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A morphometric study of scapular glenoid cavity

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Aims and objectives: The knowledge of shape and morphological parameters of glenoid cavity are important in the design and fitting of glenoid components for total shoulder arthroplasty. The variations in normal anatomy of glenoid are important in diagnosis and treating conditions like osseous Bankart lesions and osteochondral defects. The aims were: (i) study the morphometric values of glenoid cavity of scapula; (ii) to compare with similar studies which have been cited earlier.

Material and methods: The present study was carried out on 182 dry, adult human scapulae of unknown sex belonging to south Indian population. Various diameters of glenoid cavity were measured with the help of vernier calliper. The incidence of three different shapes of glenoid cavity was also noted.

Results: The mean superoinferior diameter of right and left scapulae were 32.83 ± 2.94 mm and 32.46 ± 2.78 mm respectively. The average anteroposterior diameter of lower half of right glenoid cavity was 24.76 ± 2.17 mm and that of left glenoid cavity 24.25 ± 2.40 mm. Pear shaped glenoid cavity was more commonly found.

Conclusion: The most common complication of total shoulder arthroplasty is loosening of glenoid component. The glenoid morphology has a prognostic implication on the primary glenohumeral osteoarthritis. The morphometry of glenoid cavity has clinical implication in orthopaedic joint replacement, glenohumeral instability and rotator cuff tear management.

Conflicts of interest

The author has none to declare.

http://dx.doi.org/10.1016/j.jasi.2016.08.011

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Anatomical correlation with chronic pelvic pain

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Chronic pelvic pain is a biomechanical dysfunction in the pelvic floor, pelvic ring or associated lumbar or abdominal structures. Pelvis contains multiple organ systems with complex overlapping innervation, hence, it is often difficult to identify a single contributor to the pathogenesis. The search for a specific etiology, millions of sufferers has been visiting multiple specialists over time at significant cost, affecting both the patient and the healthcare system. That is why the clinical examination should include a thorough medical, surgical, social and behavioral history as well as the evaluation of each system individually and collective interaction of these systems from thoracic cage to the thigh region. That is why understanding of the specific regional neuroanatomical relationship of the nerve structures is very essential to precision in interventional and rehabilitation management.

Chronic pelvic pain related neuroanatomy is discussed on ganglion impar, genito-femoral, pudendal, iliohypogastric, ilioingunal, and superior hypogastric nerves where diagnostic blocks help to diagnose the cause and long term therapy is being done by radiofrequency ablation therapy. Neuromodulation therapy also has been done in different cases with satisfactory results.

Chronic pelvic pain is a multifactorial entity due to sensitization of autonomic and somatic nerves that innervate various surrounding structures, which is only possible to diagnose through a multidisciplinary approach with a thorough knowledge of anatomy to pinpoint the pain generators, to manage accordingly.

Conflicts of interest

The author has none to declare.

http://dx.doi.org/10.1016/j.jasi.2016.08.012

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Branching patterns of thyrocervical trunk

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Aims and objectives: Since the subclavian artery and its branches are involved in so many clinical instances, the study of the variations in the origin and branches of thyrocervical trunk was selected for analysis.

Material and methods: In 40 adult cadavers of unknown sex and 10 dead fetuses, the subclavian artery was exposed using conventional dissection method and the branching pattern was studied.

Results and conclusion: The number of branches varied from one to four in study of both adult and foetuses. Since many neurovascular structures are closely related to thyrocervical trunk and its branches, this study will be useful clinically.

Conflicts of interest

The authors have none to declare.

http://dx.doi.org/10.1016/j.jasi.2016.08.013

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Study of the size of the coronoid process of mandible

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Aims and objectives: The mandible serves as an important structure providing attachments to all the muscles of mastication. The coronoid process – the anterior bony projected part of ramus of mandible gives attachment to two important muscles of mastication. The aim of this study was to observe variations in the size of coronoid process in relation to its side, shape, age and sex.

Material and methods: The material for the study comprised 160 dry human mandibles grouped on criteria of age and sex, from the osteology bank of anatomy department, S.C.B. Medical College, Cuttack.

Results: The size of coronoid process was found to be approximately 1.5 mm longer on the right than on the left side; 0.01 mm longer in males than females; and 0.01 mm longer in dentulous than in edentulous specimens. Triangular coronoid process was found to be the longest followed by round and then hook-shaped.

Conclusion: This study – a pioneer one study will be of immense value for the anthropologists, forensic scientists and reconstructive surgeons.