Interpregnancy interval and the risk of preterm birth: A case-control study of infants born at Al-sadaqa general teaching hospital, Aden, Yemen

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Background: Interpregnancy interval (IPI) is a known risk factor for preterm birth. The aim of this study was to assess the relationship between IPI and spontaneous preterm birth, and to identify the influence of confounding variables such as socioeconomic status, maternal age, and reproductive history.

Methods: This is a hospital-based, case-control study conducted in the department of neonatology, Al-Sadaqa General Teaching Hospital, Aden, during June to September 2011. A case was defined as infant born spontaneously before 37 weeks of gestation and control was a next eligible infant born between 37-42 complete weeks of gestation. Comparison between groups was assessed by statistical analysis and odds ratio were calculated for confounding factors.

Results: A total of 100 preterm (cases) and 100 full-term (controls) infants were evaluated for the effects of IPI. Intervals of both <12 months and 12-24 months were significantly associated with preterm births compared to control (37% vs 12% and 73% vs 46% respectively, all p<0.05). The risk of preterm birth was higher in association with low number of antenatal care visits (OR=10, 95% CI=1.62-61.46, p=0.018), younger women’s age (OR=8, 95% CI= 1.35-8.4, p=0.001), non-educated mother (OR=7.92, 95% CI=2.49-25.22, p=0.002) and gravid 2-3 (OR=6.5, 95% CI= 5.06-53.8, p=0.001). Significant risk was also observed among mother with low socio-economic status and residents of rural areas (all p<0.05).

Conclusions: Short IPI is significant risk factors for preterm birth. This highlights the importance of counseling women in childbearing age to wait at least 24 months between delivery and subsequent conception.

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