

## Relationship between the Fetal body weight and the Fetal kidney weight at different gestational ages of developing human fetuses in Gujarati population.

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### Abstract:

**Introduction:** Human kidneys start developing around 5th week of gestation which continues to grow until the last month of pregnancy. Size and weight of kidney is dependent on the number and size of nephrons and the sequential changes in the weight of normal developing human kidney and its relation with the fetal weight during different gestational period is very important to diagnose any fetal abnormalities associated with abnormal kidney size. The aim of the present study was to establish the relationship between fetal body weight and fetal kidney weight at different gestational ages of developing human fetuses in the Gujarati population. **Material and methods:** Present study was conducted in the Department of Anatomy, B.J. Medical College, Ahmedabad, Gujarat, in collaboration with Department of Obstetrics and Gynecology, Civil hospital, Ahmedabad, Gujarat during the year 2013 to 2018 on 53 abortus/fetus of gestational age ranging from 14 to 40 weeks. **Results:** A continuous increase in the fetal as well as right and left kidney weight was observed which was slightly slowed down nearing the end of the gestation period. The rate of increase in total kidney weight and rate of increase in fetal body weight are not in linear fashion. Further the rate of increase in kidney weight is more as compared to rate of increase in fetal weight during 30-33 weeks of gestational age owing to the renal development in the latter part of the pregnancy. During the early stage of development, the rate of increase in both the kidneys were slow but as the fetal weight crosses 1000 gm, the kidney weight increases faster. **Conclusion:** Observations of the present study pertaining to fetal body weight as well as fetal kidney weight at different gestational ages of developing human fetuses can be used as reference parameters while performing routine perinatal post-mortem examination.

**Key words:** Fetal Kidney, Fetal weight.

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