo, 2011).

Pain is something sensory subjective and emotional that is not fun to be had related with damage network actual nor potential , or describe happen damage (Tamsuri , 2007). Pain that occurs in the body man Actually is response defense For tell exists dangerous damage to tissue body (Tortora, 2012). According to (Smeltzer SC, 2008) said that if painful No overcome in a way adequate so resulting in a rehabilitation process patient will delayed , hospitalization patient become longer , level high complications and need more Lots cost . According to a scientific paper (Syarifudin, 2016) entitled Post-TURP Operation Nursing Care in BPH patients in Mr. I in the Dahlia Room at Batang Regional Hospital stated that researchers conducted an assessment on post-TURP surgery patients, data was obtained: the patient said there was pain in the surgical area. P: the pain was felt during activity and the pain disappeared when resting, Q: like being stabbed, R: in the stomach lower middle part, S: pain scale 7 (severe) T: pain comes and goes, objective data the patient appears to be grimacing.

The role of nurses is very important in every surgical procedure before, during and after surgery. Nurses need to observe the level of post-operative pain to determine the pain scale. The way nurses can help relieve pain is by taking pharmacological and non-pharmacological approaches (Smeltzer S. &., 2012). Several studies have carried out non-pharmacological measures to treat pain in post-TURP surgery patients, such as research conducted by (Wulandari, 2018) on the effect of early mobilization on post-TURP surgery pain in BPH patients at RSU PKU Muhammadiyah Bantul using a quasi-experiment research method with a posttest control design type. with a total of 30 respondents. This study concluded that there was a significant difference in the effect of early mobilization on post-TURP surgery pain in BPH patients at RSU PKU Muhammadiyah Bantul before early mobilization and after early mobilization. Meanwhile, according to research (Sueb, 2016) on Benson relaxation can reduce post-TURP pain at Dr. Hospital. Pirngadi, Medan City, using a randomized pretest-posttest with control group design research method with a population of 14 people, concluded that the combination therapy of Benson relaxation and administration of analgesics can reduce the intensity of pain in patients after TURP procedures.

Non-pharmacological ways to reduce pain can be divided into two parts, namely physical modality therapy and cognitive-behavioral strategies. Deep breathing relaxation techniques, cold compresses and warm compresses are therapeutic modalities in the form of cutaneous stimulation (Price, 2006). Cutaneous techniques can provide effective pain relief. This technique distracts the patient and focuses attention on the takjil stimulus, away from painful sensations, thus reducing the perception of pain (Kozier B & Erb, 2009). According to (Smeltzer SC, 2008), deep

breathing can relax skeletal muscles that experience spasm caused by tissue incision (trauma) after surgery and increase blood flow to the traumatized area, thereby speeding up the healing process and reducing the sensation of pain.

Several studies on deep breathing as carried out according to (Widiatie, 2015) in his research on the Effect of Deep Breathing Relaxation Techniques on Reducing Pain Intensity in Mothers Post Cesarean Section at Unipdu Medika Jombang Hospital with a pre-experimental design with a one group pre-post test design approach with population 10 people. This study concluded that there was an influence of deep breathing relaxation techniques on pain intensity in post-cesarean section mothers at Unipdu Medika Jombang Hospital.

RESEARCH METHODS

The research design used by researchers in this study is a quasi experiment with a one group pretest-posttest design approach with a first observation (pretest) which allows testing changes that occur after the experiment or intervention. Population in study This is all over Post Trans Urethral surgery patients Resection Prostate (TURP) treated at Mardi Waluyo Regional Hospital, Blitar . Based on recorded data record medical BPH patients at Mardi Waluyo Regional Hospital during One month final totaling 52 patients May 2022. Collection samples in research This use provision from (Nursalam , 2011) which states when sample not enough from 1000 then sample Can taken 20%-30% of amount population . So sample study taken 20% of population as many as 52 respondents to 10 respondents .

The sampling technique used in study This is nonprobability sampling with quota sampling. The quota technique is technique determination sample in quota set every population based on signs that have influence biggest variables that will researched . In deciding criteria inclusion must with consideration scientific . Criteria inclusion in study This are : Post Trans Urethral surgery patients Resection Prostate (TURP) in space surgery , Respondent with age over 40 years old , patient is conscious (compos mentis) and cooperative , patient with type SAB anesthesia , the patient is the first to do it Trans Urethral surgery Resection Prostate (TURP), Patients experience painful moderate (minimum scale 4), Willing become respondents with moreover formerly Sign the informed consent , the patient is post- operative TURP and has been given drug anacgesic with the same type 6 hours after drug enter .

Study carried out in space take care stay surgery namely the Dahlia Room at Mardi Waluyo Hospital Blitar from 18 June to 25 July 2022. Data collection techniques used in study This is with interviews and observations . Interview techniques used aim For obtain information about basic data / identity respondents , meanwhile method observation used For observe in a way direct to respondents about level painful post TURP surgery patients .

Data analysis in research This aim For analyze effectiveness giving giving deep breaths to level pain in post - transurethral surgery patients resection prostate (TURP). On research this , ratio data need normality test was carried out moreover formerly using the Kolmogorov-Smirnov (KS) test with degrees 95% confidence $p = 0.05$, significant $p \geq 0.05$. After carrying out the KS test, statistical tests are then carried

out. This research uses comparative analysis. So the type of statistical test used if the KS test results are normally distributed is the paired t-test or paired difference test with a confidence level of 95% and an error level of 5% with a significance level of p<0.05. Testing in this research, the results of the paired t-test will produce a p-value which concludes that the p-value is significant if < 0.05 and not significant if the p value is ≥ 0.05.

RESEARCH RESULTS AND DISCUSSION

1. Pain Levels in Respondents Post Trans Urethral Surgery Resection Prostate (TURP) Before and After Giving Deep Breaths.

   Research result pain in respondents after Trans Urethral surgery Resection Prostate (TURP) before and after done action giving deep breaths during done once / day during three day can described in table 1 and diagram 2 below This :

   Table 1 Pain level before and after done administering deep breaths in the Dahlia Room at Mardi Waluyo Regional Hospital, Blitar .

No.	Pain	Scale Frequency Pain Sebelum	Frequency Prosentase	Scale painful Sesudah	Prosentase
1.	Nyeri Ringan	0	0%	6	60%
2.	Nyeri Sedang	9	90%	4	40%
3.	Nyeri Berat	1	10%	0	0%
Total		10	100%	10	100%

   Table 1 shows the pain intensity before administration Nearly all (90%) experienced moderate pain when breathing deeply, 9 people. After giving deep breaths, the majority (60%) experienced pain light number of 6 people.

2. Effectiveness Giving breath in to Level Pain Before and After Giving Deep Breaths to *Post Patients Operation* TURP

   Results of research analysis regarding differences in pain levels before and after giving in on patient post operation TURP outlined on table 2 following This:

   Table 2 Results Analysis Difference Level Painful Senelum And After Giving deep breaths in patients Post Operation TURP

Intervensi	N	Mean	Mean Penurunan	t	*p-value*
Sebelum	10	5,4	2,1	21,0	0,000
Sesudah	10	3,3			

*Tingkat kemaknaan α=0,05

   Table 2 is known mark *p-value* on table in atop obtained *p-value* <0.05 It means there is difference decline intensity painful after done giving deep breath on patient *post* TURP operation.

DISCUSSION

In the discussion in this study, the researcher explained the identification of pain levels of respondents in the coldpack, hotpack and deep breathing treatment groups and the

results of the analysis of the effectiveness of deep breathing on pain levels in respondents after Trans Urethral Prostate Resection (TURP) surgery in the Dahlia room at Mardi Waluyo Hospital, Blitar.

1. Pain Level of Respondents in the Deep Breathing Treatment Group

Based on the research results, it shows that the change in the pain scale after six hours of Trans Urethral Resection of the Prostate (TURP) surgery in respondents before giving deep breaths was that all respondents in this study experienced moderate pain. According to the researchers' analysis, the pain that arises after the operation according to the researchers' analysis is caused by tissue damage which triggers the release of pain mediators which will be transmitted to the brain and perceived as pain. This is in accordance with the theory (Smeltzer, 2002), namely that after surgery, tissue damage occurs which releases chemicals in the form of histamine, bradykinin, acetylcholine and the substance P. Prostaglandin into the extracellular tissue. These substances affect pain receptors (nociceptors) which are then transmitted to the spinal cord. In the spinal cord, these chemicals are released so that pain signals continue to the nervous system. This signal travels to the thalamus and finally to the highest center (cerebral cortex) in the brain so that pain occurs.

Based on the results of research after deep breathing treatment, it shows that the change in pain level after six hours of Trans Urethral Resection of the Prostate (TURP) operation is moderate pain. According to the researchers' analysis, this is influenced by several factors such as (1) anesthesia (spinal anesthesia block) no longer works (2) administration of Ketorolac tromethamine analgesic medication (3) experience of surgery (4) experience of dealing with pain (5) administration of deep breaths .

Giving deep breaths can reduce the level of pain by releasing chemical mediators such as bradykinin, prostaglandins and substance P which will stimulate the sympathetic nerves, causing the sympathetic nerves to experience vasoconstriction which ultimately increases muscle tone which causes various effects of muscle spasm which ultimately compresses the blood vessels. Reducing blood flow and increasing the speed of muscle metabolism which causes the sending of pain impulses from the spinal cord to the brain and is perceived as pain (Suddart, 2002). This is also in line with research (Widiatie, 2015) showing that the deep breathing technique carried out on post-cesarean section mothers at Unipdu Medika Jombang Hospital with a pre-experimental design with a one group pre-post test design approach with a population of 10 people concluded that there was an influence of the technique. deep breathing relaxation on pain intensity in post-cesarean section mothers at Unipdu Medika Jombang Hospital.

2. Effectiveness of Pain Levels after Deep Breathing

Based on the research, the results showed that there was a difference in the level of pain after being given deep breathing therapy, indicating that there was a decrease in the level of pain. This shows that this method is effective in reducing pain levels. In general, the results of this study are in line with the truth of the theory regarding giving deep breaths which can reduce or reduce pain to control the nervous system

which can ultimately reduce pain levels (Arovah, 2010).

CONCLUSION

Based on the results of the research, entitled "Effectiveness of Deep Breathing on Pain Levels in Post-operative Trans Urethral Resection Prostate (TURP) Patients in the Dahlia Room, Mardi Waluyo Hospital, Blitar" which was carried out on June 18-July 25 2019, it can be concluded that the pain intensity scale before and After giving deep breaths in the group, from almost all at moderate levels down to mostly at mild levels of pain.

SUGGESTION

1. For Nurses in the Dahlia Room at Mardi Waluyo Regional Hospital, Blitar
Expected can used as alternative for nurse For reduce pain in post - operative patients especially in post- operative trans urethral resection prostate (TURP) patients .
2. For Respondents
Expected deep breathing therapy can applied when At home For reduce pain felt anytime when currently feel painful or Sick consequence post- operative pain nor exists injury .
3. For Researchers Furthermore
Expected researcher furthermore can develop study with study about post- operative Trans Urethral Resection Prostate (TURP) patients such as : long time hematuria, other non- pharmacological therapy For overcome pain , and increase amount respondents to the research furthermore .

BIBLIOGRAPHY

Alimul , A. A. (2003). Nursing Research & Scientific Writing Techniques. Jakarta: Salemba Medika.

Arif, M. (2011). Nursing Care for Urinary System Disorders. Jakarta: Salemba Medika.

Arikunto, S. (2006). Research Procedures A Practical Approach. Jakarta: PT Rineka CIpta.

Arovah , N. (2010). Therapy Cold (Cold Therapy) deep Handling Injury Sport .

Asmadi. (2008). Nursing Procedural Techniques: Concepts and Applications of Basic Client Needs. Jakarta: Salemba Medika.

Brunner, & Suddarth. (2002). Nursing Textbook Nursing Medical Surgical Ed. 8 Vol. 1. Jakarta: EGC.

Burke, L. P. (2008). Medical surgical nursing: Critical thinking in client care. (4th ed). New Jersey: Pearson Prentice Hall.

Notes Record IBS Medical , Mardi Waluyo Regional Hospital, Blitar . (2019). Blitar : Mardi Waluyo Regional Hospital.

Cooperberg MR, BJ (2013). Defining High Quality Health Care. Urological Oncology: Seminars and Original Investigations, 411.

Costantini R, AG (2011). Controlling Pain in the Post-Operative Setting. US National Library of Medicine, 27-116.

Gayatri Oktasari , d. (2014). Comparison Effectiveness Compress Warm and Compress Cold To