Self-Care in Pregnancy-Induced Hypertension

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Abstract

THE aim of this study is to find out the effect of self-care activities such as rest and diet at home, for the control of mild PIH and prevention of eclampsia with a minimum of health cost. The methodology included physical assessment, questioning and giving self-care instructions. This study showed that there was a significant (P 0.01) reduction in systolic and diastolic blood pressure 10 days after self-care instruction. These data support the findings of Hauth et al and Dawn. The observation of this study has an important implication in nursing practice.

Introduction

Pregnancy induced hypertension (PIH), commonly referred to as toxemia, is a progressive disease, which if untreated, can result in eclampsia with generalized convulsions and both maternal and fetal death. The maternal mortality rate in eclampsia ranges from zero to 13%. When this is coupled with fetal mortality rate in eclampsia, which varies from 10% to 37%, the cumulative mortality ranges from zero to 50% for the mothers and the infants. According to the report by Kirtikar in India, the risk to mother is 30% and 70% to the child. The still birth rate from unbooked pre-eclampsia generally speaking is about 10%. Such perinatal loss can be reduced by early diagnosis and management of mild PIH. The development of pre-eclampsia cannot entirely be prevented. However, the course of the disease can be haulted at mild PIH and eclampsia can be prevented by taking health care activities initiated by the nurse and continued self-care by the patient.

Self-care permits people and families to take initiative and responsibility in developing their own potential for health. Self-care is the dominant mode of health care practice for most rural population of the world to attain Health for All by 2000 AD.

With the increasing medical cost of the present day, prolonged hospitalization may not be possible for some mothers. In developing countries, where toxemia is more prevalent and hospital facilities are meagre, as an alternative, it is better to put the uncomplicated mild toxemia on domiciliary treatment regimen. In this context self-care will be the most effective and appropriate approach to enhance both maternal and fetal well-being and successful outcome of pregnancy.

Literature Review

Pre-eclampsia of pregnancy is a disease of unknown etiology, hence it becomes a disease of theories. According to Hauth, the treatment regiment consisted of a general diet, ambulation as desired (but in fact, limited when compared to ordinary ambulation at home), blood pressure measurement is to be taken every four hours while awake, weight three times weekly, and random urine evaluations for proteinuria. It was found that out of 372 patients with in five days 85% of the women admitted were normotensive.

According to Dawn, in 300 consecutive primigravida, he could halt the disease at mild PIH (BP 140/90mm Hg) in 90% by his programme of extra salt restricted diet and two hours rest after mid-day meal and eight hours sleep at night while lying on the sides were effective in the control of mild PIH. Speroff has noted a weight loss from diuresis of 1-4 pounds over a 24-hour period in patients on rest in lateral position alone. Chesley advocates left lateral position over right in order to avoid compression on the inferior venacava and right ureter. Wilson says both erect and supine positions are deleterious in the presence of vasoconstriction.

Brewer reported the origin of PIH as nutritional deficiency. Prinrose and Higgins suggested that higher levels of plasma protein might prevent pre-eclampsia. Women at risk of PIH are advised to eat a high protein diet (75 to 80 gms daily). Willis and Sharp pointed out that excessive salt is limited, as no salt may be added to the food at the table and high sodium food are avoided. However sodium should not be restricted below two to four grams daily, since research had shown that severe sodium restrictions are not therapeutic.

Hypertension in pregnancy is no longer treated with diuretics, weight loss and immediate termination of pregnancy. They are managed with lateral recumbent positioning and frequent maternal and fetal monitoring. According to Willis and Sharp, weight control, salt restriction and the use of diuretics have been abandoned, the lateral recumbent position has been offered as a new approach to retard the pathologic process that occurs in PIH. However the simplicity of management does not diminish the seriousness of risk to the mother and fetus.

According to Walborn, self-care nursing focussed on the use of the nursing process to assist the patient family unit to learn and practise self-care activities for which they have the right, responsibility, motivation, knowledge and skill. In John Hopkins Hospital at Baltimore, the self-care theory has been used in several out-patient clinics (cardiac and diabetic clinics). Although there was a mechanism for referral to medical doctors, the nurse specialist controlled the clinics and used Orem's self-care theory in their daily practice.

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Orem's self-care nursing theory has been used in the context of the nursing process to teach patients to increase their self-care agency, to evaluate nursing practice and to differentiate nursing from medical practice. The WHO study group on the Hypertensive Disorders of pregnancy met in Geneva from 24th to 30th September 1985, one of the communities and individuals, including families. For hypertensive disorders of pregnancy, as with other issues involving maternal and child health, the community made aware of the warning signs that can be used for early detection of conditions requiring action. Since rest is important for women during pregnancy and specially for those with early "mild" singns of hypertensive disorders of pregnancy, health education should ensure that community leaders are aware of its importance. The real location of certain chores undertaken by women at risk of developing these conditions together with the community's awareness of the potential dangers incurred by these women at risk may limit the serious consequences of neglect.

Methodology

A total of 20 primigravida with PIH attending the MCH clinics in Community Health and Developing (CHAD) Hospital, Vellore, were taken for the study. Patients were selected by non-probability sampling, according to availability during the six weeks study period from 26-11-1986 to 8-1-1987. Previously normotensive primi gravida from 29th to 38th weeks of gestation with a diastolic blood pressure between 90-110 mm Hg or a systolic pressure between 140-160 mm Hg or a rise in diastolic of at least 15 mm Hg or a rise in systolic of at least 30 mm Hg from the base line, who were not on antihypertensive and diuretics were included in the study. Following the initial assessment and history taking, the already prepared self-care instructions regarding food and rest were given to each patient. After 10 days of instruction, a follow up assessment was made at MCH centres on the physiological responses in terms of blood pressure, weight, edema and proteinuria. The data before and after self-care were compared to find out the differences. A paired 't' test was used to find out the significance in reduction of systolic and diastolic blood pressure separately.

Results

It was observed that the blood pressure had come down to normal range, in 85% of the patient and eclampsia was prevented among these patients. Reduction of systolic and diastolic blood pressure was found to be significant at $P<0.01$. There was no significant increase in the weight of the patients after 10 days follow up.

The reduction in weight was not significant among patients who had the problem of edema. Both edema and high weight gain should be considered possible premonitory signs that the hypertensive disorders of pregnancy may develop, but were not evidence of actual disease. Weighing during pregnancy is therefore useful not only to detect those who are at greater risk of developing the hypertensive disorders of pregnancy, but also to discover those at risk of producing small—for gestational—age babies because of low weight gain.

Proteinuria was found in two (10%) patients, and disappeared in both of them as the blood pressure came to normal level. This factor shows that proteinuria in PIH needs no special treatment and control of blood pressure automatically corrects the problem. None of the patients (100%) has developed pathological edema which was a symptom of deterioration of mild PIH.

Conclusion

The findings of this study have some important implications in nursing practice and the personnel. The systematic instruction helped the patient to practise self-care activities and showed significant reduction in systolic and diastolic pressure. It proves that it is possible to motivate patients to take more responsibility for their own health through education which contributes to their general well-being and facilitates recovery.

In this study, control and improvement of mild PIH and prevention of eclampsia was observed to occur without diuretics or antihypertensive medication, but only with self-care activities such as rest and diet at home.

The role of primary health care workers in the management of hypertensive disorders of pregnancy is essentially in early case detection and health education. They may be able to manage mild cases by prescribing bed rest at home. It is most appropriate in the present Indian set up that self-care be utilized as a more feasible and economic way to attain the goal of Health for All by 2000 AD.

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