

# The variation of superior semicircular canal bone thickness in relation to age and gender

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## Abstract

**Background:** Superior semicircular canal dehiscence syndrome (SSCD) is a current diagnosis that is due to a loss of bone covering the superior semicircular canal (SSC). This results in pressure-/sound- induced vertigo and oscillopsia.

**Objective:** To find the variation of the thickness of the bone that covers the Superior Semicircular Canal with relation to age and gender among the Chinese descents.

**Materials and methods:** Three hundred and eleven temporal bone Cone Beam Computed Tomography (CBCT) images of patients who attended Otolaryngology clinic at Second Hospital of Shandong University from January 2017 to April, 2018 were retrospectively studied. The images were reconstructed in the line of Poschl and the thinnest area of the bone covering the SSC was taken.

**Results:** We included 172 (55.31%) females and 139 (44.69%) males. Mean age was 41 years. Overall mean difference in thickness was found to be  $-0.0210$ . There was no significant difference between the female and male bone thickness ( $p = .7113$ ). With age the mean difference was  $0.0801$  ( $p = .1557$ ) which was not statistically significant.

**Conclusion and significance:** There were no significant change in bone thickness with advancing age. CBCT is the best method of assessing SSCD.

**Keywords:** Superior semicircular canal, superior semicircular canal dehiscence, Cone beam computed tomography