



CRANIOFACIAL NEURO OSTEOLOGY

A NOVEL CONCEPT FOR DIAGNOSIS OF MALFORMATIONS



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INTRODUCTION

The discipline of prenatal and postnatal interrelationships is named as **Neuro-osteology**.

The craniofacial patterning of the fetus involves various developmental fields and any malformation associated with these fields would naturally influence the outcome of facial form and function, and can be seen in orthodontic radiographs.

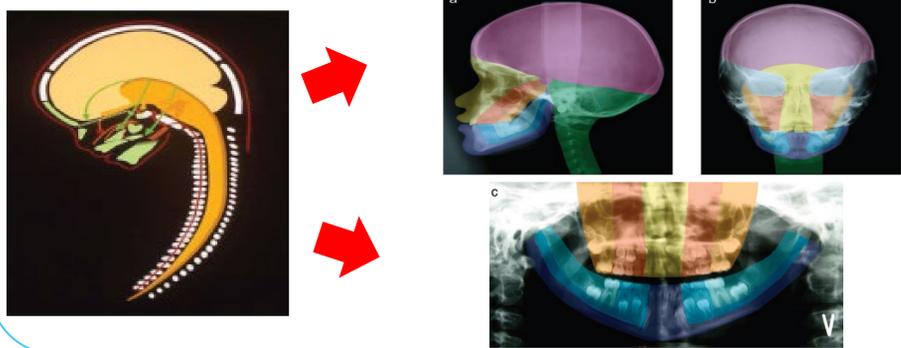


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Neuro osteological evaluation of dentition helps one to decide whether the pathological condition is congenital and hence a **Malformation**, or acquired as a result of trauma or infection, a **Disruption**.

RELEVANCE TO DENTISTRY

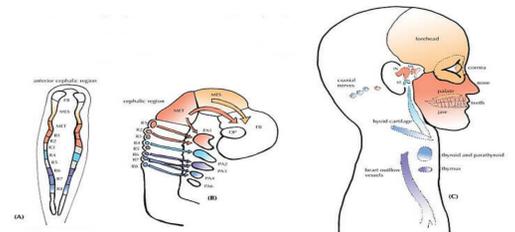
Neural crest cell migration Representation in lateral and frontal cephalometric and panorama



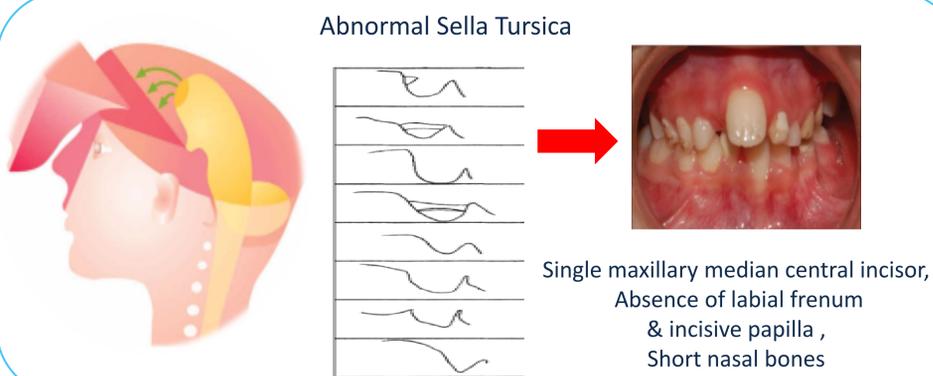
5 DEVELOPMENTAL FIELDS REPRESENTED IN ORTHODONTIC RADIOGRAPHS

According to Developmental Neuro-osteology, Head and neck regions of the human body can be broadly classified into 5 developmental fields namely

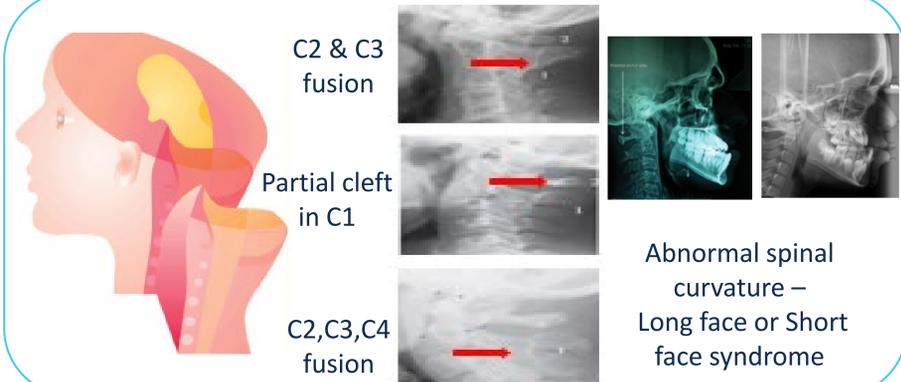
1. Frontonasal field
2. Cerebellar field
3. Maxillary field
4. Mandibular field
5. Palatine field



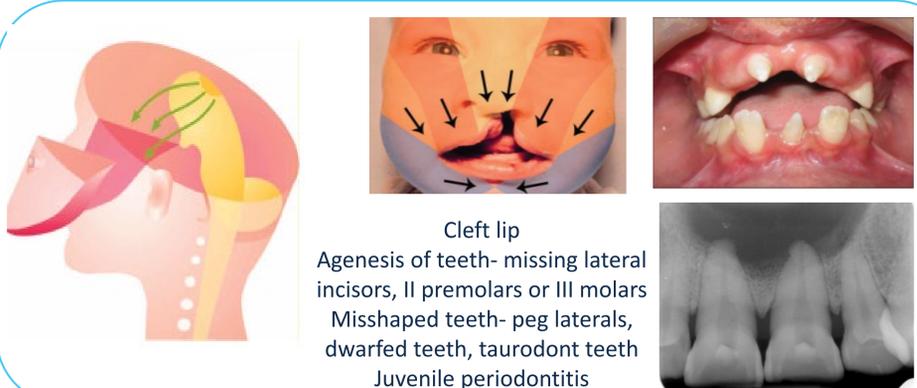
1. Frontonasal field



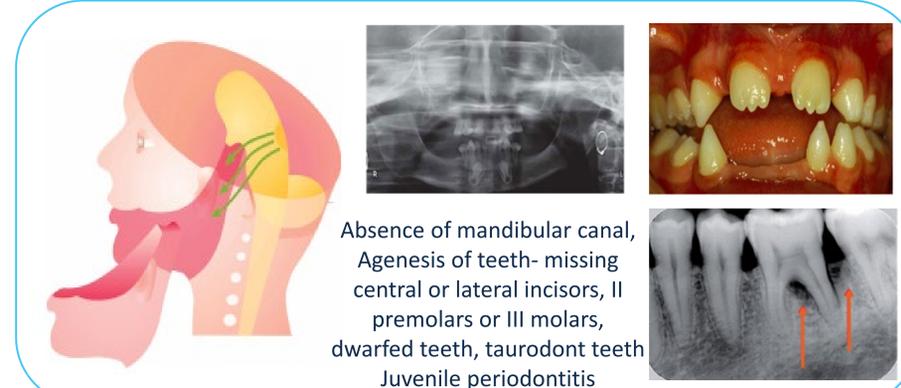
2. Cerebellar field



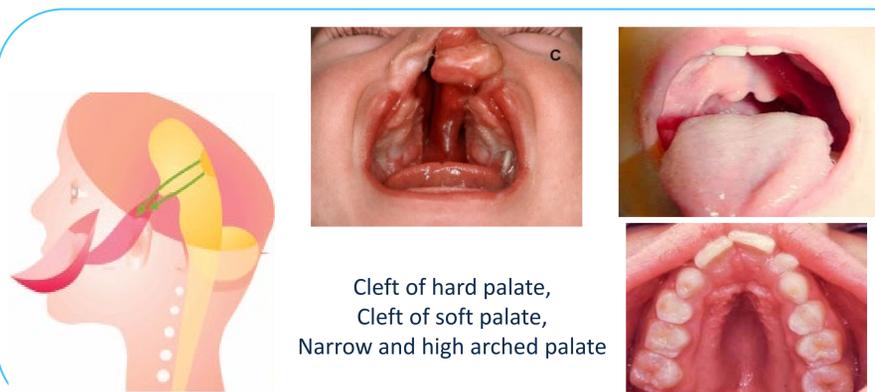
3. Maxillary field



4. Mandibular field



5. Palatine field



CONCLUSION

For dentistry, neuro-osteological fields concept has meant that cranial development cannot be considered in isolation from the axial skeleton. Studies in progress indicate that not only are different axial regions affected in different genetic disorders, but also that these regions are associated with different craniofacial malformations.

