

Abstract No: MP-01

Placental abnormalities observed among stillbirths, Kandy district, Sri Lanka

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Stillbirths are a major concern of the health system of a country as it is a tragic event both for the mother and the society. The placenta of a stillborn baby may have evident anatomical and physiological changes that deviate from the typical appearance of a healthy placenta. These variations could be a cause for the foetal demise *in utero*. Our study aimed to determine remarkable gross abnormalities identified among placentae of stillbirths. A cross-sectional study was conducted in the National Hospital Kandy, Teaching Hospital Peradeniya, Base Hospital Gampola, and District General Hospital Nawalapitiya, for one year from April 2017. The placentas, including umbilical cords of stillbirths that completed 22 weeks of period of amenorrhoea were examined to assess the presence of abnormalities. All consecutive cases were included in the study from the beginning for one whole year. Of 213, placentae that had irregular shapes were 4 (1.9%), and all had complete cotyledons. Two (0.9%) had succenturiate lobes, and one (0.5%) had incomplete membranes. Retroplacental blood clots were observed in 48 (22.5%). Placental infarcts were seen in 25 (11.7%). Among the 211 umbilical cords observed, 195 (92.4%) depicted normal insertion at the placental site. Abnormal insertions observed were battledore (n=13, 6.2%), furcate (n=2, 0.9%) and velamentous (n=1, 0.5%). The number of true umbilical cord knots, nuchal entanglement, umbilical cord hemorrhages, and two cord blood vessels were 4 (1.9%), 24 (11.4%), 46 (21.8%), and 1 (0.5%) respectively. The mean umbilical cord length was 39.4cm. Our study found apparent gross abnormalities in the placentas and umbilical cords among stillbirths. Hemorrhages in both placentae and the umbilical cord, and placental infarcts showed higher incidences compared to other changes. Direct impact on the foetus can be found in the cases of true cord knots ceasing blood supply to the foetus, as well as nuchal entanglement that was leading to asphyxia. Furthermore, the mean cord length in the study was shorter than the normal average length. In-depth laboratory investigations are needed to determine their direct or indirect association with stillbirth. Moreover, national-level values for umbilical cord length must be made for future references and better evaluation.

Keywords: Abnormalities, Kandy, Placenta, Stillbirth, Umbilical cord

Acknowledgment

This work was supported by the University Grants Commission, Sri Lanka under the research grant (UGC/VC/DRIC/PG2017(I)/EUSL/05).