ABSTRACT

Bacterial vaginosis is caused by changes in the vaginal microflora. It is accepted as a major public health problem and is associated with adverse pregnancy outcome. Non pregnancy complications also are known to occur. BV also enhances the women's suceptability to HIV.

Epidemiological data on BV for Sri Lanka is not available at present. This study aimed to examine prevalence of BV, develop a simple screening method for diagnosing BV, determine some risk factors of BV and evaluate its association with low birth weight and preterm delivery.

Eight hundred and sixty nine pregnant women attending antenatal clinics of government health care institutions in the city of Colombo, and 342 pregnant women admitted to these institutions for the management of delivery, were enrolled. Participating antenatal attendees were above 14 weeks of gestation. The study was conducted in four stages. In the first stage of the study a questionnaire was administered to collect socio-demographic, medical, sexual and other related information. BV was diagnosed using Amsel et al (1983) criteria. In a sub sample, a vaginal swab was taken blindly to detect clue cells in addition to screening by the Amsel method. The cases identified as BV positives by screening and an equal number of BV negatives were investigated to identify some risk factors of BV. A sample of 342 pregnant women admitted for the management of delivery to the above institutions were administered a questionnaire, screened for BV and followed through to delivery to assess the outcome of pregnancy.

The prevalence of BV among pregnant women attending government health care institutions in the city of Colombo was 30.6% (95% CI 27.54-33.66). The prevalence of BV among women in 2nd trimester was 34.1% (95% CI 28.73-39.47) and 3rd trimester was 28.8% (95% CI 25.08-32.52). The difference of prevalence of BV between trimesters was not significant ($p>0.05$).

The validity of the detection of clue cells on a Gram stained vaginal smear prepared from a blind swab in diagnosing BV in comparison to Amsel method was examined. The results were: sensitivity - 88.2%, specificity – 100%, positive predictive value – 100%, and negative predictive value – 94.8%.

The case control study identified the use of IUD six months prior to getting pregnant, age at coitarche ≤15 years, frequency of sexual intercourse >3 per week, history of vaginal discharge during some stage of pregnancy, presence of vaginal and cervical discharge as risk factors of BV. After adjusting for confounding effects the logistic regression model identified a history of vaginal discharge at some stage of present pregnancy (OR,1.23, 95% CI,1.03-1.46), use of IUD six months prior to getting pregnant (OR,1.69, 95% CI, 1.09-2.65), frequency of sexual intercourse >3 per week (OR,1.25, 95% CI, 1.01-1.55) and age at coitarche ≤15 years (OR, 2.23, 95% CI, 1.02-4.91) as risk factors of BV.

Low birth weight and preterm delivery occured more among BV positives than among BV negatives. The observed differences of incidence of low birth weight and preterm delivery between BV positives and negatives did not reach statistical significance in this study.

BV was a prevalent condition among pregnant women attending government health care institutions in the city of Colombo. The detection of clue cells on a Gram stained vaginal smear prepared from a blindly taken vaginal swab for diagnosing BV proved to be a simple, valid and reliable method. Identification of history of vaginal discharge during some stage of present pregnancy as a risk factor for BV provides a justification for thorough investigation and proper management of pregnant women who complain of vaginal discharge. The identified risk factors can be used for comparison purposes in future studies. The findings of the present study justifies investigations on BV in pregnancy.