

언어구분 KOR

논문구분 원저/구연

논문분야 척추

논문제목 **Centroid** 측만각 측정법의 정확도에 대한 통계적 분석

영문제목 **Centroid Method: An Alternative Method of Determining Coronal Curvature in Scoliosis**

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서론 : Although, the Cobb method is considered the gold standard, the centroid method may offer a reasonable alternative in adult scoliosis, because it has been shown to have better inter- and intraobserver reliabilities in adolescent scoliosis.

재료 및 방법 : Although, the Cobb method is considered the gold standard, the centroid method may offer a reasonable alternative in adult scoliosis, because it has been shown to have better inter- and intraobserver reliabilities in adolescent scoliosis.

결과 : Intraobserver Comparisons of all the 60 radiographs revealed that ICCs (inter- and intraclass correlation coefficients) Cobb and the centroid methods were both excellent ( $>0.979$  vs  $>0.918$ ), and MADs (mean absolute differences) were similar ( $<1.58^\circ$  vs  $<2.02^\circ$ ). In interobserver comparisons, ICCs of Cobb method was higher than that of the centroid method ( $0.922 >$  vs  $0.799 >$ ). And, the MAD of the Cobb method were lower than that of the centroid method ( $<2.91^\circ$  vs  $<4.84^\circ$ ). Comparisons of radiographs sub-divided by severity showed that the ICCs of Cobb and the centroid methods were both excellent ( $>0.819$  vs  $>0.801$ ), and their MAD were similar ( $<2.29^\circ$  vs  $<2.53^\circ$ ) for intraobserver comparisons. Interobserver comparisons showed that ICCs and MAD were dependent on the severity of coronal curvature, and the ICCs of Cobb method ( $0.698 >$ ) was greater than that of the centroid method ( $0.507 >$ ). Furthermore, MAD values were lower for the Cobb method than the centroid ( $<3.59^\circ$  vs  $<6.07^\circ$ ). Moreover, these results are contradictory to the previous study, which showed the higher reliability of centroid method in measures of adolescent scoliosis.

결론 : In the present study, the reliability of the centroid method was found to be more susceptible to the severity of disease in older patients, despite its demonstrated greater reliability in adolescent scoliosis. Our findings show that selective use of these two methods in old and young patients can increase the reliabilities of measurements made.

**acknowledgment :**

Adult scoliosis, Centroid method, Cobb method, Radiographic measurement