

Pneumatization of Anterior and Posterior clinoid processes - A preliminary study.

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Introduction

During anterior and/or posterior clinoidectomies the knowledge on presence of pneumatization is useful for the neurosurgeon in order to prevent a cerebrospinal fistulae formation as a complication.

Methodology

A collection of fifty computed tomography (CT) images of the skulls which were available at the Department of Anatomy, Faculty of Medical Sciences, University of Sri Jayewardenepura were evaluated by two individuals independently and confirmed by a Consultant Radiologist.

Results

In the analyzed CT images 34 were males and 16 were females with a male to female ratio of 2:1

Ages of the study subjects span from 1 month to 90 years with a mean age of 53.2 ± 2.32 . Pneumatization of anterior or posterior clinoid processes was observed above 20 years of age. We did not observe an increased tendency for pneumatization of the clinoid processes with increased age.

In 24%(12/50) of the analyzed CT images showed pneumatization of the ACP and in 20%(10/50) showed pneumatization of the PCP.

Out of the pneumatized ACP, 25%(3/12) were only on the left side, 33.3%(4/12) were only on the right side and 41.7%(5/12) were on bilateral anterior clinoid processes.

Out of the pneumatized PCP, 40%(4/10) had pneumatization only on the left PCP. Pneumatization only on the right PCP or both PCP were shown in 30%(3/10) each.

In analyzed male CT images 17%(6/34) of ACP and 17%(6/34) of PCP were pneumatized. Whereas in analyzed female CT images 37.5%(6/16) and 25%(4/16) of ACP and PCP were pneumatized respectively.

Discussion and Conclusions

Pneumatization of clinoid processes did not show a relationship with increased age. Presence of pneumatization were commoner in females compared to males. To compare the prevalence in pneumatization of ACP and PCP among different populations need further radiological studies to derive population values for Sri Lanka.