

## 55. Study of palmar dermatoglyphics in ventricular septal defect

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**Objective:** Dermatoglyphics form in utero during early gestation, in which cardiac embryogenesis occurs; thus, any prenatal insult during that period may have an influence on the dermatoglyphics. Therefore, dermatoglyphics study was carried out to elucidate the significance of their presence in ventricular septal defect.

**Method:** Finger prints and palm prints of the cases and control were taken by Ink & paper method and studied with the help of hand lens of 4D power. Various dermatoglyphic parameters like finger print pattern, atd angle, absolute ridge count & ab, bc, cd, and ad ridge counts were observed and calculated in 72 cases of proven ventricular septal defect and 300 normal children (control) and compared statistically.

**Result:** It was observed that ventricular septal defect cases exhibited preponderance of whorls (54.4%) with decrease in loop pattern (33.8%) as compared to those of controls and the difference was highly significant ( $p < 0.001$ ). While the mean 'atd' angle in the cases of ventricular septal defect ( $51.11^\circ \pm 7.79^\circ$ ) was widened up and was statistically significant too, the mean 'ab' ( $30.10 \pm 4.96$ ), the mean 'bc' ridge ( $22.60 \pm 6.11$ ), the mean 'cd' ridge ( $31.6 \pm 6.89$ ), and the mean 'ad' ridge counts ( $68.6 \pm 6.53$ ) were also higher in the ventricular septal defect as compared to that controls and on statistical comparison, the difference was found to be highly significant.

**Conclusion:** Dermatoglyphics may be used as a new predictive and diagnostic tool with practice and expertise for population studies for prediction of congenital cardiac diseases.

## 56. Variations in the level of exit and division of sciatic nerve

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**Objective:** The sciatic nerve divides normally into the tibial and common peroneal nerves at the apex of the popliteal fossa. But the division can occur at any level from the sacral plexus to the inferior part of the popliteal fossa. When it divides within the pelvis, the two branches may leave the pelvis through different routes and may be compressed under other anatomic structures, resulting in non-discogenic sciatica. The aim of this study was to determine the level of the exit and of the division of the sciatic nerve.

**Methods:** 60 inferior extremities were examined in 30 adult male cadavers in the Department of Anatomy, JNIMS, Imphal.

**Results:** Sciatic nerve divided into tibial and common peroneal nerve at the apex of popliteal fossa in 58.34% of cases, below the apex in 13.33% and above the apex in 28.33%. In 5 cases (8.33%), it divided within the pelvis where common peroneal

nerve passed through and tibial nerve below the piriformis in 3 cases, both the nerves passed below in 1 case and in another case, common peroneal nerve passed through and tibial nerve passed above the piriformis.

**Conclusion:** In sciatic nerve neuropathies, the extent of neurological deficits depends on the level of the sciatic nerve division. Division at a higher level can result in the involvement of only one out of the two branches. On the other hand, it may result in failure of popliteal block anaesthesia.

## 57. A study on sacral index in Kerala population of south India

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**Aims & Objectives:** Human sacral bones are of great interest to the anatomists, forensic experts and anthropologists as it is one of the important bones used for identification of sex in skeletal remains. Various parameters and indices are available based on which the sex can be determined using sacrum. One such important parameter is the sacral index. Studies show that sacral index significantly varies among male and female gender and among different populations.

**Methods:** The materials for the present study consisted of 150 adult sacra (75 males and 75 females) of known sex available in the Department of Anatomy, DM - Waynad Institute of Medical Sciences, Waynad, Kerala. With the help of a stainless steel sliding caliper and flexible steel tape, the Maximum length of Sacrum and Maximum breadth of Sacrum were measured. The sacral index was then calculated.

**Results:** Based on the sacral index, anthropologists have classified the sacra into specific groups. The mean sacral index of the male and female sacra in the present series is 114.94 mm and 126.2 mm respectively falls under the platycheiric group (sacral index  $> 106$ ). The present study showed a significant difference among the average male and female sacral indices and considers SI as a valuable parameter in identification of sex.

**Conclusion:** The present study showed a significant difference among the average male and female sacral indices and considers SI as a valuable parameter in identification of sex. This study will be useful for the anatomists, anthropologists and experts in forensic medicine for accurate sexing of sacra and various other clinical tenacities.

## 58. Cadaveric study of the absence of plantaris tendon in lower limbs

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**Background:** The plantaris muscle is a small muscle with a short belly and long thin tendon that forms part of the posterior superficial compartment of the leg, together with the soleus and gastrocnemius. It is a fusiform muscle in which