A-40 Variation in the Circulus Arteriosus of Willis in Sri Lankan fetal brains

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Three configurations have been described in the posterior bifurcation of the posterior communicating artery (pcom.). In the adult configuration, the diameter of the pre communicating part (p1) of the posterior cerebral artery is greater than that of the posterior communicating artery. In the fetal configuration the diameter of p1 is less than pcom. In the transitional configuration the diameters are approximately equal.

The objective of this study was to determine the frequency of these configurations in fetal caderveric brains, this being the first such study in Sri Lanka.

Basal arteries of 34 human fetal cadaveric brains (21 males, 13 females) between 30 to 40 weeks of gestation were examined, configurations were noted and diameters taken using a graticule.

The total adult, fetal and transitional configurations in both sides of the circles were 40 (59%), 23 (34%), & 5 (7%) respectively. The audlt, fetal and transitional configuration were 25 (62.5%), 12 (30%) & 3 (7.5%) in males and 15 (53.5%, 11 (39.3%) & 2 (7%) in females. Bilateral adult configurations were seen in 15 (44%). (10 males, 5 females). Bilateral fetal configurations were seen in 7 (21%) (3 males, 4 females). There were no bilateral transitional configurations.

The adult, fetal and transitional configuration in the right side was 20 (59%), 12 (35%) & 2 (6%) and in the left side 20 (59%),11 (32%) & 3 (9%) respectively.

This study reveals that there is a marked variation in the posterior bifurcation of the posterior communicating artery, of Sri Lankan fetal brains.