EFFECTS OF DELETERIOUS ORAL HABITS ON THE DENTO-FACIAL COMPLEX*

D. N. Kapoor, R. K. Roy and M. K. Bagchi

Lucknow

Habits may be said to consist of a complex system of reflexes which begin to function when a child or an adult is confronted by an appropriate stimulus. These are either instinctive, obstructive or deleterious in their order and pattern. The first one is either inherited or may result from an insufficient sucking of the breast or the bottle. The others are acquired by frequent repetition and exert abnormal forces on the teeth and other perioral structures. Some of these forces are misdirected and become harmful for the optimum growth and development of the dento-facial structure. Deleterious habits such as thumb sucking, mouth breathing, lip biting and sucking, tongue thrust and swallowing, contribute directly or indirectly to the occurrence of different types of malocclusion and an imbalance of facial components, thus affecting esthetics, phonetics, mastication and swallowing. These consequences are grave and immediate measures should be undertaken to break the habits. This article presents the problems related to the effects of deleterious oral habits on the dento-facial component.

*Sucking of thumb, finger or dummy

The facial bones are not densely calcified in early childhood, so the sucking pressure between the maxillary and the mandibular teeth creates an abnormal developmental force which results in malocclusion. The effects that are observed as a result of this habit (Fig. 1) are:

1. Narrowing of both the mandibular and the maxillary molar areas.
2. Overlapping, rotation and lingual and mesial axial rotation of the maxillary incisors.
3. The lower lip is placed between the incisors causing a protrusion of the upper incisors and lingual inclination of the lower incisors.
4. Children with thumb or dummy sucking habits may produce tongue thrust activity and an open bite tendency.
5. An incompetent under lip (short upper lip) with a high palatal vault, narrow dental arch and diastema may result.

Lip biting and sucking and nail biting

Malocclusion due to lip biting and sucking makes the maxillary central incisors protrude and the mandibular incisors retrude with infraocclusion of the anterior teeth and an anterior open bite. Individuals with the nail biting
habit exhibit crowding and rotation of the anterior teeth and attrition of the mandibular incisal edges.

Mouth breathing

Nasal obstruction and enlarged adenoids have a significant causal relationship with an obstructive type of mouth breathing. The effects on the dento-facial components as a result of mouth breathing habits (Fig. 2) are protrusion of the maxillary anterior teeth because of the lack of restraining influence of an incompetent short upper lip, supraversal of the upper and lower incisors and infraversal of the molars, distal relation of the mandible with the maxilla in cases with an obstructive type of mouth breathing, a contracted 'V' shaped maxillary arch, procumbancy of the maxillary denture base with an over-development of the anterior maxilla proper, high vault palate, arrested development of the middle one-third of the facial skeleton, flattened nasal bridge, and a 'pigeon face' appearance.

Tongue thrust and abnormal swallowing

A change in muscle function can initiate morphologic variations in the normal configuration of the teeth and the supporting bone and enhance the malocclusion. This may induce a complete collapse of the maxilla and an adverse growth of the mandible. The tongue thrust habit is classified into non-deforming tongue thrust which does not produce any abnormal effect; anterior tongue thrust which produces an anterior open bite, procumbant anterior teeth and sometimes a posterior cross-bite, Lateral tongue thrust produces a posterior open bite, posterior crossbite and deep overbite. Anterior and lateral tongue thrust together produce anterior and posterior open bites, procumbant anterior teeth and sometimes a posterior crossbite.

Self mutilation

Self mutilation is observed among young boys and girls. They may utilize the fingernail to push away the gingival tissue from the lateral surface of the lower cuspid, exposing the underlying alveolar bone by tension. Another common habit in teenage girls is to open bobby pins with the anterior incisors, to place them in the hair.

Postural defects

An abnormal pressure exerted on the growing bone and teeth can produce malocclusion. The pressure is usually derived from an abnormal sleeping posture, placing the hand firmly on the jaw during reading and an abnormal frenulum thrust. Placing of the palmar bulge at the base of the thumb against the maxillary incisors and the premolar area causes a retrusion of the maxillary arch and a protrusion of the mandibular incisors.

References
