



ROLE OF HRCT IN TEMPORAL BONE PATHOLOGIES

Radiology

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ABSTRACT

CT plays an important diagnostic role in patients to determine anatomical variation (DNA) that may place the patient at increased risk for intraoperative and postoperative complications. In the present study, it has been attempted to identify the temporal bone by Computerized Tomography and evaluation of associated pathology involving temporal bone. This prospective study was conducted on 50 patients with clinical impression of deviated nasal septum subject to CT scanning on PHILIPS 128 SLIES machine. A CT abnormality was observed maximum in patients between 2 to 40 years (17 patients). The CT examination revealed pathological findings in 50 patients (100%) which included temporal bone fracture (22%).

KEYWORDS

INTRODUCTION

A Computed tomographic (C.T) image is a display of anatomy of a thin slice of a body acquiring and reconstructing the images from multiple X-ray absorptions.

High resolution computed tomography (HRCT) imaging of the lungs is well established for diagnosing and managing many pulmonary diseases. Optimal methods of acquisition and interpretation of HRCT images require knowledge of anatomy and pathophysiology as well as familiarity with the basic physics and techniques of CT. This parameter outlines the principles for performing high quality HRCT of the lungs.

The temporal bone contributes to the lower lateral walls of the skull. It contains the middle and inner portions of the ear, and is crossed by the majority of the cranial nerves. The lower portion of the bone articulates with the mandible, forming the temporal mandibular of the jaw.

Pathologies of temporal bone are:

Temporal Bone Cholesteatoma

Clinical features of temporal bone cholesteatoma are miscellaneous, and sometimes misleading: signs of middle ear cholesteatoma, progressive or sudden facial palsy, sensorineural deafness as in acoustic neuroma, conductive deafness as in otosclerosis, secretory otitis media, or intracranial complications. Polytomography is the only way to pinpoint topography and extension. CT scanning is very useful in determining extension.

other pathologic are:

Temporal bone langerhan's cell histiocytosis

Temporal bone trauma

Temporal bone cholesteatoma etc .

The aim of this study is ..

To evaluate the abscess in the temporal bone. To evaluate the cause of fracture in the temporal bone.

METHOD AND MATERIAL

The prospective study is done on High resolution computerized tomography (HRCT) Temporal bone performed on 128 slice multi-detector CT (MDCT) PHILIPS ingenuity core unit. The patients were scanned in supine position. The data is collected for the study referred to the department of radio-diagnosis and imaging for the HRCT temporal bone from OPD/IPD/ER of Chhatrapati Shivaji Subharti Hospital, Subharti Medical College, Meerut, U.P.

Review Of Literature

ChuniLal Thakur , Amandeep Singh , Sumeet Singh , Arvinder Singh Sood , kunwarpa Singh⁽¹⁾ in 2015 did a study on "Role of high resolution computer tomography in evaluation of pathologies of temporal bone" High Resolution Computer Tomography (HRCT) , a modification of routine CT, provide a direct visual window in the temporal bone providing minute structural details. Purpose of the present study was to evaluate the normal variations, pathological processes (infections and congenital anomalies) and their extent involving the temporal bone along with these imaging finding surgically, wherever available.

"HiralHappani, JagrutiKalola, HirenRathod, AnjanaTrivedi⁽²⁾ in 2018 did a study on "Role of HRCT temporal bone in patients with chronic suppurative otitis media" chronic suppurative of otitis media (CSOM) is inflammation in ear discharge. It is associated bone comes in the knowing the extent of involvement caused by the.Disease.

RESULTS

In this study it was observed that 60% male and female 40% amongst patients with Maximum numbers of patient were in the age group of 40-60. In the present study 18(100%) patients showed computed tomography imaging abnormalities. In the present study male patients (16%) showed more Temporal bone fracture.

in this study in which 31 (62%) patients were male and 19 (38%) patients were female. The distribution of the basis of the gender is as follows

Distribution of patients on the basis of age group

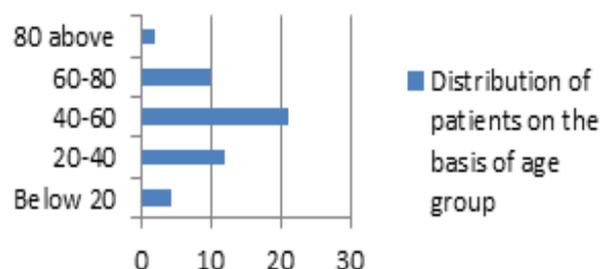


Table no. 1: Distribution of patients on the basis of age group.

Age Group	No. of patient	Percentage
Below 20	5	10%
20-40	12	24%
40-60	21	42%
60-80	10	20%
80 above	2	4%
Total	50	100%

DISCUSSION

The present study "ROLE OF HRCT IN TEMPORAL BONE PATHOLOGIES" is a prospective observational study conducted to evaluate the interstitial lung disease by HRCT examination using Phillips 128 slice MDCT. The study was carried out from 25 December 2021 to May 25, 2022 on 50 patients in the department of radio diagnosis and imaging referred for HRCT chest examinations from OPD and different wards of Chhatrapati Shivaji Subharti Hospital, Subharti Medical College and Swami Vivekananda Subharti University, Meerut, Uttar Pradesh.

The present study "ROLE OF HRCT IN TEMPORAL BONE PATHOLOGIES" is a prospective observational study conducted

REFERENCES

1. Text book of S.K. Bhargava and Sumeet Bhargava, Vth edition.
2. Chuni Lal Thakur, Amandeep Singh, Sumeet Singh, Arvinder Singh Sood, Kunwarpa Singh⁽¹⁾ "Role of high resolution computer tomography in evaluation of pathologies of temporal bone" journal of clinical and diagnostic research: JCDR9(9), TC07, 2015
3. Hiral Hapani, Jagruti Kalola, Hiren Rathod, Anjana Trivedi. "Role of HRCT temporal bone in patients with chronic suppurative otitis media" Radiology 3(3), C70-C72, 2018