

**The Management Modalities of Cleft Palate
in Plastic Surgery Department Ain Shams
University
In the last 10 years (1984 - 1994)**

Thesis

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By



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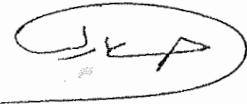
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Introduction & Aim Of The Work

INTRODUCTION AND AIM OF THE WORK

Cleft lip and palate has been one of the most frequently occurring congenital anomalies (Ivy, 1952) .

They are not a mere anatomical clefts but are also a functional disability . A child born today with cleft palate, with or without prepalatal cleft, should receive a comprehensive care . Surgical care is much more than simply obtaining closure of the hard and soft palatal clefts at appropriate age .

Clefts can adversely affect every function of the face, cleft palate can be associated with malnutrition, malocclusion, deficiencies in maxillary and malar bone growth, eustachian tube malfunction, reduced air conduction in the middle ear, deafness, and naso-respiratory obstruction . As such, there can be problems in speaking, alimentation, hearing, nasal breathing, taste and smell as well as in normal facial appearance and expression .

Priorities in timing are critical . For example, a post-operative velopharyngeal incompetence producing speech distortion usually should be corrected before malocclusion, even so the time might be best for orthodontic care . Often, these two problems can be treated simultaneously . However, if there is an articulation problem due to anterior malocclusion it makes a little sense to insist on speech training before the malocclusion is corrected (Abyholm et al, 1981) .

The treatment will spread over 15-20 years, so the plastic surgeon who is responsible for the care of these patients, should have at least a rudimentary knowledge of the disciplines of dentistry, speech pathology, pediatrics, genetics, and otolaryngology. In this way, the surgeon can collaborate effectively with these specialities, and with others who may also be involved (**Randall, 1983**).

That is why when examining a patient with cleft lip and palate especially with severe tissue deficiency and anatomical distortion, the surgeon is faced with difficult tasks of evaluating results and planning of the ideal management for each individual patient.

AIM OF THE WORK

Our aim is to make an analysis of different techniques used in the management for cases presented with primary palatal cleft and those presented with secondary complications after primary palatal surgery, in *The Plastic Surgery Department Ain Shams University* in the last ten years (1984 -1994).

REVIEW OF LITERATURE

Embryology

Anatomy

Epidemiology & Aetiology

Pathogenesis

Classifications

Pathological Anatomy

Surgical Management

Primary Procedure

Secondary Procedure

Embryology

EMBRYOLOGY

Development of the face :

The face is formed from five processes which surround an opening (*the stomodeum*) at the anterior end of the embryo (Fig. 1) (Sedano et al, 1970) .

These are :

- 1- Frontonasal process : a single process .
- 2- Maxillary process : one on each side .
- 3- Mandibular process : one on each side

I) Frontonasal process :

The appearance of the olfactory pits divides the frontonasal processes into three processes ; one median (*The medial nasal process*), two lateral (*The lateral nasal process*) . The medial nasal process develops a bulge on each side, known as the globular process .

- Medial nasal and globular process forms :

- 1- The septum of the nose .
- 2- The philtrum of the upper lip .
- 3- The premaxilla .

- Lateral nasal process forms :

The side of the nose, (takes no part in the formation of the upper lip) .

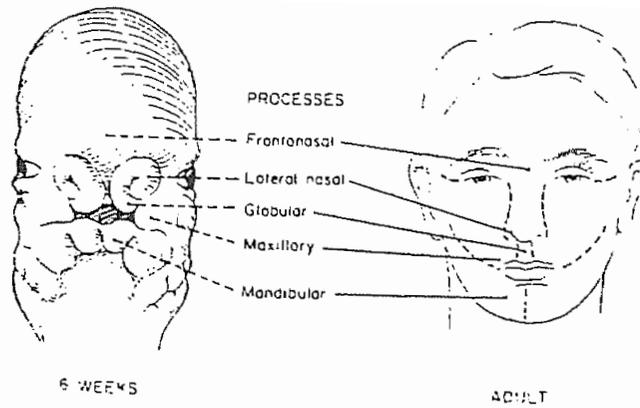


Figure 1 . Contributes to the embryonic processes to the adult face .
(From KcCarthy J.G.(Ed.) . *Cleft Lip And Palate And Craniofacial Anomalies, Vol . 4,Philadelphia. W.B. Saunders Company, 1990*) .

II) Maxillary process forms :

- 1- The cheek and the whole upper lip except the philtrum .
- 2- Most of the upper jaw .
- 3- The palate .

III) Mandibular process forms :

The lower jaw .

These processes fuse around the stomodeum (the site of the future mouth), to form the face (Fig. 2) (Stark, 1986) .

Development Of The Palate :

The embryonic development of the palate may be subdivided into two parts :

- 1- Primary palate .
- 2- Secondary palate .

1- The primary palate :

The cells of the anterior neural crest that give rise to the developing upper lip, must arrive in their proper location at appropriate time between the fourth and the seventh week of gestation, and in appropriate number for normal development (Stark, 1986) .

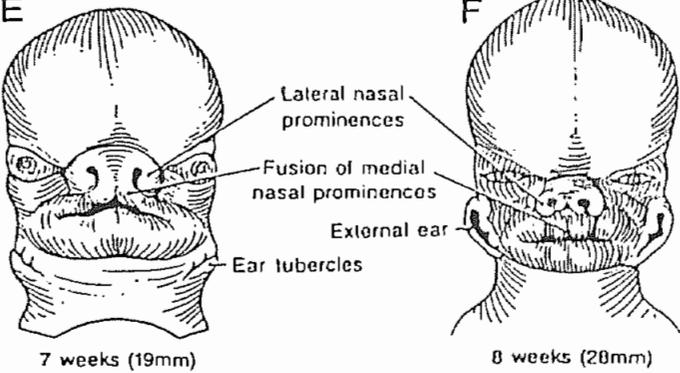
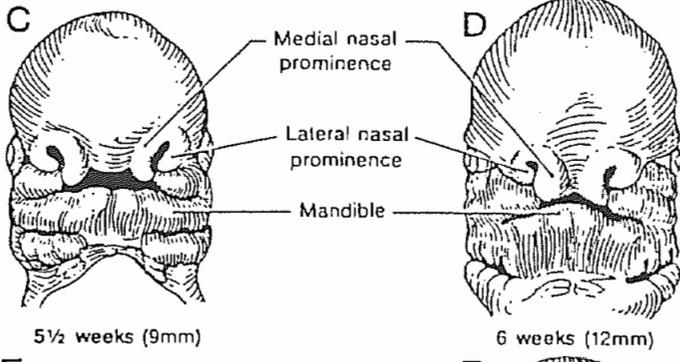
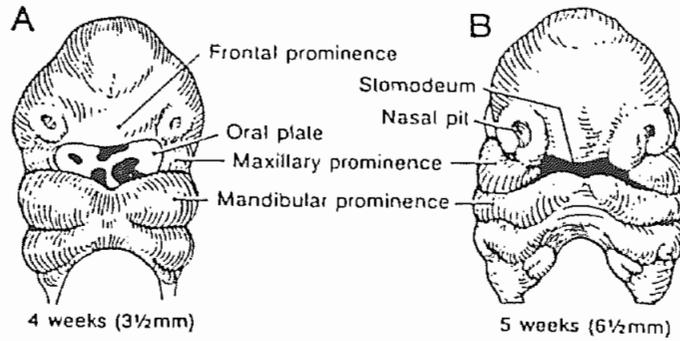
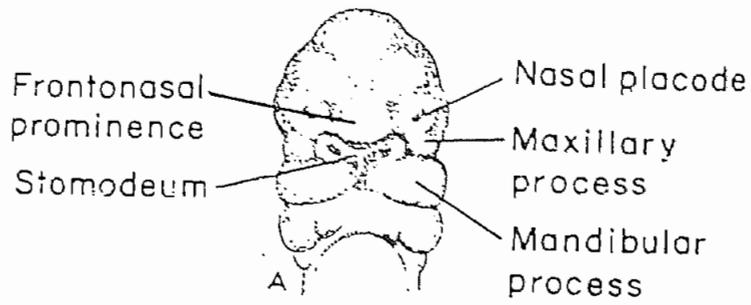


Figure 2 . Formation of the face . (From Patten B.M. In Georgiade G.S. et al, (Ed.) . *Textbook of Plastic, Maxillofacial and Reconstructive Surgery* . Williams & Wilkins . Baltimore . Vol. I, 1992) .