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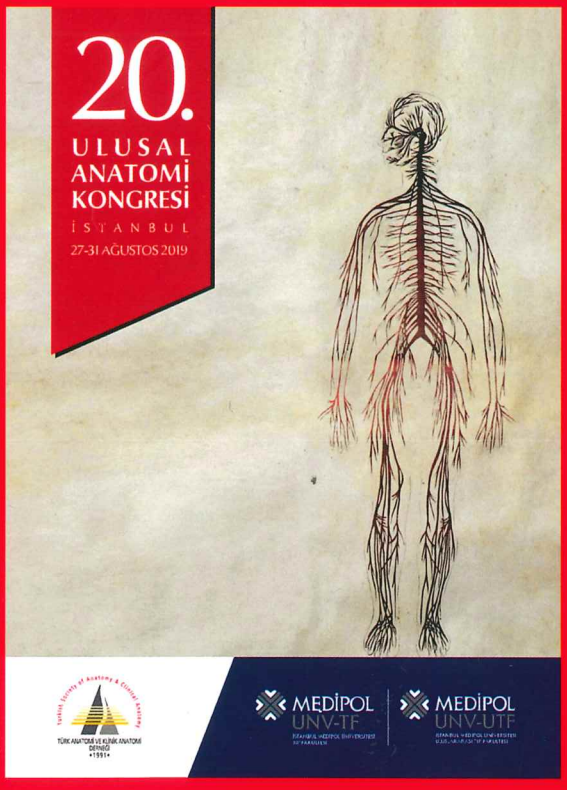
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An International Journal of Experimental and Clinical Anatomy

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An International Journal of Experimental and Clinical Anatomy

Official Publication of the Turkish Society of Anatomy and Clinical Anatomy

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Anatomy, an international journal of experimental and clinical anatomy, is a peer-reviewed journal published three times a year with an objective to publish manuscripts with high scientific quality from all areas of anatomy. The journal offers a forum for anatomical investigations involving gross, histologic, developmental, neurological, radiological and clinical anatomy, and anatomy teaching methods and techniques. The journal is open to original papers covering a link between gross anatomy and areas related with clinical anatomy such as experimental and functional anatomy, neuroanatomy, comparative anatomy, modern imaging techniques, molecular biology, cell biology, embryology, morphological studies of veterinary discipline, and teaching anatomy. The journal is currently indexing and abstracting in TUBITAK ULAKBIM Turkish Medical Index, Proquest, EBSCO Host, Index Copernicus and Google Scholar.

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Abstract should be written after the title in 100–250 words. In original articles and articles prepared in IMRAD format for Teaching Anatomy category the abstract should be structured under sections Objectives, Methods, Results and Conclusion. Following the abstract at least 3 keywords should be added in alphabetical order separated by semicolumns.

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Welcome Address of the Congress President

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Dear Valued Colleagues,

The 20th National Anatomy Congress will be held on Istanbul Medipol University's South campus from 27 to 31 August 2019. With this congress organized in association with the Turkish Society of Anatomy and Clinical Anatomy (TSACA), we would be pleased to see and entertain you at Istanbul Medipol University, one of the rising values of Turkey. We are working heart and soul to ensure that our congress will not only sustain the scientific level that has been achieved in previous years, but also be satisfactory in social aspects.

This congress is intended to provide 9 courses in analysis of MR images by MRiCloud system; anatomical illustration; facial nerve dissection; tissue clearing; hip and knee prosthetic applications; foot and ankle dissection; medical terminology; and pelvis dissection. Courses will be held on August 27, 2019 from 9:30 a.m. to 2.30 p.m. before the opening program and our 3.5-day intensive congress program will start on Wednesday, August 28. Distinct from earlier congresses, our congress is intended to be carried out as a "clinically oriented anatomy congress" so that it allows further interaction with clinical branches and clinicians where our efforts are planned accordingly. To that end, a panel titled "Why Do We Need Anatomy and Basic Medical Sciences?" will be held on August 28 with the contribution of academic clinicians who support our congress. Subsequently, one-hour "Neurosurgery panel" will be held on August 29, followed by one-hour "Orthopedics panel" on August 30 and one-hour "Dentistry and Radiology joint panel" on August 31. During 35-minute "clinically oriented anatomy" sessions which will be held after lunch and right before oral presentations on 28th, 29th and 30th of August, a series of presentations will be made by academicians from physiology, anatomy, neurology, plastic surgery, neurosurgery, orthopedics, general surgery, radiology and otorhinolaryngology.

As our key speakers, Prof. Richard T. Ambron will speak about the cellular, molecular and anatomical bases of chronic pain, while Prof. Abdulkadir Ömer will talk about the pancreas and Prof. Juan R. Garcia will discuss anaplasty and 3D medical printing, which we believe to be highly useful and purposeful.

As in previous years, the awards for the best oral and poster presentations will also be handed out this year.

As indicated in our introductory video of the congress that we shared with you earlier, the student dormitory at Istanbul Medipol University allows our young colleagues and graduate students who have the position of a medical specialist, lecturer or research assistant to accommodate and attend the congress free of charge. Additionally, we would like to express our contentment regarding our capability to offer our young colleagues who have devoted themselves to anatomy such an opportunity to enhance their participation in the congress through encouragement.

To accommodate our young colleagues who do not prefer to stay at the dormitory and our valued academicians who are a member of our professional community, we have concluded an agreement with two hotels located very close to our university in Kavacik. Any of our guests who choose to stay at hotel will enjoy discounted accommodation at these hotels given on the webpage. More detailed information can be found in the 'accommodation' menu of our webpage.

On the other hand, it is planned to provide transportation services for the guests who will use airports, coach stations and high-speed train stations throughout the congress. More detailed information can be found in the 'transportation' menu of our webpage.

Considering the traffic in Istanbul, scientific activities are scheduled to start at 9.30 a.m. The scientific program is projected to be completed at 4.40 p.m. on August 28 and 29, 4.50 p.m. on August 30 and 1.00 p.m. on August 31.

As included in the social program, an opening cocktail reception will be held at Beykoz Sabanci Teacher's Lodge on August 27, followed by a Bosporus tour on August 28 and a gala dinner on August 29 at Hidiv Kasrı in Beykoz. Following the completion of the scientific program on August 30, our guests will be given free time so that they can enjoy Istanbul freely.

The management of Istanbul Medipol University supports such scientific and social activities wholeheartedly and receives us with open arms. We wish to see all of you in the congress to act in response to this hospitality.

Kind regards,

President of the Congress
Prof. B. Ufuk Şakul

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Objective: Shape, image or possible morphological differences that belongs to biological organisms or similarities are very significant both graphically and statistically. Maintaining the shape of data explaining with strong statistical analysis, providing our evaluation with specific result, Recognising and using geometric morphometry method will fullfill existing requirement according to classical methods.

Methods: In the geometric morphometric method special reference points which expressed and digitize the shape as geometrically are used. Reference points that called Landmark are determined by specific criterias. The image file of the samples which will be examined are determined and transferred to the computer. Files that transmietted present to the programm and reference points of landmarks which previously agreed are placed. Cartesian coordinates of landmakrs are computing and saved as a TPS format.TPS relw module using Procrustes superimposition method are scaled, transferred and rotated. By superimposing the shapes, the differences due to the size are eliminated and the difference between the shapes is ready to be analyzed. Differences between groups are determined and comparisons are made. In-Group differences Thin plate spline (TPS) difference between groups determined by using MANOVA program.

Results: Deformation inputs obtained as a result of analysis, graphical and statistical datas visualize the regions where selected Landmarks is focused and explaining the reason of variation between groups.

Conclusion: The selected anatomical structure applied on image or graphy with statistical shape analysis programs possible morphological differences and similarities are determined, both statistical and graphically satisfiying resuls are obtained.

Keywords: shape analysis,geometric morphometry, anatomy

O-118

Investigation of distal humerus morphometry

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Objective: The fractures of the distal part of the humerus constitute 0.5–2% of all bony fractures. Approximately 33% of these fractures involve the elbow joint. Anatomical reduction of the fracture is very important for painless, stable and mobile elbow joint restoration. Many surgical methods including olecranon osteotomy and the triceps lifting approach are used to treat. The anatomical features of distal humerus should always be kept in mind for internal fixation which is commonly used as a surgical procedure.

Methods: The measurements of distal humerus were performed in 50 dried adult humerus which were used as educational materials in anatomy laboratories and in 50 radiographies of the humerus which are reported as normal by the radiologist.

Results: Mean length of humerus (mean±SD) was measured as 300.8 mm (±17.3). The mean lenght and width of capitulum humeri were 18.26 mm (±2.56), 19.45 mm (±2.01), respectively. The mean lenght and width of trochlea humeri were 14.32 mm (±1.97), 21.73 mm (±2.16) respectively.The distance between medial and lateral epicondyle were measured as 58.38 mm (±4.41).The mean lenght, width and depth of coronoid fossa were 9.56 mm (±1.78), 13.07 mm (±2.28), 4.48 mm (±0.81), respectively.The mean lenght, width and depth of olecranon fossa were 19.39 mm (±2.37), 26.16 mm (±3.17), 14.35 mm (±2.43), respectively.

Conclusion: Morphometric data of distal humerus obtained from dry bones and radiographs may useful for surgical procedures performed in this area.

Keywords: distal humerus, humerus fracture, elbow joint, morphometry

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Using Archimedes' method to measure os calcaneus volume

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Objective: To calculate external volumes of cadaver dry bones, Archimedes' water-displacement method has been used by many researchers, but failed due to penetration of water into the bones. In this study a solution to overcome this problem is proposed and tested.

Methods: Fourteen dry os calcaneus were studied. The bones had been placed in 10 inch party balloons, the air was aspirated with a 50 cc syringe so that the bone was covered with a thin layer of latex until no space was left between the balloon and the bone. The balloon tip was tied with a rope and was cut. Then, volumes were calculated by using Archimedes' water displacement method. On CT 1 mm thick sections of the bones were obtained and three-dimensional reconstructions were performed in Aquarius iNtuition Volume Rendering program to calculate volumes. Then the volumes found by two different methods were compared.

Results: The proposed method prevented the penetration of water into the dry bones. The mean volume of os calcaneus calculated was 58.6 mm^3 (38–71 mm^3) by Archimedes' principle and 59.05 mm^3 (39.9–71.2 mm^3) by radiographic method. Measurements obtained by two different methods showed a difference of minimum 0 mm^3 and maximum 2.8 mm^3. Due to