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Invited Lectures

(I-1 — I-5)

I-1

An unforgettable legend: Prof. Dr. Sami Zan

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“The risorius muscles of a physician should always work” was only one of many invaluable sayings I could remember of this passionate, inspiring, and suave gentleman with a cunning glance behind his glasses. Sami ZAN was born in 1921 in Istanbul. He graduated from the Haydarpaşa High School in 1940 and subsequently started his medical training at Istanbul Faculty of Medicine. Prior to his internship, he transferred to the newly founded Faculty of Medicine at Ankara University and graduated in 1946. Following his military service, he completed his mandatory health service in the İdil province of Mardin. He returned to the Istanbul Faculty of Medicine in 1948 as a research assistant in the Institute of Anatomy. He was appointed as an associate professor in 1955, a full professor in 1966, and as the Head of Department of Anatomy in 1978 until his passing due to a heart attack in 1984. His expertise in anatomical knowledge and educational skills identified him as a “Master Teacher” and resulted in superb lectures that were best described as theatrical performances. As a prominent lecturer he simplified most complex anatomical concepts by integrating low fidelity models including cardboards, hoses, kettles, mess kits, sheaths, water filled balloons or even food such as eggs and sandwiches. For example, in his lectures on the prostate he always used a tangerine that symbolized benign prostate hyperplasia. He extracted the fruit without damaging

the skin and emphasized the current surgical approach to the disease. He also used chalk to prepare hand drawn figures and diagrams in advance of his lectures. Nevertheless, his most prominent feature was probably his excellent talent for interacting with students and being approachable to all of them. To achieve this, he initiated the “Philosophical Anatomy” talks before his lectures. These pre-lecture talks were conducted in a conversational style and covered the lecture topic of the day involving a general knowledge regarding anatomy, physiology, and clinical practice integrated with interesting information that he collected from news or magazine articles. The Philosophical Anatomy lectures were so popular that students from various faculties such as law, dentistry, or pharmacy, and even common folk attended them occasionally. Every time a generation of physicians as his pupils reflect on his jokes and advises, they relive his lectures and aspire to share them in order to keep them alive.

Keywords: anatomy education, Sami Zan

I-2

Arthroscopic anatomy and pathologies of the shoulder

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In order to understand musculoskeletal pathologies of the shoulder region, comprehending the physioanatomy of the glenohumeral, acromioclavicular, and scapulothoracic joints along with the muscles responsible for the synchronization of

O-36**Evaluation of nasolacrimal duct morphometry in Turkish population: a preliminary results**Vatansever A¹, Demiryürek D², Erçakmak Güneş B², Gümeler E³¹Department of Anatomy, Faculty of Medicine, Balıkesir University, Balıkesir, Turkey; ²Department of Anatomy, Faculty of Medicine, Hacettepe University, Ankara, Turkey; ³Department of Radiology, Faculty of Medicine, Hacettepe University, Ankara, Turkey

Objective: Nasolacrimal duct, lies between lacrimal bone and maxilla, opens into inferior nasal meatus. Due to its canal-shaped structure, obstructions of nasolacrimal canal are seen commonly. Numbers of studies have been published to evaluate nasolacrimal duct morphometry. However, anthropometric values could change between different populations. Therefore, a smaller number of studies have been published which evaluated the nasolacrimal duct morphometry regarding anthropometric diameters in different populations. Considering cranio-metric values during nasolacrimal duct surgeries has a significant importance for a successful surgery and high-quality post-operative period. Aim of this study was a detailed evaluation of nasolacrimal duct morphometry in Turkish population considering cranio-metric properties.

Methods: In our study, computed tomography image series of the head region of 23 female and 22 male participants, mean age 56.8 (27–82), have been included, retrospectively. Participants who had any pathology in the head region were excluded from the study. Antero-posterior diameter of cranium was measured using midsagittal sections of computed tomography images. Furthermore, antero-posterior and latero-lateral diameters of nasolacrimal duct at its starting point were recorded. Additionally, vertical angle of nasolacrimal duct and the distance to anterior surface of maxilla at the point of its opening into inferior nasal meatus were measured. All data was imported into SPSS v23 software to perform statistical analyses.

Results: Evaluated parameters did not have statistically significant changes with age. However, antero-posterior diameter of cranium (mean 17.76 cm; 15.96 to 19.56 cm), latero-lateral diameter of the nasolacrimal canal at the starting point on the left side (mean 3.57 mm; 1.99 to 5.17 mm) and the distance to anterior surface of maxilla at the point of its opening into inferior nasal meatus on the right side (mean 1.05 cm; 0.66 to 3.57 cm) were statistically longer in men than women ($p < 0.05$).

Conclusion: Nasolacrimal duct obstructions, could be congenital or acquired, are complex pathologies which have various etiologies and prognosis and encountered frequently by ophthalmologists. There are surgical or non-surgical treatment methods for those pathologies. According to our preliminary results, most of the evaluated parameters did not demonstrate statistically significant differences between genders. These results could demonstrate that surgeons could decide their surgical techniques without considering gender differences.

Keywords: nasolacrimal duct, computed tomography, obstruction

O-37**Topography of the external branch of the superior laryngeal nerve and its importance in surgical interventions: cadaver study**

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Objective: Injury of the external branch of the superior laryngeal nerve (EbSLN) can cause a hoarse or weak voice due to the functional loss (dysergia) of cricothyroideus muscle. The purpose of the current study; to reveal the topography of EbSLN in Turkish population, to prevent injury to EbSLN during surgical intervention in the anterior neck region.

Methods: Landmarks were determined for the detection of the EbSLN. In total, 26 bilateral hemilarynges (4 females, 22 males) were dissected. The distance between the piercing point (PP) of the EbSLN, the superior pole of thyroid gland (ST) and the laryngeal prominence (LP) of thyroid cartilage were measured. All measurements were compared left and right.

Results: The distances from PP to ST were measured as 10.66 ± 4.76 mm (transverse) and 2.9 ± 9.70 mm (vertical), from PP to LP 23.36 ± 7.79 (transverse) and 13.02 ± 5.38 (vertical), from ST to LP 10.5 ± 6.59 mm (transverse) and 33.75 ± 7.84 (vertical). PP to LP was found 34.26 ± 6.62 mm lateral and 10.49 ± 7.68 mm inferior of the laryngeal prominence. While EbSLN ended in the cricothyroid muscle (CT) 50.01%, it ended in 42.3% inferior constrictor pharyngeus (ICP) and 7.69% often by giving branches to the thyroid gland.

Conclusion: In this study, safe approaches for nerve protection during neck surgeries such as thyroidectomy with identified landmarks are described. In addition, it can be a safe and important guide in surgical approaches to be applied in the anterior neck region.

Keywords: superior laryngeal nerve, safe surgical approach, thyroidectomy, cadaver

O-38**Sex determination using frontal sinus diameters on direct radiography**

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Objective: It may be necessary to identify skeletons that cannot be recognized for any reason. In cases where descriptive features such as DNA and fingerprints cannot be used, radiological

examinations play an important role. Frontal sinus (FS) is absent at the beginning of life unlike other sinuses. Since its shape and developmental stages differ in each individual, it can be used in determining the sex and identity of individuals. In our study, we aimed to investigate the use of FS diameters in sex determination in anterior-posterior (AP) cranial radiographs.

Methods: 350 patients between the ages of 20–55 who have had AP skull radiography were included in the study. FS was classified as symmetrical, asymmetrical (right or left dominant), unilateral or bilateral aplasia. The longest diameters on both sides were divided into each other to evaluate the right and left asymmetry. Right height, right width, left height, left width measurements were made, the largest diameters were taken in the measurement. Independent t-test was used to compare diameter measurements between sexes. For the use of frontal sinus parameters in sex determination discriminate analysis method was used.

Results: The mean age of the patients was 31.23±11.9 years in males, 34.45±10.75 years in females, and 32.8±11.45 years in both groups. Bilateral aplasia (12 men, 8 women) was detected in 20 patients, right aplasia in 19 patients (10 men, 9 women), and left aplasia in 11 patients (7 men, 4 women). FS was symmetrical in 206 of the remaining 300 patients, right dominance in 33 patients and left dominance in 61 left patients. Measurements were made in the remaining 300 patients (154 men, 146 women). Right height, right width, left height and left width values were all statistically higher in males than females ($p < 0.05$). In the analysis made for gender determination, it was determined that 71.2% of women and 68.2% of men were able to classify correctly. Correct classification for both sexes was calculated as 69.7%.

Conclusion: We found that FS diameters were higher in men than in women and direct radiography could be used in sex determination at a rate of 69.7%. According to this information, FS diameters can be used in forensic sciences in determination of sex and person, even if not alone.

Keywords: paranasal sinus, direct radiography, frontal sinus, sex determination

O-39

Transverse foramen as a guide during cervical spine surgery

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Objective: In cervical vertebra surgeries, particularly reducing complications of vertebral artery (VA) injury; anatomy of VA

and structures in its critical neighborhood is important. Lateral dissection, especially anterior cervical surgeries, is the greatest risk for VA; reference points should be determined accordingly. Aim of the study is to contribute to reduction of VA injury and complications in cervical region surgeries with the data obtained as a result of morphological, morphometric evaluation of transverse foramen (TF) through which the VA passes.

Methods: In Albert Einstein College of Medicine Anatomy Laboratories, set of 80 dry bones, C3, C4, C5, C6, C7 vertebra on both right (R) and left (L) sides; AP (anteroposterior), transverse diameters of TFs were measured with digital calipers. Each vertebra was evaluated in terms of morphological, variation, osteodegenerative changes. Measurements were evaluated statistically with the SPSS 11.5 Windows program. Average, standard deviation values were thus calculated.

Results: It was observed that TFs in different levels were double, as of the number '8', two foramen side by side joined with a thin bony tissue in the middle (double, accessory / split). 49 of C6 vertebra were examined both side (98 TF), 18 of them on R, 20 of them on L, for total of 38, 52 of C5 vertebrae (104 TF), 18 on R, 14 on L; for total of 32, 52 of C4 vertebrae (104 TF), 6 on R & 5 on L, 11 of them were paired, these were detected as accessory or split TF. Spur formations in which unicus heterotrophically extended over the TF were observed in 1-C3, 2-C4, 1-C5, 2-C6 vertebrae. When TF in 2 different sets were compared in terms of their diameters, it was observed that they were differentiated on both sides. Osteophytes were detected in 1-C5 vertebra from the corpus vertebrae towards the TF. When the boundaries of 1-C6 TF were examined, it was observed that one side was in the form of a sharp edge instead of a circular contour. In our study, it was observed that TF diameters on both sides increased from C3-C6. (R: 4.95±0.62 to 5.49±1.01 mm, L: 5.10±0.56 to 5.86±1.21 mm)

Conclusion: Increasing TF diameters from C3-C6 level, variations in TF (double, incomplete formations etc.) affect the course of VA, were especially risky in anterior approaches. Preoperative imaging, evaluating anatomy of the region, the osteodegenerative changes of VA (structures in the vicinity of TF), will contribute to reducing postoperative complications of VA injury in cervical region surgeries.

Keywords: transverse foramen, cervical spine, cervical vertebra, clinic anatomy, vertebral artery, variation

O-40

Determination of the os trigonum prevalence with radiographic images in Alanya population

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Objective: Os trigonum is one of the most common accessory ossicles in the ankle region and it is usually detected as an inci-