

49

Radiological assessment of patterns and thickness of bony roof of superior semicircular canal



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Introduction: Superior semicircular canal (SSC) a part of the inner ear balancing system in humans has three layered covering over it. The outermost bony cover is thin at birth, but progressively thickens until three years of age. Studies had reported dehiscent or extremely thin bone overlying the SSC with varied incidence. Few studies also claim reduced thickness of the bony plate with advancing age. With the gaining importance of this bony plate thickness, this study was done to find out the pattern and thickness of bone overlying the SSC across age and gender.

Methods: The computerized tomographic images of patients who were referred for high resolution CT temporal bone to the radiology department during 2015–2016 were studied for the patterns and thickness of the bony plate overlying the SSC. The correlation between the different types and age was studied.

Result: A total of 140 images of temporal bones were studied. The bony plate showed five different pattern namely normal, thick, papyraceous, pneumatized and dehiscent in differing proportions. The normal range of thickness was noted to be from 0.6 mm to 2.5 mm. With increase in age, papyraceous or dehiscent type was observed to be predominant when compared to other types.

Conclusion: The thinning and dehiscence of the bone overlying SSC has led to the superior semicircular canal syndrome. The correlation between various patterns, thickness of bony plate overlying SSC and age in this study, stresses the importance for studying the temporal bone in cases of variation in balancing and giddiness along with regular investigations to rule out the dehiscence of bony plate.

Conflicts of interest

The author has none to declare.

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50

Study of radiological pattern in feet of disabled leprosy patients attending tertiary care hospital



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Introduction: Leprosy is a social and chronic inflammatory disease mainly affect skin and peripheral nerve, bone changes are common in leprosy. India contributes about 60% new leprosy case detection globally. It is considered to be important mainly because of its potential to cause permanent and progressive physical deformities with serious social and economical consequences. About 25% of the leprosy patients who are not treated at the early stages of the disease develop deformities of the hands and feet. About 80% of the joint lesions are in the metatarso-phalangeal joints of the foot or in the inter-phalangeal joints of the hands and feet. The main aim of this study is to observe the radiological changes in feet of leprosy patients with deformities

Aim and objectives: 1. To study the radiological changes in the feet of leprosy patients with deformities. 2. To suggest suitable recommendation based on study.

Materials and methods: Types of study: cross-sectional, observational study.

Study population: Leprosy diagnosed patient attending CLTRI Hospital& SSSMC&RI Hospital.

Study setting: Hospital based, i.e. CLTRI outpatient dept. and SSSMC&RI outpatient dept.

Study tool: X-rays of lower extremity.

Study period: April 2016–June 2016.

Statistical method: Percentage and proportion.

Result: Total of 93 leprosy patients (70 male and 23 female) with disabilities/deformities were examined radiologically to evaluate bone changes. The common age group observed is 40–60 years with average 52.6 (range 12–85 years) years. X-rays of lower extremity were used for this study. Specific bone changes are periosteitis and sclerosis which may occur due to lack or incomplete anti-leprosy treatment and non-specific changes are absorption of bones and cupping of joints which may occur due to increased duration of disease and also partial or lack of treatment. Out of total 93 study subjects the partial absorption of metatarsals 40 (40.3%), proximal phalanges absorption seen in 54 (58.1%) and complete absorption of middle phalanges 62 (66.7%) terminal (distal) phalanges 63 (66.7%). The sclerosis seen in 8 (8.6%) and cupping of MTP joint seen in 35 (37.6%) of study subjects.

Conclusion: Though leprosy is an ancient disease, it still continues to be the most feared, due to deformities. The bone changes with deformities are preventable, since all these are not due to the disease itself. The study of the radiological changes may help the clinician in formulating methods for the management of the disease and in preventing the permanent loss of function and the occurrence of deformities and disabilities.

Conflicts of interest

The authors have none to declare.

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51

Anomalous origin of bronchial artery from aortic arch or its branches: A CT study



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Introduction: Bronchial artery embolization has become an established procedure in the management of massive and recurrent haemoptysis. Bronchial artery of anomalous origin is known as a source of haemorrhage and persistent haemoptysis post embolization. Only very few studies has been reported on the anomalous origin of bronchial artery.

Aim: To study the prevalence of anomalous origin of bronchial artery from aortic arch or its branches from chest CT images.

Materials and methods: 3000 CT chest images available in the Department of Radiology were studied during the period of June 2015 to June 2016.

Observations: Left bronchial artery was found arising from aortic arch and right bronchial artery from descending aorta only in a single case. The patient had recurrent haemoptysis post bronchial artery embolization.