



Title	Sexual dimorphism in the facial morphology of adult humans : A three-dimensional analysis
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## 論 文 内 容 の 要 旨

氏 名 ( Zere Edlira )

論文題名

Sexual dimorphism in the facial morphology of adult humans: A three-dimensional analysis (成人の顔面表面形状の性差に関する三次元解析)

論文内容の要旨

The objective of this study was to demonstrate sexual dimorphism in the entire three-dimensional facial surface form of adult humans. The sample consisted of Female and Male Groups ( $n = 200$ ; age range, 18–35 years). Three-dimensional images of each subject's face at rest were recorded. A total of 185 variables that described facial surface configuration features were extracted from each image. The variables were compared between the groups using t-tests, and those exhibiting P-values  $<0.0001$  were entered into a stepwise discriminant function analysis for sex determination. Wire mesh fitting was also performed on each image to examine the facial surface morphology. The mean node coordinates of the fitted mesh were compared between the groups using t-tests. Sixty-seven of the 185 variables differed significantly between the groups, and 11 qualified for inclusion in the stepwise analysis. The Female Group exhibited a greater vertical height of the eye fissure, shorter posterior-anterior height of the nasal tip, vertically greater supraorbital ridge, shorter lower face height relative to the total upper anterior face height, more prominent cheeks in the infraorbital region, less prominent cheeks in the buccal region, shorter vertical height of the subnasal region, a smaller nasal hump, and a smaller nasal alar. The discriminant function analysis was 96.5% accurate overall. The wire mesh fitting results showed that the eyes, forehead, and chin were in vertically higher positions in the Female Group than in the Male Group. The cheeks and nose were more protuberant in the Female Group and Male Group, respectively.

論文審査の結果の要旨及び担当者

氏 名 ( セレ アトリラ )			
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論文審査の結果の要旨

本研究は，日本人成人男性および女性について撮影した三次元顔面表面形状データを用いて，顔面表面形状の性差について検討したものである．その結果，女性は男性と比較して，垂直的に長い眼裂，前突した眼窩下部，後退した頬部，前後的に低い鼻尖，小さい鼻背隆起と鼻翼，垂直的に短い鼻下，および垂直的に短い下顔面高を認めることが明らかとなった．

本研究は従来知られていなかった頬を含む顔面全体の表面形態の性差について新しい知見を与え，矯正歯科治療の治療計画立案において，成人男性・成人女性それぞれについての顔面表面形状における治療目標を決定する上で，重要な指針となるものである．

よって，博士（歯学）の学位論文として価値のあるものと認める．