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Research Article

The Corellation of Hypnoanesthesia with Pain Degree on Installation of Intra Uterine Device (IUD)

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Abstract

Aims : this study was to analyze the difference of median pain of IUD insertion in hypnoanesthesia group and IUD mounting standard group, to analyze the difference of pain reduction scores of IUD insinuation on hypnoanesthesia group and IUD mounting standard group and to analyze hypnoanesthesia relationship with degree of pain in the installation of Intrauterine Device (IUD).

Research : research design used quasi experimental approach with two group post test only with control group design. Analysis of results using Mann-Whitney and Chi-Square test.

Results : result of the research shows that there is difference of pain score of hypnoanesthesia group that is median value 4 and standard group of IUD insertion with median value 5 and obtained p value <0.001. There was a difference of pain reduction score in the hypnoanesthesia group of 60% and in the standard group of 33.3% with p = 0.002. There is a correlation of hypnoanesthesia with degree of pain in IUD insertion with p value = 0.005.

Conclusions : the hypnosis method emphasizes the emergence of positive suggestion, calm feeling, and relaxation that make it comfortable. When the condition is calm and relaxed, the brain will automatically release the hormone endorphins that reduce pain and give a sense of comfort and relaxation.

Keywords:

Childbirth, Hypnoanesthesia, Intra Uterine Device (IUD), Pain Degree, Time Period.

INTRODUCTION

Family planning and family information system said that family planning program is one way to control child birth, time period and ideal age for giving birth, manage pregnancy, through promotion, salter and help that based onrights of reproduction to accomplish a family with quality family planning is one of strategy to reduce the number of mother's deathespecially for a mother with pathologic condition 4T (too young in age, too often giving birth, too close time period of giving birth and too old in age). Beside all of those, family planning also purposed to upgrade the family quality so

that it can bring safe feeling, peace and best hopes for better future to accomplish the wealthiness of mentally and socially. (1)

Survey of family planning member at 2015 (2) shown that inject contraception still become the best choise for the couple of childbearing age with the percentage about 53,83%, and then they are following the list by pill 28,30%, implant 21,99%, intrauterine device 6,79, MOW 5,59%, condom 3,69% and MOP 0,49%. Number of Couples of childbearing age in west java reached to 9.715.469 and active family planning member are about 7.031.902 with using inject contraception 3.610.253 member, pill

1.665.048, intrauterine device 798.654, implant 392.978, condom 334.039, MOW 177.664 and MOP 53.266 member. Number of couples of childbearing age in Bandung are about 648.562, and family planning active member are 552.482 who are using injection 309.541, pill 99.720, intrauterine device 92.544, implant 23.219, MOW 15.368, condom 6.446 and MOP 5.394 user. (3)

The low coverage of Intrauterine device is caused by afraid during installation, which are hard medical procedures including pelvic examination that caused afraid and pain during it. Hypnoanesthesia become one of psychotherapy approach and effective way to handle pain. Relaxation hypnosis method which combined with acceptance technique that adapted from the art of meditation are in several times had been effectively proven to handle the pain. Hypnoanesthesia become an alternative to reduce the pain because this method is very simple that with only using the power of positive suggestion that appear based on the mind concept so that it can bring positive energy that could be control by ourself (4). Research that had been done in Australia resulted that hypnosis could do to manage pain while birthing. The research proven that group of mother (46,7%) whom accepted this method only feel low pain, while the other group (65,2%) feel very much in pain (5). Hypnoanesthesia is an anesthesia system that can make consciousness status become passive artificially so that will increase the obedience to suggestions or order and the consciousness and attention become also limited. (6)

METHODS

This research design was using quasi experimental approach with two group post test only with control group. Quasi experimental is kind of evaluation with aim to decide is the program or intervention to the subject of research. This research focus on the using of hypnoanesthesia method. Samples of this research are applicants for

intrauterine device family planning method. To determine of sample is by consecutive sampling technique that all subjects who are qualified are put in the research until all sample number is fulfilled. Inclusion criteria on this research are candidate for intrauterine device of family planning program, only have one child, never using intrauterine device before, and approved to have this method by her husband.

The candidate of intrauterine device will have to through the examination to make sure that she is a well condition and allowed to take the intrauterine device (not contradict). Procedures that will be doing are anamneses, body examination, bimanual examination and inspeculo, examination will be doing by competent midwife. The woman that stated healthy and willing to become part of the research will get the coupon to separate between control group and application group until it become 31 person per each of group. The candidate in application group will receive hypnoanesthesia method for 45 minutes before the intrauterine device being apply until the candidate feel relax and comfortable, and in that conditions then will be do the application of intrauterine device according to standard of service. After that the candidate will be back to the fully consciousness and the level of pain while was the device applied would be rank. Then the candidate will be placed to the observation ward and take a rest for 15 minutes, and then the candidate will be rank and all proceed are done so she may go home. Candidate from control group, will be given the intrauterine device placement as usual it been done. After that the rank of pain will be examine and being gave the same treatment with the first group, then after 15 minutes the candidate will be rank and all proceed are done so they may go home. Pain intensity measurement was using Numeric Rating Scale (NRS) method. Client asked to mark a pain score scale 0 to 10 that describe pain description while intrauterine device being apply. With the category (0) painless, (1-3) low pain, (4-6) middle pain, (7-9) pain,

(10) painful. To do the measurement, client is marking on the line with range number to describe the pain. Processing from the data that collected had been done in line and column tabulation with every variable formed as characteristic and Numeric rating Scale (NRS) from the result of hypnoanesthesia technique. Data that had been analysis will be proceed descriptively and analytically. For the description it will give number of statistic scale and presentation for category data, while in numerical data it will give count of average, deviation standard, the median and range. Statistical test that used was Mann Whitney method to compare the differentiation both middle point data, data was not normal distribution that there is pain score to each group, Wilcoxon test method used to

compare differentiation both middle point data there are between the pain during applying device and 15 minutes after. Chi square correlation test used to figure out is there any correlation between hypnoanesthesia with pain score of intrauterine device installation.

The research had been done in district Pacet Bandung with research subject are candidate of intrauterine device method. Time its doing was about October to November 2017 with approval from research health ethic commission of medical faculty at Padjajaran University number of license: 1077/UN6.C.10/PN/2017. Subject validity was 62 candidate of intrauterine device method.

RESULTS

Table 1. Differentiation of pain score for Hypnoanesthesia and Standard Installation group

NRS	Group		P value*
	Hypnoanesthesia (n=31)	Standard installation (n=31)	
1. During Installation			< 0.001*
Mean (SD)	3.32 (1.83)	5.19 (1.70)	
Median	4	5	
Rentang	1-7	2-8	
2. After 15 minutes installation			< 0.001*
Mean (SD)	1.26 (1,24)	3.0 (1.46)	
Median	1	3	
Rentang	0-4	0-5	
Score comparison during and 15 after installation	p < 0.001 **	p < 0.001 **	

Note : * Uji Mann Whitney dan **Uji Wilcoxon

Table 1 shown that there are different of score of pain from the hypnoanesthesia group and that is median point (4) and with the standar intrauterine device installation with the median point (5) and there is a point $p < 0.001$. after 15 minutes installation there are the different in the number of median. (1) for the hypnoanesthesia group and (3) for standard installation group. So we get $p < 0.001$.

Table 2. Differentiation of pain decrease score for Hypnoanesthesia and Standard Installation Group

Decrease pain score (%)	Group		P value*
	Hypnoanesthesia	Standard Installation	
Mean (SD)	65.4 (30.3)	41.9 (24.1)	0.002
Median	60 %	33,3 %	
Range	0-100	0-100	

Note : *uji Mann-Whitney

Table 2 shown that there are a different score of pain decrease on hypnoanesthesia group reached to 60% and on the standard installation reached about to 33.3% with value $p=0.002$ ($p<0.05$) so that we can conclude that there are significant differentiation score between hypnoanesthesia group and standard installation group.

Table 3. The Correlation Hypnoanesthesia with pain degree for intrauterine device installation

Pain Degree	Group		P value*
	Hypnoanesthesia	Standard Installation	
1. During Installation			
Low pain	15 (48.4)	6 (19.4)	0.009
Middle pain	15 (48.4)	17 (54.8)	
Painful	1 (3.2)	8 (25.8)	
2. After 15 minutes installation			
Painless	11 (35.5)	2 (6.5)	0.005
Low pain	18 (58.1)	20 (64.5)	
Middle pain	2 (6.5)	9 (29)	

Note: *Uji Chi Kuadrat

Table 3 shown of proportion of pain degree during installation, that there are same position 48.4% to 54.8% in the middle pain, so that known the p value = 0.009 ($p<0.05$) to conclude that there is a significant correlation between hypnoanesthesia to the pain degree during intrauterine device installation. Proportion of pain degree at 15 minutes after installation for the hypnoanesthesia group is painless (35.5%), while to the standard installation user is in low pain position (64.5%) and the p value = 0.005 ($p<0.05$) and it can be also conclude that there is a significant correlation between hypnoanesthesia to the pain degree after 15 minutes intrauterine device installation.

DISCUSSION

Mann Whitney statistic test resulted p value $p < 0.005$, with median value differentiation 4 during intrauterine device installation for the hypnoanesthesia group and median value 5 for the standard installation group. At 15 minutes after installation median value 1 for the hypnoanesthesia group and median value 3 for the standard installation group. So that it concluded that there are significant differences of the pain degree between hypnoanesthesia group and standard installation group (7) One thing that become an obstacle for intrauterine device installation is fear of pain during installation. Procedure that can make it pain is the tool of installation in the service to stabilize the uterus and to stimulate the canal of uterus so it can be straight through the uterus, to put the inserter tube through service, and also irritation on the endometrium cavity caused by the intrauterine device stick. Service pain was mediated by parasympathetic nervess² to s⁴ and sympathetic fiber from T10 to L1 that connected to the uterine fundus. Some of intrauterine device installation is done at post partum or post abortion as procedure as clinical based with the purpose to reduce the pain during installation because womb is in the involution or post abortion (8)

Pain degree that felt by woman during intrauterine device installation is variative its informed by some research that has published, mostly woman had the middle pain level during installation. It related to feel sick to vomit and restless after installation. The pain could be still be felt to the 15 minutes after installation, the pain predicted being came from the psychosocial factor, as imagination of pain that will influence the woman whom will do this procedure. Pain during installation can become a problem and abstacle for the woman to use this method. Some research has been tested some intervention for the pain during installation (9,10). This study is evaluating profilaxis intervention and the procedure to reduce the pain. With decided

the optimum method to reduce the pain while installation can increase the reach of intrauterine device user as family planning method. As an alternative, ineffective intervention only will increase cost and hold the initiation of installation. Hypnosis had many times used for some research and being applied to be pain management method to reduce pain during child birthing, post surgery, pain management for some painful cases and intrauterine device installation is one of it. (11)

Hypnosis has taken as an effective non pharmacology therapy for psychology and non psychology. But one of the benefit is as a strategy to manage the painful condition compared to standard treatment. Hypnosis gave modern cure. It also gave a superior effect compare to the other psychology intervention for pain treatment that exist. It based on the research that had been done by Guy H. Montgomery which has shown that hypnosis has effect to handle the pain, with p value $p = 0.001$ mean it is significant influence between hypnosis to the painfulness(12) Result of statistic test median score for pain decrease of the hypnoanesthesia group is 60 % and the standard group is 33.3 % with p value = 0.002 so that it concluded there is a significant different from those two groups. The decrease of pain degree of the hypnoanesthesia group shown higher percentage compare to standard group. In line with (13), that with hypnosis technique purposed to solve the problem or increase self skill, that the result hoped to stay forever. In hypnotherapy, client and hypnotherapist cooperate to get the aim. Client wont be made unconscious or helpless, in the other way they will be guide to realize their self strength so they can use their wise and mind strength to tell themselves that they can do it. (14)

Modern Hypnotherapy method with client oriented have more chance to open the client realization to know their main problem and help them to cure or solve the problem itself by themselves. Client will feel more

comfortable with their own condition and also can take the condition that they have, so the problem will not disturb their daily routine. By that we can say that hypnotherapy is a hypnotical application to cure. If the client given a suggestion to decrease the pain degree so the aim of hypnotherapy is to decrease the pain that felt by the client. Respondent will get a positive suggestion that will be delivered to the hypothalamus, so the respondent themselves can control the pain perception, decrease the pain degree will be more appear according to parasympathetic nerve reaction respond to the pain by suggestion. (15). Generally hypnotherapy for anesthesia is using psychological approach, it works by increasing client coping skills, coping skills were built since they were a child, but it can be also built and developed with education and training, one of the trainings mentioned is hypnotherapy that will change the pain perception to the client (16).

According to chi square test, pain degree proportion during installation of the intrauterine device to the hypnoanesthesia group are in the low pain stage (48.4%) and for the standard installation group are in the middle pain (54.8%) so by that the p value = 0.009 ($p < 0.05$) it can be concluded that there is a significant difference of pain degree between hypnoanesthesia client with standard installation client (17). Pain degree proportion in the 15 minutes after installation, hypnoanesthesia group came to the stage painless (35.5%) while the group with standard installation are in the low pain stage (64.5%), by that we know the p value = 0.005 ($p < 0.05$) and concluded that there is a significant correlation between hypnoanesthesia to the pain degree in 15 minutes after installation of intrauterine device. (Table 3)

Pain management with this technique is an external treatment that influences the internal response of pain. Pain management with hypnosis including diaphragm, progressive relaxation technique, guided imagery and meditation. Some research has

shown that hypnosis is very effective in decreasing pain of post operation (18)

Hypnosis method point is in to bring the positive suggestion, relax and comfortable. When client felt relax automatically the brain will flow the endorphin hormone that will reduce the pain and give comfortableness. But if there are panic, fear or stress during installation felt stronger, then the brain will flow some substance that will block endorphin. More fear some one while having child birthing more pain that the feel will be (19) Hypnosis will bring the mother to the condition to not at all thinking about the pain that will be caused by medical intervention. But hypnosis be able to make the mother keep relax and not being panic, so without any pain, the installation of intrauterine device can be going smooth (20). While in the relax condition, the subconscious will manage the harmony of body so it can produce a natural anesthesia so we acknowledge it with endorphin hormone. This condition is line in with a research that had been done by Melyana and friends (2009) titled "Pengaruh Metoda Hypnobirthing Terhadap Intensitas Nyeri Kala I Persalinan Normal di BPS Kota Semarang."

The research shown that mostly respondent without hypnobirthing has painful intensity about to 70% and low pain 30%. For respondent with hypnobirthing mostly they had low pain 66%, middle pain 27% and painful 7%. This research also supported by the result of research by Marfu'ah about the difference of pain intensity to hypnobirthing respondent for primipara with normal child birthing. It then known that from 30 respondent with hypnobirthing respondent whom shown painful are 40%, middle pain 53.3% and low pain 3.3%.

CONCLUSION

There are differences of pain score in the intrauterine device installation for group with hypnoanesthesia and standard installation. There is difference in pain score decrease. And there is a relation between

anesthesia with pain degree during intrauterine device installation.

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