

Impact of Hypnotherapy on Preeclampsia in Pregnant Women

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Abstract: Preeclampsia is a syndrome that comes on after the 20th weeks of pregnancy commonly manifested by "trias" symptoms of increased blood pressure, proteinuria and edema. Preeclampsia is the second leading cause of maternal mortality in Indonesia. Dr. Soebandi Hospital Jember as a referral hospital in Jember district recorded high preeclampsia incidence rate which potentially caused maternal death. In addition, preeclampsia also affects the growth of infants and children. The approach to dealing with preeclampsia is now focused more on the symptoms due to the uncertainty of the cause of preeclampsia. A commonly suspected cause is psychological factors of pregnant women. Stressful pregnant women stimulate the secretion of the cortisol hormone that punctures vascular vasodilation resulting in increased blood pressure and circulatory disturbances. An integrated approach between physical and psychological has not been observed. Hypnotherapy is an alternative approach to facilitate the subconscious energy reflecting that the body functions normally. The purpose of this study was to determine the impact of hypnotherapy on the development of preeclampsia. This study used One Group Pretest-Posttest design involving 30 out of 32 people as population and opted accidental sampling technique. Hypnotherapy was given from the 34th week of pregnancy to the postpartum period. The preeclampsia pre and post hypnotherapy trials were analyzed by bivariate and then tested using two paired samples. The results of t test were t-count of systole 2,271 ($p = 0,036$), diastole 2,114 ($p = 0,049$), urine protein 2,558 ($p = 0,020$) and edema 2,333 ($p = 0,031$). This suggests that there is a hypnotherapy effect on the decline of "trias" symptoms of preeclampsia. The administration of hypnotherapy and pharmacological management has a more positive effect on the "trias" symptoms of preeclampsia compared to only pharmacological management.

Keywords: Hypnotherapy, Preeclampsia

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I. Introduction

Preeclampsia is a syndrome manifested by "trias" symptoms, (hypertension, edema, and proteinuria). Preeclampsia usually comes on after 20th weeks of pregnancy (Cunningham, 2005). The preeclampsia rate increases from year to year. According to WHO the incidence of preeclampsia occurs mainly in developing countries. In Indonesia the incidence rate of preeclampsia is 7-10% of pregnancy. Preeclampsia incidence rate in East Java is 14%. Jember regency as the third largest city in East Java recorded the incidence rate of preeclampsia at 17% of pregnancy and most cases of preeclampsia were referred to dr. Soebandi Hospital Jember.

The exact causes of preeclampsia in pregnancy have not yet been discovered. Many theories put forward about the process of the occurrence of preeclampsia. The antigen-antibody reaction in pregnancy is simply depicted as the reaction in the body by which the body is protected from complex foreign molecular such as the existence of the fetus in the mother's womb. In this case the body makes a defense mechanism. Saito (2007) found there was an activation of the innate and adaptive immune system in clients with preeclampsia. In addition, the body's immunoregulatory system drops and persistent inflammation reduces the function of regulatory T cells. Therefore, systematic immune activation may be one of the causes of preeclampsia. Preeclampsia causes transplacental circulation to be impaired due to vasoconstriction of blood vessels including fetal circulation. Inadequate blood circulation of the fetus affects the growth of the fetus. According to Xiong (2001), babies born to preeclamptic mothers are at risk of prematurity and have asphyxia and low birth weight. In addition to the preeclampsia fetus also affects mother's physical condition such as post partum hemorrhage and mortality.

In Indonesia the maternal mortality rate (MMR) was at 248/100,000 live births in 2007 (the Central Bureau of Statistics/BPS) and was higher compared to the government target according to Millennium Development Goals (MDGs) of 125/100,000 live births (Indonesian Ministry of Health, 2008). In East Java, based on Maternal Mortality Report (MMI), the number of maternal deaths in 2011 was 627 cases of which the postpartum period ranked the highest at 48,17%, while ante and postnatal contributed respectively 22.49% and 29.35%. The causes of maternal mortality rate in East Java in 2011 covered 29% bleeding, 27% pre eclampsia,

22% other causes, heart disease 16% and infection 6% (Dinkes Jatim, 2011). The maternal mortality rate in Jember in 2012 was 116,4/100.000 live birth and caused by pre ekmormia heavy-eclampsia 41,86%, bleeding 30,23%, for others 16,28%, heart disease 6,98% and sepsis 4,65%, while the incidence rate preeclampsia in Jember in 2012 recorded 575 cases (Dinkes Jember, 2013).

Actions to treat preeclampsia are medically performed by relieving symptoms and providing therapy to prevent eclampsia. But in reality many mothers with mild preeclampsia become severe preeclampsia or eclampsia. To our knowledge, medical action combined with psychological actions aimed at improving the immune system by increasing the subconscious energy to function normally has not been conducted. Research Glaser et al (2002) concluded that the immune system may be affected by psychological interventions such as hypnosis. Increasing the subconscious mind that the baby contained in the womb was part of the mother's body can prevent antibody antigen response

Hypnotherapy is one way to arouse the subconscious mind with positive suggestions for the purpose of healing. Gay (2007) found that hypnotherapy could lower the blood pressure of the client with hypertension. In hypnotherapy, positive affirmations are made when the body is in a relaxed state or an alpha brain rhythm condition. Planting positive affirmations repeatedly can put the body function as expected (Silalahi, 2010). Positive affirmations given in this study was conditioning of the entire system of the body especially cardio vascular and immunological system to function with the expected norms so that the mother and her fetus were assured to be fine. The indicator of healthy mother and fetus is measured from the blood pressure and the proteinuria while that of a healthy fetus is measured from the fetus heart rate and fetus weight estimation.

A pregnant woman who goes in a hypnotic condition, her mind waves enter the alpha wave with the frequency of 7-14 hertz or more deeply into theta waves with a frequency of 4-7 hertz. When the mind enters this wave, humans produce a natural endorphin substance generating a pleasant and comfortable sensation. Besides the hypnotic condition causes the body's metabolism to be better and the body is freed from tension (Santos, 2008).

Research by Hendriyanto (2011) found a significant influence on the use of hypnotherapy on stress levels in students of faculty of nursing Universitas Padjadjaran in 2011. Hypertension as one of the signs of preeclampsia is caused by vascular vasoconstriction. Cortisol, a hormone secreted during stress, can increase vasoconstriction. Cortisol secretion can be prevented by hypnotherapy. A hypnotized mother is in a comfortable and relaxed state so that cortisol secretion decreases (Smyth, 2001). Decreased cortisol secretion affects the decrease in vasoconstriction so that blood pressure also decreases.

Hypnosis also works to increase the activity of the right brain. The right brain is directly connected to the Autonomic Nervous System that regulates blood pressure, heart rate, breathing, and digestion (Campbell, 2002). Rafael (2006) found hypnosis as a stress therapy that could stabilize right-brain and left brain function (Rafael, 2006).

The emerging stressors will be received by thalamus and then passed on to the Limbic system and the primary sensory cortices, thus they affect the limbic system. In the limbic system serotonin, norepinephrin, and GABA will affect hypothalamus to remove excessive CRF and there will be an increase in ANS activity. CRF alone will stimulate the anterior pituitary gland to exclude excessive ACTH. ACTH stimulates the adrenal cortex to secrete excess cortisol so that cortisol itself will stimulate vasoconstriction of the blood vessels.

Psychologically, any negative self talk or negative influence can be alleviated with positive suggestion so that all problems or stresses will be replaced with a more positive belief about the body functions. Suggesting that all organs of the body functions well, especially cardiovascular function, kidney function influences the growth of fetus. Factors affecting the response to stress include physiological functions of personality behavioral characteristics, stressor characteristics, such as intensity, duration, scope, amount, and stressor properties (Gadzella, 2001).

Taking into account of those significances, to examine the influence of hypnotherapy on preeclampsia is strongly necessary.

General Purpose of Research

To analyze the influence of hypnotherapy on preeclampsia in dr Soebandi Hospital Jember

Specific Purpose of Research

1. To identify the "trias" symptoms of preeclampsia prior to Hypnotherapy.
2. To identify the "trias" symptoms of preeclampsia after Hypnotherapy.
3. To analyze the influence of hypnotherapy on the "trias" symptoms of preeclampsia.

Conceptual framework

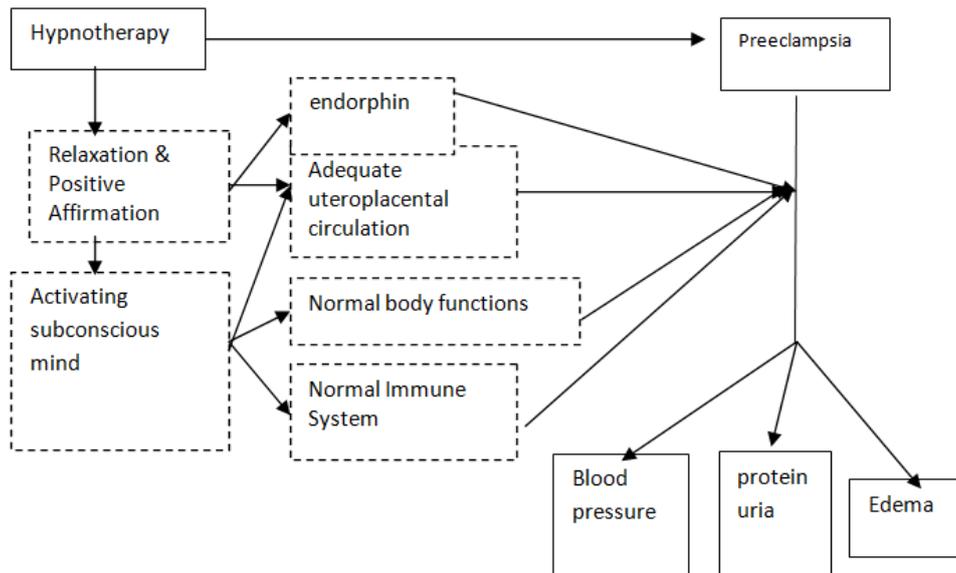


Figure (1) The conceptual framework of the influence of hypnotherapy on preeclampsia

Notes : = area covered in the study

= area not covered in the study

Research Hypothesis

Ha: There is an effect of hypnotherapy on the trias symptoms of preeclampsia

II. Research Method

Design

This is a *Pre-experimantal research* with “*One Group Pretest-Postest*”research design. This is an effort to explore the influence of Hypnotherapy on trias preeclampsia. The research population were 32 pregnant women under light preeclampsia who underwent medical therapy of pharmacological management at polyclinic especially for pregnant women in dr. Soebandi regional hospital (RSD) in Jember regency during May to August 2015, while 30 people were involved as research samples identified through Slovin pattern. The research implemented the technique of non probability sampling with the type of accidental sampling; one way of collecting samples by involving available respondents in the research area and context.

Research Variables

Treatment Variable : Hypnotherapy

Measured Variable : Triage symptoms of preeclampsia pre hypnotherapy.

Triage symptoms of preeclampsia post hypnotherapy.

Table (1) Operational Definition

Variable	Operational Definition	Indicator	Measurement tool	Measurement Scale	Result
Hypnotherapy	Efforts for subconscious energy improvement of pregnant women to properly function the body organ through steps: - relaxation, - Intensification, - implantation & - trmination	Relaxation & Suggestible	Standard Operating Procedure (SOP)	-	-
“Trias”Symptoms of preeclampsia	Three indicators of pregnancy over 20 weeks such as increased blood pressure,	Pre eclampsia: • Light, if: - BP: Systole 140-160 mmhg	Observation Sheet	Interval	<ul style="list-style-type: none"> • Value of systole blood pressure • The

	proteinuria and leg edema usually occur before Hypnotherapy and medical treatment management	Diastole 90-110 mmhg - Urine protein: +, or ++ - Oedem on face and legs • Weight, if: - BP: sistole \geq 160 mmhg Diastole \geq 110 mmhg - Urine protein: +++ or ++++ - Oedem on face and legs - Epigastric pain			value of diastole blood pressure • Protein in urine • Leg edema
“Trias”Symptoms of preeclampsia	Three indicators of pregnancy over 20 weeks such as increased blood pressure, proteinuria and leg edema usually occur after Hypnotherapy and medical treatment management	Pre eclampsia: • Light, if: - BP: Systole 140-160 mmhg Diastole 90-110 mmhg - Urine protein: +, or ++ - Oedem on face and legs • Weight, if: - BP: sistole \geq 160 mmhg Diastole \geq 110 mmhg - Urine protein: +++ or ++++ - Oedem on face and legs - Epigastric pain	Observation Sheet	Interval	• Value of systole blood pressure • The value of diastole blood pressure • Protein in urine • Leg edema

Data Analysis

After data collection, checking or data correction was carried out followed by descriptive test and *t tes* of two couple of samples namely pre-eklamsia symptom pre and post hypnotherapy.

Research Code of Conduct

The research has been tested and obtained letter of recommendation in the form of “*Ethical Clearance*” from Ethical Commission of Medical Research, Polytechnic of Health, Ministry of Health Malang with number of registration : 217/KEPK-POLKESMA/2015.

III. Result

A. Triage Symptoms of Preeclampsia Identification Pre Hypnotherapy

Table (2) Observation Result over Respondents Trias Symptoms of Preeclampsia Pre Hypnotherapy

	Mean	modus	n	SD
• Blood Pressure Systole	146,66	-	30	7,88
• Diastole Blood Pressure	107,5	-		10,31
• Protein in urine		+2		
• Edema		+2		

B. Triage Symptoms of Preeclampsia Change Identification post Hypnotherapy.

Table (3) Observation Result over Respondents Trias Symptom of Preeclampsia Post Hypnotherapy

	Mean	modus	n	SD
• Blood Pressure Sistole	128,4	-	30	6,78
• Diastole Blood Pressure	88,4	-		5,2
• Urine protein		+1		
• Edema		+1		

C. Change Differences in respondents’ Trias Symptom of Preeclampsia pre and post hypnotherapy

Table (4) The observation result of Change Differences in respondents’ Trias Symptom of Preeclampsia pre and post hypnotherapy

	<i>t</i>	<i>p</i>	<i>n</i>
Blood Pressure Sistole	2,271	0,036*	30
Blood Pressurediastole	2,114	0,049*	
Protein urine	2,558	0,020*	
Edema	2,333	0,031*	

*Significant at α 0,05

IV. Discussion

Change Identification in “Trias” Symptom of Preeclampsia through pharmacological management prior to Hypnotherapy

From the t-test results it was found that the effect of pharmacological management occurred in the triage symptoms of preeclampsia. This way, in the pharmacology management pregnant women was given anti-hypertensive therapy which affects the decrease in blood pressure, and diuretic therapy. The results can be seen from the average blood pressure of both sistole and diastole. As a matter of fact, sistole blood pressure decreased 19 mm Hg; From 147 mm Hg to 128 mmHg. Whereas, diastolic pressure also decreased by 16 mm Hg; From 104 mm Hg to 88 mmHg.

The decrease of blood pressure has an impact on increasing blood circulation to kidneys so that kidney damage can be prevented and urine protein decreases. The decrease of plasma proteins can prevent fluid loss to the intra-cell space. The research result showed the average of systole blood pressure of 146.66 mmHg, diastolic blood pressure 107, mmHg, urine protein mode +2, and edema mode +2. This is a symptom of light preeclampsia according to Cunningham (2005) which means syndrome with triage of symptoms of hypertension, edema and protein uri. Preeclampsia begins at 20 weeks of pregnancy.

Change Identification in triage symptoms of preeclampsia post hypnotherapy and pharmacological management of preeclampsia mothers

From t-test result, the effect of pharmacology management and hypnotherapy over the triage symptoms of preeclampsia was identified. This way, pharmacological management technically has an impact towards the decrease of blood pressure, urine protein and edema. In addition, the treatment of hypnotherapy will likely have more effect towards the decrease of blood pressure, urine protein and leg edema.

Hypnotherapy apparently disables critical factors and evokes the subconscious mind. Hypnosis is also able to increase the right brain activeness or Autonomic nervous system which controls blood pressure under normal conditions (Campbell, 2002). Hypnotherapy can also overcome stress as hypnotherapy through relaxation techniques can relax the body. With a relaxed body, cortisol hormone secretion can be inhibited and this condition causes vasoconstriction of blood vessels to be prevented so that blood pressure decreases.

As the result, the right and left brain can work more stably and balanced (Rafael, 2006). The subconscious mind is very responsive to mothers with anti-hypertensive and diuretic therapy. Anti-hypertension affects the decrease of blood pressure. The research result showed the average blood pressure of both systole and diastole. Systole blood pressure decreased 19 mm Hg; From 147mm Hg to 128 mmHg. Whereas, diastole pressure decreased by 16 mm Hg; From 104 mm Hg to 88 mmHg.

The research results showed that the average systole blood pressure before management was 128 mm Hg, diastole blood pressure 87 mm Hg, urine protein with mode 0 and edema with mode 0 which indicated that pregnant women in preeclampsia condition. The treatment of hypnotherapy awakens the mother's subconscious and positive suggestion that the body was in normal functions. However, through individual observation, some mothers with systolic pressure of ≥ 140 mm Hg, diastole ≥ 90 mm Hg, urine protein + 2 still exist due to various factors. The research results showed that mothers with preeclampsia history had systole and diastolic blood pressure but with a mild preeclampsia category. Long-lasting disorders, even as seen as organ function disorder will surely affect the healing process.

The Influence of Hypnotherapy on triage symptoms of preeclampsia.

From t test result, the difference of pre and post hypnotherapy: the value of t-systole count was 2,271 ($p = 0,036$), diastole 2,114 ($p = 0,049$), urine protein 2,558 ($p = 0,020$) and edema 2,333 ($p = 0,031$). This means the influence of hypnotherapy on the triage of preeclampsia symptoms occurred. The provision of hypnotherapy and pharmacological management had a more positive effect on triage of symptoms of preeclampsia than that of pharmacological management

Hypnosis applied through pharmacological management for the control of preeclampsia will enable most organs work better as hypnosis can modulate the right brain and left brain in a balanced way. This obviously effects the balanced body functions control so that all body functions work normally including heart and kidney. The subconscious mind also enables the body to function automatically. This promotes normal blood and improves urine protein levels which eventually prevents intracellular fluid run to the extracellular and edema, thus, will not occur.

Positive suggestions towards pregnant women in preeclampsia will respond normally in trance condition as brain waves are in alpha to delta conditions. This is the program mechanism for the body to respond according to suggestion. In addition to the trance conditions, critical factors were blocked so that any suggestion transferred into subconscious mind received as a message of no evaluation process. Repeated Suggestions will reinforce the suggestion program in the body.

V. Conclusion

Conclusion

Based on the research result, the following conclusion comes as points to ponder:

1. Triagesymptom of preeclampsia occurred after pharmacological treatment prehypnotherapy
2. Positive change occurred over triagesymptom of preeclampsia post hypnotherapy and pharmacological management
3. The influence of hypnotherapy and pharmacological management exerted over rate decrease of triagesymptom of preeclampsia.

Suggestion

1. For Medics

Medics and midwives are suggested to develop Non-pharmacological approach as one of their independent treatments in preeclampsia management such as hypnotherapy.

2. For further research

Further researches can be conducted with women of heavy preeclampsia with more number of samples and longer time.

3. For Educational Institution

This particular institution can provide extra material or knowledge in accordance with hypnotherapy so that the outcomes will be more competent.

4. For pregnant woman

Pregnant women are hoped to welcome new concepts through positive mindset during pregnancy.

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