

dialysis fluids and catheters and, problem of vascular access in young children. It is recommended that preventive nephrology should be practiced by all. Preventive paediatrics consists of efforts to avert rather than to cure disease and disability. The goal of preventive nephrology is not in any way different from this except that the effort is directed at averting renal disorders.<sup>22</sup> It includes primary prevention which is the attempt to avoid renal disease altogether and prevent its onset mainly by public enlightenment. Secondary prevention is the recognition and elimination of the precursors of renal disease such as screening for asymptomatic bacteriuria and also prompt diagnosis and treatment of renal disease in its early stages. Tertiary prevention on the other hand consists of measures aimed at reducing or arresting the damage or disability arising from established renal disease. Such measures include dialysis and renal transplantation which are not yet readily available in the developing countries.

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## The Influence Of Previous Abortions On Risk Of Hypertension In Pregnancy In Nulliparous Parturients.

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#### Abstract

**Objective:** Hypertensive disorders in pregnancy and abortions are common events in Nigeria. This study was designed to determine the influence of previous abortion on the risk of hypertensive disorders in pregnancy in nulliparous patients in our environment.

**Method:** A group of consecutive 508 nulliparous women were followed up from booking till delivery, history of previous abortion was obtained at baseline and the relationship between this and the risk of developing hypertension was examined by univariate analysis and logistic regression.

**Results:** The incidence of hypertension in pregnancy in this study was 20.6% overall. It was 16.1% and 23.7% among patients with a history of a previous abortion and those without a history of abortion respectively. In the age group categories, the highest incidence was among mothers less than 20 years of age (31.4%) and lowest (15%) in the age group of mothers between 26 and 30 years of age.

The adjusted odds ratio for hypertension among those with history of previous abortion compared with those without, adjusting for all the other variables in this model was 0.62, showing a 38% reduction in odds with a positive history of previous

abortion. Only the 26-30 years age group showed a significantly lower reduction in odds of hypertension compared to the less than 20 years group ( $P = 0.009$ ). Family history of hypertension was not a significant predictor in the logistic regression model ( $P = 0.144$ ,  $CI = 0.88 - 2.44$ ).

**Conclusion:** History of previous abortion in nulliparous women reduces the risk of developing hypertensive disorders of pregnancy by 38%.

**Keywords:** Abortions, Pregnancy, Hypertension.

#### Introduction

Hypertension in pregnancy is commonly a disease of first pregnancy. It has been suggested that rather than being a disease of primiparity, it is actually a disease of primigravidity<sup>1,2</sup>. Several risk factors have been associated with the disease<sup>3</sup> and there has been some suggestion of possible immunological etiology for it<sup>1,4</sup> especially with increasing evidence that immunological reactions may arise from exposure to paternal antigens through prolonged pre-conception cohabitation<sup>4</sup>, previous abortions, preterm and term pregnancies<sup>2,5,6</sup>.

Hypertension in pregnancy is more common in low-resource countries, like Nigeria, than developed

economy countries where most studies on this complication of pregnancy had been conducted. Thus, data on these associations are lacking in Nigeria. As in most countries with low contraceptive usage prevalence, abortion is quite common in Nigeria. With this coexistence of high incidence of hypertension in pregnancy and high abortion prevalence, this population provides the ideal setting to study the interaction between these two factors.

This preliminary study was designed to determine the effect of previous abortions on the risk of hypertension in pregnancy among nulliparous patients.

**Materials and Methods**

This cohort study was conducted at the University College Hospital Ibadan, Nigeria between 1<sup>st</sup> January 2002 and 31<sup>st</sup> March 2004. Institutional Review approval was obtained for the study. All Nulliparous pregnant women who registered for antenatal care before the 20<sup>th</sup> week gestational age at the study location and during the study period were recruited.

Participants in the study (508), identified as being nulliparous based on the initial booking record, were interviewed at the next visit if they were below the 20<sup>th</sup> week of gestation and if the records show no evidence of preexisting hypertension or other medical disorders. The women recruited were followed up until delivery and a final interview and review of medical records was conducted within 48 hours of delivery.

Patients with preexisting hypertension or who booked after the 20<sup>th</sup> week of pregnancy were excluded from the study. Patients with other preexisting medical conditions were also excluded from the study. History of previous abortions (spontaneous or induced) was obtained from the

patients. This was defined using the WHO definition<sup>7</sup> and confirmation of pregnancy by ultrasound or pregnancy test was prerequisite in this study to establish a case of an abortion.

Hypertensive disorders were classified using the ACOG classification (2002)<sup>8</sup>. Hypertension in pregnancy in this category of women, was defined as the presence of systolic blood pressure above 140 (or 30 mm Hg above the pre-pregnancy levels) and the diastolic blood pressure is above 90 (or 15 mm Hg above the pre-pregnancy level), first recorded after the 20<sup>th</sup> week gestational age. The diagnosis was established when 2 such abnormal blood pressure measurements were recorded at least 6 hours apart<sup>9</sup>.

The main outcome variable was the development of hypertension in pregnancy (pregnancy induced hypertension) and this was binary and coded as “1” for “yes” and “0” for “no”. The main independent variable was the history of abortion which was also binary and coded the same way as hypertension in pregnancy. Other explanatory variables are family history of hypertension (also binary and coded as the previous variables) and the age of the patient which was divided into 5 categories in the analyses.

Attempts to classify the abortions by paternity was dropped after the initial pilot study revealed refusal of most of the women included in the study to answer the question about the paternity of the abortions and were quite reluctant to admit to more than 2 - 3 previous abortions.

Stata software<sup>11</sup> was utilized for all the analysis in this study. The original data was transferred from the individual questionnaires to a standard proforma, then entered into Excel spreadsheet and later imported into Stata. Chi squared test was utilized in the univariate analyses and multivariate analysis was performed using the logistic regression model for binary outcomes. Statistical significance was set

**Table 1: Comparison of Hypertensive and Normal Patients**

Variable	Hypertensive (n=105)	Normal (n=403)	Signature
Age	no(%)	no(%)	
<20	16(15.24)	35(8.68)	
21-25	30(28.57)	120(29.78)	
26-30	18 (17.14)	112 (27.79)	p=0.087
31-35	23 (21.90)	81 (20.10)	
>35	18 (17.14)	55 (13.65)	
History of Abortions			
Yes	33 (31.43)	171(42.43)	
No	72 (68.57)	232 (57.57)	p=0.041
Family History of Hypertension			
Yes	27 (25.71)	77 (19.11)	
No	78 (74.29)	326 (80.89)	p=0.135

**Table 2: Multivariate Analysis of Risk of hypertension by the Covariates**

Variable	Crude Odds ratio	95% Confidence Interval	p value	*Adjusted Odds ratio	95% Confidence Interval	p value
Age group(years)						
<20	1.00			1.00		
21-25	0.55	0.27-1.12	0.098	0.55	0.27-1.13	0.107
26-30	0.35	0.16-0.76	0.008	0.36	0.16-0.77	0.009
31-35	0.62	0.29-1.32	0.214	0.63	0.29-1.33	0.225
>35	0.71	0.32-1.59	0.410	0.72	0.32-1.60	0.416
Previous Abortion						
Yes	0.62			0.62		
No	1.00	0.39-0.98	0.42	1.00	0.39-0.99	0.045
Family History						
Yes	1.47			1.46		
No	1.00	0.88-2.42	0.137	1.00	0.88-2.44	0.144

\* Adjusted for other variables in the Model.

at p<0.05.

**Results**

The incidence of hypertension in pregnancy in this study was 20.6% overall, it was 16.1% among patients with a history of a previous abortion and 23.7% among those without a history of abortion.

This was statistically significant as shown in table 1. The box plot in figure 1 shows the adjusted incidence based on the multivariate model in table 2. The

distribution of hypertensive disorders in pregnancy among those with a positive family history of hypertension and those without was not statistically significant (P= 0.144, CI=0.88 - 2.44).

Among the age group categories, the highest incidence was among mothers less than 20 years of age (31.4%) and lowest in the age group of mothers between 26 and 30 years of age being only 15%.

The result of the multivariate analysis is shown in



table 2, the adjusted odds ratio for hypertension among those with history of previous abortion compared with those without and adjusting for all the other variables in this model was 0.62, showing a 38% reduction in odds with a positive history of previous abortion.

As shown in the univariate analysis, the highest incidence was in mothers under 20 years of age; this group was chosen as the reference group in the multivariate analysis. Only the 26-30 years age group showed a significantly lower reduction in odds of hypertension compared to the reference group.

The incidence of hypertension in pregnancy was 26% among patients who reported a family history of hypertension compared to 19.3% among those without a family history this was however not

statistically significant (P = 0.135). The 46% increase in odds ratio observed in the multivariate analysis was also not statistically significant [Table 2].

**Discussion**

The high incidence of hypertension in pregnancy in this study is consistent with other studies conducted among the high risk nulliparous group<sup>6</sup>. This study was conducted in a tertiary health care facility and being a referral centre, this figure may likely be higher than what obtains in the general population. Previous abortion was found in this study to be protective against development of hypertension and this is consistent with findings in other studies<sup>2,6,12,13</sup>. In some of these other studies, the association between hypertensive disorders of pregnancy and

previous abortion was more if the abortion shared same paternity with the index pregnancy. This relationship could not be established in this study because of the very high non-response rate to the paternity question, thus this was excluded from the interview to avoid losing respondents. However, the high association detected in this study is consistent with a high rate of shared paternity. This is not surprising in view of the cultural setting in which this study was conducted. In this environment, due to the high premium placed on fertility, it is not unusual for men to insist on “testing” the fertility of their partners with a pregnancy during courtship [pre-nuptial conception], which may be kept, or aborted. Also women who responded to the abortion questions in this study probably did so because they were confident the previous abortion was for their current husbands and had no fear of his finding out about their response to this question.

Some of the effects of abortion observed in this study was probably due to the effect of prolonged pre-conceptional cohabitation which has been shown to reduce the incidence of hypertensive disorder in pregnancy<sup>4</sup>. The issue was not addressed in this study, but it is hoped that better funded and larger studies done in this environment will address this issue. Although the number of abortions was not indicated in this study precisely, the history of at least one abortion has been shown to be sufficient to reduce incidence of hypertension in pregnancy<sup>2,13</sup>.

The immunological basis for these findings is discussed by Sibai et al<sup>1</sup>. The proposed hypothetical model involves the unique interaction between paternal antigens either from semen or pregnancy to produce a protective immune response which enhances the second wave of

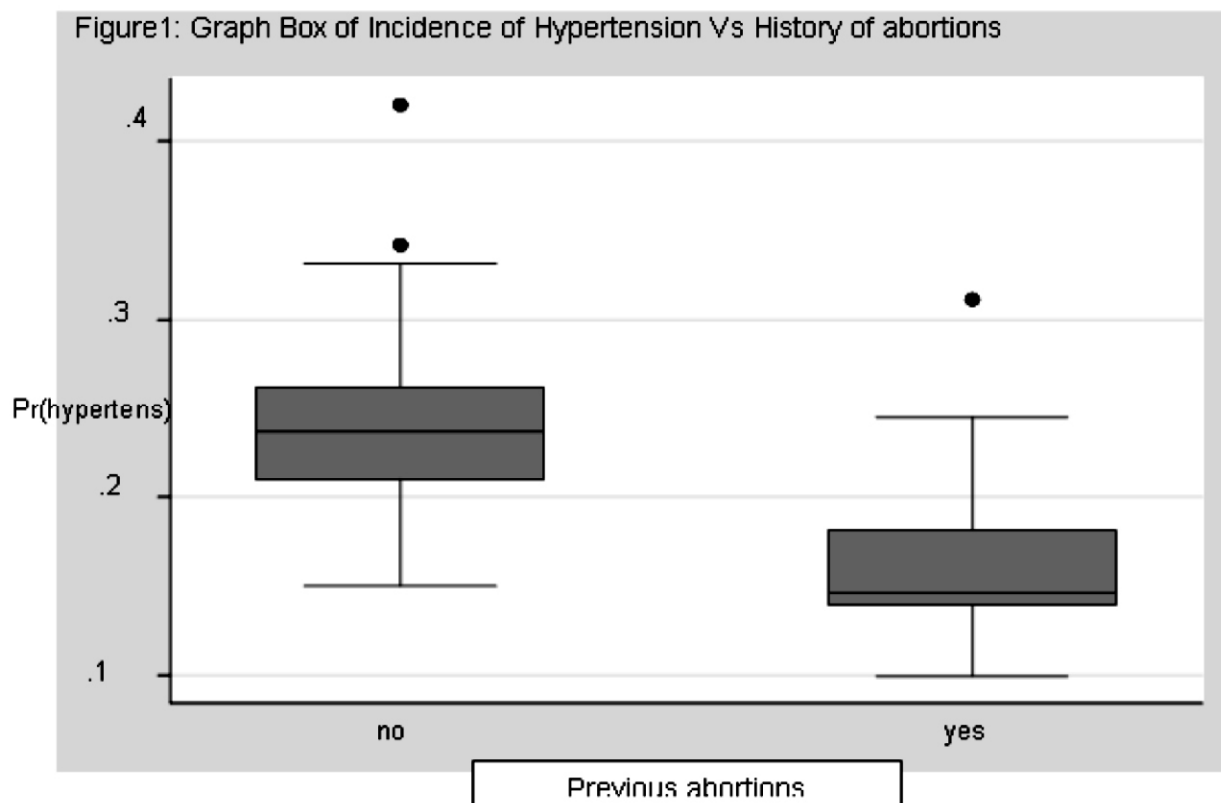
trophoblastic invasion, reduces risk of breakage of trophoblastic tissue into the general circulation and the attendant generalized inflammatory response which leads to hypertensive disorders<sup>1</sup>.

The sample size for this study is relatively small because of the strict inclusion and exclusion criteria applied and this may account for the weak but significant association (p=0.045) of protective effect of previous abortions (induced or spontaneous) on the development of hypertension in pregnancy among nulliparous in this study. The exclusion criteria were necessary to reduce the confounding effects of the excluded variables. In all, the protective effect of previous abortion was confirmed by this study providing further support for the immunological basis for hypertension in pregnancy.

The findings that previous abortions, which might translate to increased exposure to paternal antigens, reduce the risk of hypertensive disorders in pregnancy may be the key to development of primary preventive strategy for this condition.

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\*\* Pr(hypertens) - Previous history of hypertension

**Effect Of Motivation On Job Performance Of Nurses In Ibadan, Nigeria**Tijani W.A<sup>1</sup>, Oluyedun H.A<sup>2</sup><sup>1</sup>Department of Nursing, Ladoke Akintola University of Technology, Osogbo, Oyo State, Nigeria<sup>2</sup>Oyo State Hospitals' Management Board

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**Abstract****Background:** *Motivation is one of the most essential tools in getting the best out of employees in an organizational set up.***Objective:** *To find out methods used to motivate nursing staff in the University College Hospital (UCH) Ibadan in order to establish the cause of the frequent exodus of nurses to foreign land.***Method:** *It is an exploratory study carried out from 5<sup>th</sup> to 10<sup>th</sup> October, 2005. Two hundred nurses were chosen by simple random sampling method and a self developed questionnaire was administered to each of them. However, only 100 subjects returned the questionnaire.***Results:** *It was found that the respondents were not satisfied with the hospital management as they believed they were not adequately motivated towards effective performance of their job. Consequently, 90% were planning to quit the UCH job in the nearest future and 56% were processing foreign jobs. The respondents cited the following as reasons for preferring foreign job to that of UCH: Inadequate nursing equipment - 12%, lack of credit for work done - 20%, poor salary 24%, and non recognition of additional certificates possessed by the nurses 42%.***Conclusion:** *For the Hospital to retain its nursing staff, Nurses in UCH need to be provided with comprehensive motivation packages.***Keywords:** *Motivation, Job Performance, Cordial Relationship.***Introduction**According to Tijani<sup>1</sup> quoting Henderson (1966) nursing is the act of assisting an individual sick or well, in the performance of those activitiescontributing to his health, recovery or to peaceful death that he would perform unaided if he has the necessary strength, will and determination. Adelowo<sup>2</sup> commenting on the age long existence of the profession, observed that nurses constitute up to 80% of the qualified health work force in Nigeria and represent a potentially powerful force for bringing about the necessary changes to meet the peoples' needs in the pursuit of health for all in the 21<sup>st</sup> century. In carrying out their functions, the nurses encounter some challenges, which seem to debar them from performing their roles effectively. Every year, there seems to be an exodus of nurses to foreign land in search of greener pastures. Could this be so as a result of dissatisfaction and lack of motivation in their places of work in Nigeria?According to Graham<sup>3</sup> motivation is the driving force that stimulates an individual to action. In the health care sector, most administrators take for granted material inducement of employee under them; they tend to believe that the humanitarian nature of the professional callings in health care is enough motivation towards peak performance. Unfortunately, not many people believe so. Thus, when motivation is not forthcoming in a place of work, workers' commitments decrease. Cruden<sup>4</sup> described motivators as those things which induce an individual to perform. These include higher pay, a prestigious title, rewards or incentives, a name on the office door, promotion and recognition. Managers must make use of these motivators. Almost all the theories on motivation emphasize particular factors which influence the behavior of employees<sup>3</sup> and hence their levels of motivation<sup>5</sup>. These factors may be intrinsic, that is arising from the work situation or extrinsic, that is connected with experiences external to work<sup>6</sup>. Mayo<sup>7</sup> believed that the manager should be a teacher, a colleague and a consultant rather than a boss. Also according to Sayles<sup>8</sup> employees are more productive when satisfaction comes from the work itself, rather than from present or deferred economic reward or fear of