

branches proximal to the popliteus. The popliteal artery may trifurcate into anterior and posterior tibial and fibular artery.

**Methods:** The study was conducted in the Department of Anatomy, Assam Medical College, Dibrugarh in 30 formalin-fixed specimens collected from the perinatal cadavers received from the department of O&G and also adult cadavers received for dissection of undergraduate MBBS students.

**Results:** Popliteal artery showed high bifurcation and divided into terminal branches proximal to the popliteus. (Details will be discussed during the time of presentation.)

**Conclusion:** This study will be helpful for the surgeons as well as orthopaedic surgeons.

## 21. A morphological study of thyroid gland in different age groups in females

**M. Paul**, K.L. Talukdar, H. Bayan, J.D. Sarma

*Department of Anatomy, Gauhati Medical College, Guwahati, India*

**Objective:** A morphological study of human thyroid gland in different age groups in females.

**Methods:** A total of 30 formalin-fixed female cadaveric thyroid glands of below 15 years, 15–45 years and above 45 years of age groups (each group 10) are collected from Forensic Department and Anatomy Department of Gauhati Medical College, Guwahati.

**Results:** Morphology of thyroid gland is subdivided into its length, breadth, thickness and weight. In below 15 years group, average length, breadth and thickness are 2.66 cm, 1.39 cm and 1 cm, respectively of right side and 2.56 cm, 1.3 cm and 0.93 cm, respectively of left side, and average weight is 6 g. In 15–45 years group the same are 5.44 cm, 2.45 cm and 2.02 cm, respectively of right side and 5.24 cm, 2.4 cm and 1.95 cm, respectively of left side. Average weight is 26 g. In above 45 years group, the same are 4.44 cm, 1.96 cm and 1.8 cm respectively of right side and 4.40 cm, 1.88 cm and 1.72 cm, respectively of left side, and average weight is 19.02 g.

**Conclusion:** The activity and size of thyroid gland varies at different ages in females. It is functionally less active before puberty, and assumes increased activity and size at puberty, during menstruation, pregnancy and lactation. After menopause it tends to atrophy. The reproductive activity and thyroid function reciprocally influence each other. Thyroid function disorders are common in females that are reflected by alteration in normal trend of morphological changes of thyroid gland with age, thus helping in early diagnosis of thyroid disorders.

## 22. A study on luminal diameters of coronary arteries in human

**B. Rabha**, J. Sarma

*Department of Anatomy, Gauhati Medical College, Guwahati, India*

**Objective:** To measure the luminal diameters of major coronary arteries through ocular micrometer. The present study will discuss the differences of coronary arterial luminal

diameters of Indian population with those mentioned in standard literature.

**Method:** In this descriptive study, after incising pericardium, 0.5 cm long segments of right coronary artery (RCA), left anterior descending artery (LAD) and left circumflex artery (LCX) were taken at their origin, from adult male cadavers of up to 36 years age. After processing for paraffin embedding, 5 µm thick sections were prepared, mounted on glass slides and subsequently stained with hematoxylin and eosin. Luminal diameter for each section was measured through ocular micrometer, at four places along the planes at 45° to each other.

**Results:** The mean luminal diameters of RCA, LAD and LCX were 1.67 mm, 1.58 mm and 1.43 mm respectively.

**Conclusion:** The mean luminal diameters of major coronary arteries in Indian population are lower than those reported in international literature. This might be due to geographic and/or ethnic variation(s) in the histological structure of coronary arterial wall.

## 23. Variations in the central branch/branches of the middle cerebral artery

**M.K. Pant**<sup>1</sup>, S.K. Pandey<sup>2</sup>, R.C. Shukla<sup>3</sup>

<sup>1</sup>Department of Anatomy, Government Medical College, Haldwani, Nainital, Uttarakhand, India; <sup>2</sup>Department of Anatomy, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India; <sup>3</sup>Department of Radiodiagnosis, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India

**Objectives:** The knowledge of origin of the central branch(es) of the middle cerebral artery (MCA) has always been of great significance for radiologists and neurosurgeons dealing with cerebrovascular pathological conditions. A number of variations have been earlier reported for the origin of central branches of MCA. The present study was performed to observe whether there are any further variations existing other than those reported earlier.

**Methods:** This study has been performed in total 60 (38 males and 22 females) non-living brains, obtained from the department of Anatomy and Forensic Medicine, Institute of Medical Sciences, Banaras Hindu University, Varanasi. The middle cerebral artery (MCA) of each brain was picked up and the different pattern of origin of its central (perforating) branch(es) was observed. The brain tissue was dissected besides the origin of the central (perforating) branch(es) under the dissecting microscope.

**Results:** It was revealed that the central branch(es) usually originated as one or two or multiple in number from M1 segment of the MCA, but not in two groups as described earlier. In few cases, these central branch/branches originated not only from M1 segment, but also from the other artery of the circle of Willis. After its/their origin, all the branches travelled through the anterior perforating substance to reach the basal area of the sub-cortical zone.

**Conclusion:** Hence, the present study reveals that there exist variations other than those reported earlier in the branches of MCA.