Tooth Attrition Patterns in a Group of Iraqi Adults Sample with Different Classes of Malocclusion

(A comparative study)

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Abstract

Tooth attrition is wearing away of tooth structure during mastication. It is a normal occurrence and happens as an individual ages. This study investigated tooth wear patterns in adults with different classes of malocclusion and compared them with normal occlusion. The sample consisted of 363 subjects that were divided into 5 groups with an age range **"18-25"** years: 85 normal occlusion subjects, 128 class I with crowding subjects, 90 class II division 1subjects, 30 class II division 2 subjects and 30 class III subjects. Dental wear was assessed by using a modified version of the tooth wear index. Each 2 groups were compared using ***Mann Whitney*** test for the frequency and severity of wear on each surface of each group of teeth. The level of statistical significance was set at 5%.

In summary the following results were obtained:

1. The class I malocclusion group had statistically ***greater*** tooth wear in **incisal surfaces** of maxillary central incisors, maxillary lateral incisors and mandibular lateral incisors than did the normal occlusion, and had statistically ***smaller*** tooth wear in **incisal surfaces** of maxillary canines and buccal surfaces of mandibular first molars.
2. The class II division 1 group had statistically ***greater*** tooth wear in the **occlusal surfaces** of maxillary second premolars, mandibular first premolars**,** mandibular second premolars. **Buccal surfaces** of mandibular canines, mandibular second premolars and mandibular first molars than did the normal occlusion group, had statistically ***smaller*** tooth wear in **incisal surfaces** of maxillary lateral incisors, maxillary canines and mandibular central incisors.
3. The class II division 2 malocclusion group had statistically greater tooth wear in **labial surfaces** of mandibular central incisors, mandibular lateral incisors. **Buccal surfaces** of mandibular second premolars, mandibular first molars. **Occlusal surfaces** of maxillary first premolars, maxillary second premolars and mandibular second premolars than did normal occlusion group, had statistically

smaller tooth wear in **incisal surfaces** of maxillary lateral incisors and maxillary canines

4. The class III malocclusion group had statistically greater tooth wear in the occlusal surfaces of maxillary first premolars and maxillary second premolars than did normal occlusion group.

In conclusion subjects with normal occlusion and those with different classes of malocclusions have different tooth wear patterns.