**ABSTRACT**

**Background:** Morphological indicators within the cranium for prediction of mandibular growth patterns as reported by Bjork are: (1) Inclination of the condylar head, (2) Curvature of mandibular canal, (3) depth of the Antegonial notch, (4) Inclination of the symphysis, (5) Interincisal angle, (6) Intermolar angle, and (7) Lower anterior face height. The purpose of this study was to evaluate the feasibility of predicting the skeletofacial divergence by using Bjork’s structural signs of mandibular growth rotation.

**Materials:** The pre-treatment lateral cephalometric radiographs of 194 subjects aged above 15 years having CVMI stage 5 were obtained the archives as well as from those undergoing orthodontic treatment in the department. These were divided in three groups- Group A (Normodivergent-77), Group B (Hyperdivergent-65) & Group C (Hypodivergent-52).

**Results:** One way ANOVA was found that LAFH and CMC showed highest predictability in overall, females and males. The predictability of Bjork’s structural sign were in the descending order of: Normodivergent subjects: CMC > ICH> IIA> IMA> LAFH> ISY> AN, Hyperdivergent subjects: LAFH > IMA > AN > CMC > ISY > ICH > IIA, Hypodivergent subjects: LAFH ≥ CMC > ISY > IIA > AN > ICH > IMA.

**Conclusion:** This study suggests that seven structural signs of Bjork’s mandibular rotations showed great variations in terms of predicting the skeletofacial divergence & helps in the treatment planning for the patient.

**Key words:** Bjork’s seven structural signs, Predictability, Growth pattern