The relationship between neonates Low Birth Weight (LBW) and maternal parity and addiction in Varanasi, India

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ABSTRACT

The study is an approach to find out the relationship between low birth weight and maternal parity in view of habit of addiction to tobacco and smoking. Two hundred pregnant women, with less than 60 days pregnancy, were registered and followed from Government hospitals in Varanasi. LBW baby and mother pairs were studied after excluding multiple births, normal birth weight and complicated pregnancies. Parity and addiction were interviewed at the time of registration. Simple correlation co-efficient (product moment) was computed to find the relationship between maternal parity and LBW. Further ANOVA was used to examine the difference between parity groups (0, 1, 2) with respect to LBW. The relationship between maternal addiction to tobacco and smoking was computed according to point bi-serial method. Overall occurrence of LBW babies was found to be 26%. Significant positive correlation was computed between low birth weight and maternal parity. However, significant negative correlation was seen between LBW and maternal addiction. In addiction, there was significant difference in LBW between different parity groups.

Key words : LBW, Maternal parity, Relationship, Addiction

Low birth weight (LBW) has been defined by World Health Organization (WHO) (1992) as weight at birth less than 2500 grams (5.5 pounds). More common in developing than developed countries, low birth weight contributes to a range of poor health outcomes. It contributes substantially to neonatal, infant and childhood mortality as well as to morbidity (Wilcox and Skaeven, 1992).

It remains an unresolved important concern in India, where the LBW rate is 30% (UNICEF, 2004). Infants with LBW have morbidity and mortality from infection of disease, malnutrition, growth failure and are also more likely to have abnormal cognitive development, neurological impairment and poor school performance (Mc Cormick *et al.*, 1990). These babies are at greater risk of cardiovascular disease, hypertension and diabetes in adult life (Suzuki *et al.*, 2000).

The LBW is a consequence of either preterm (< 37 weeks of gestation) delivery or intrauterine growth retardation or of both (WHO, 1984). The causes of LBW are multifactorial (Kamaladoss *et al.*, 1992). It is associated with maternal haemoglobin status, socio-economic status, height, birth interval, tobacco exposure, maternal age, body mass index, parity, (Deshmukh *et al.*, 1938) and maternal smoking (Chiolero *et al.*, 2005).

In view of above cited observations, there is need of further studies for better understanding of complex interrelationship between mother and foetus, in order to make improvement in antenatal recommendations, foetal health and to decrease the rate of neonatal mortality and morbidity.

The purpose of the present study was to (i) to find out the relationship between maternal parity and LBW of babies and (ii) to analyse the relationship between maternal addiction relating to smoking, tobacco exposure and LBW of babies. Parity here denotes the number of previous pregnancies beyond the period of viability.

METHODOLOGY

Few Government hospitals were selected on the basis of purposive sampling technique, which served the needs of the experimental subjects belonging to all socio-economic status. A total of 200 pregnant women, with less than 60 days pregnancy, were registered and followed up. Pairs of LBW baby and mother were selected after excluding multiple births, normal birth weight and complicated pregnancies.

Interview schedule was prepared and administered at the time of registration to know the history of previous pregnancies regarding, number of live births, abortion, death of any child after birth, still birth, in addiction to maternal addiction to smoking and tobacco chewing.

Simple correlation co-efficient was computed following product moment formula, to find out the relation between maternal parity and LBW. Further, the analysis of variance was carried out in order to examine the difference between parity groups (0, 1, 2) with respect to LBW. In this regard the relationship between maternal