

# **Cleft Rhinoplasty**

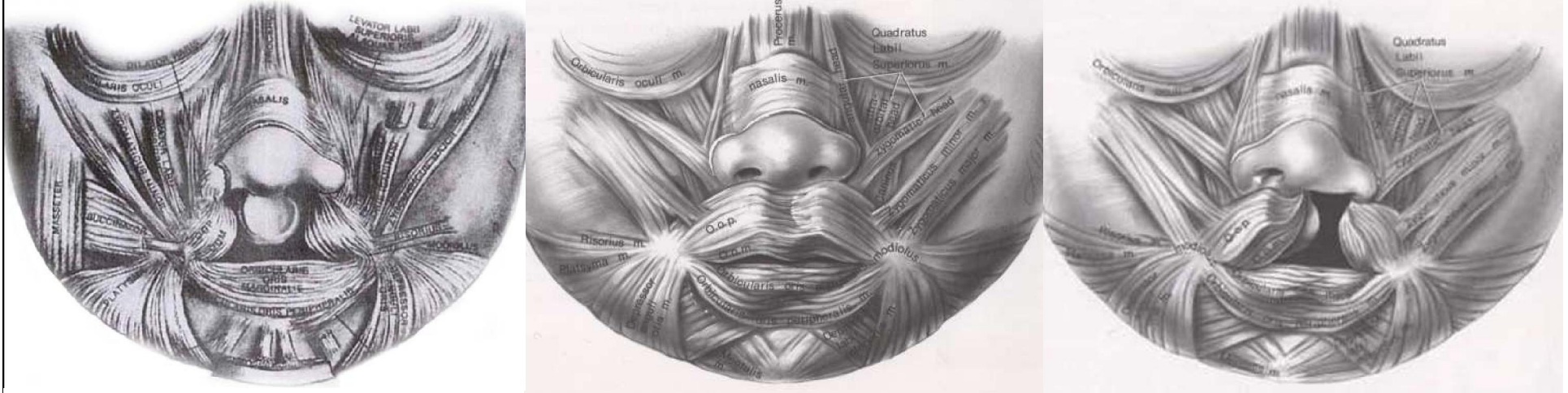
## **Complexity of the Cleft Nose and the Philosophy of its Management**

**Prof. Srinivas Gosla Reddy** MBBS MDS FDSRCS (Ed), FDSRCS (Eng)  
**Hyderabad, INDIA**



[www.craniofacialinstitute.org](http://www.craniofacialinstitute.org)

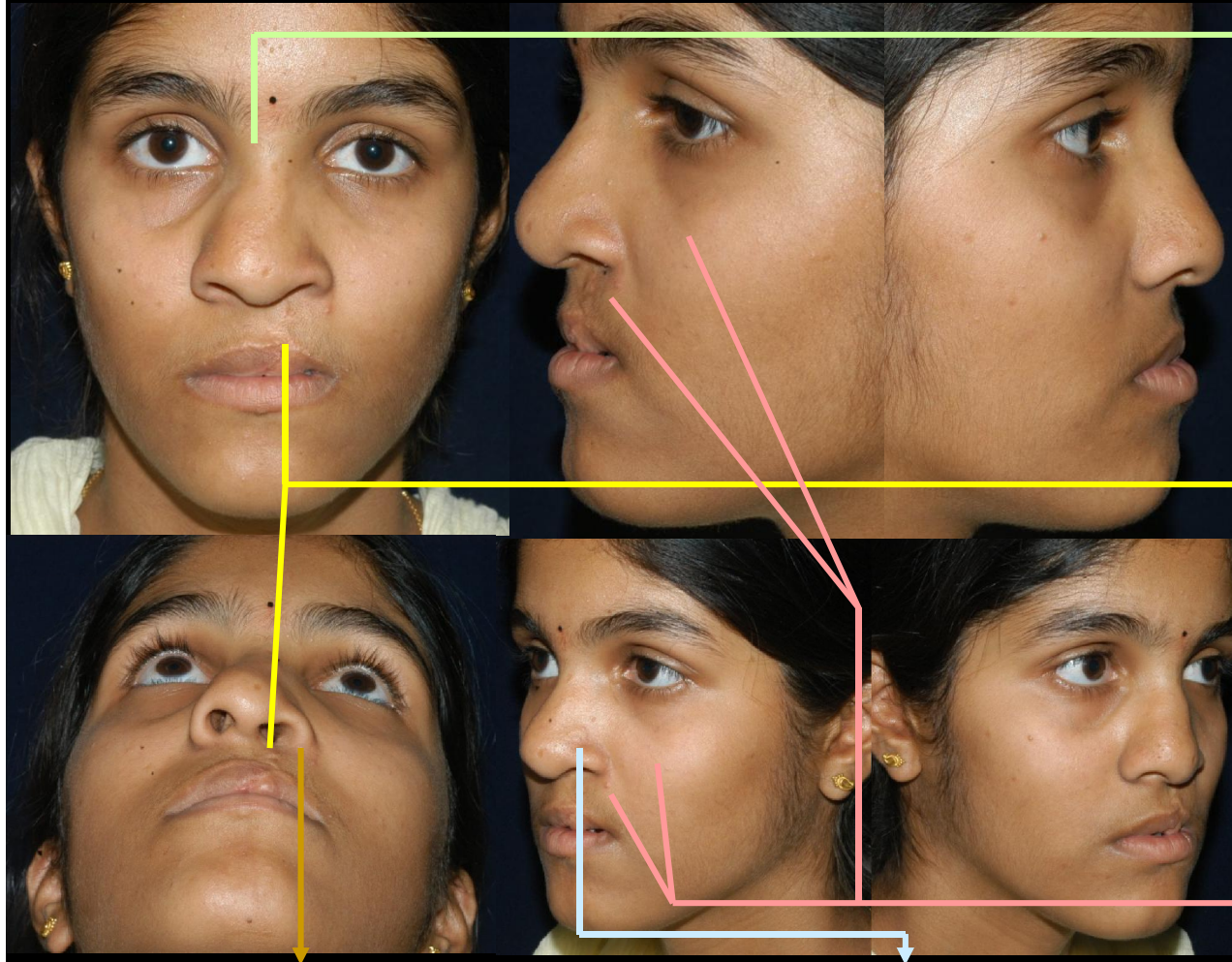
# Cleft Rhinoplasty



The cleft nose, unlike other nasal defects, is a defect of the **lip, muscles of the nose, skin over the nose, underlying bone and scar tissue** in addition to the defect of the nose



# Cleft Nose Defect



SEPTAL DEVIATION  
towards non cleft side  
due to lateral position of  
anterior nasal spine

SCAR of the cleft lip  
surgery distorting the ala

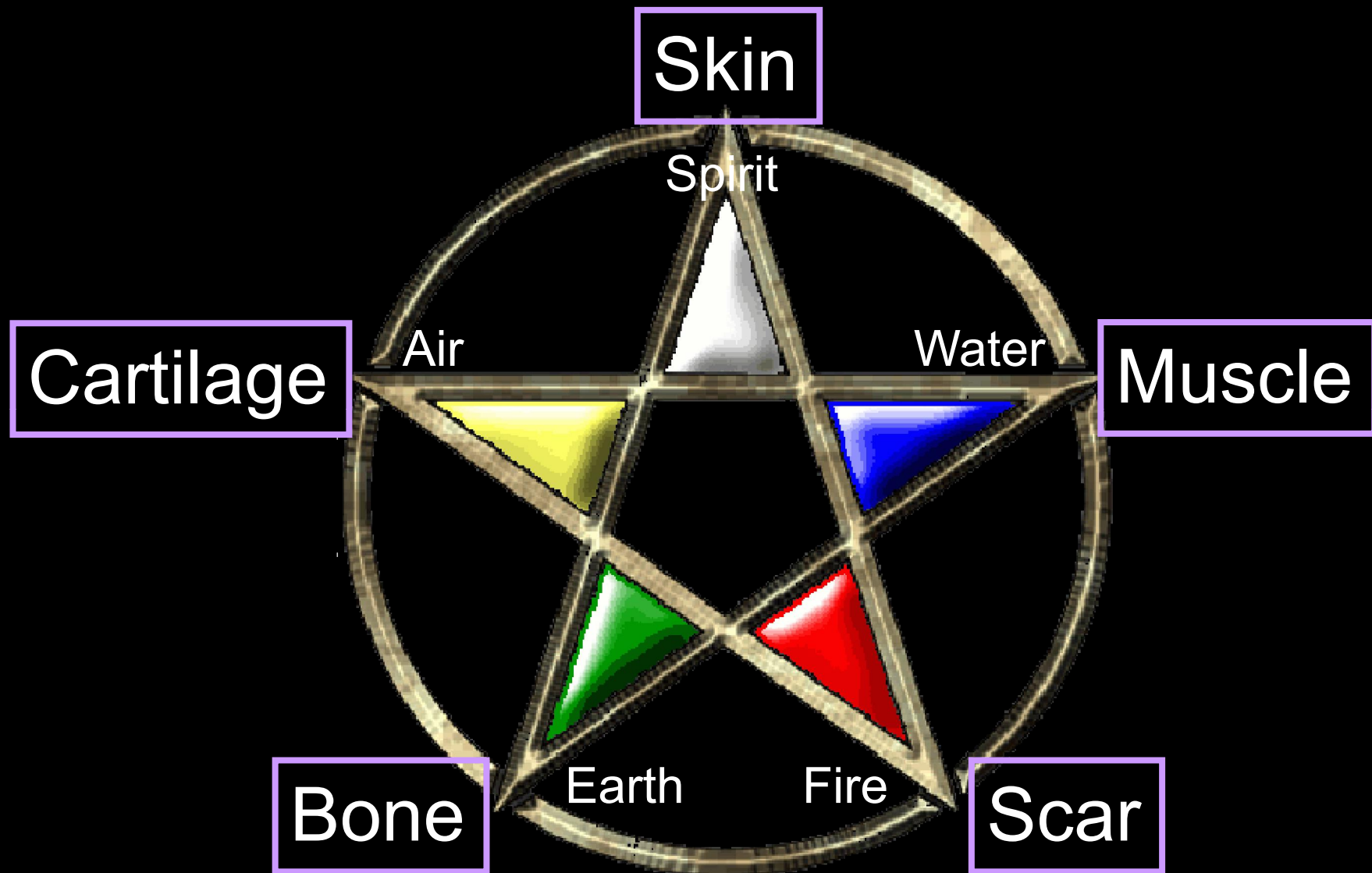
Underlying alveolar and  
piriform BONY DEFECT  
not stabilized  
Maxillary Hypoplasia on  
cleft side

NASALIS MUSCLE not  
positioned during  
primary lip repair

OVERLYING SKIN  
stretched over the nostril  
on cleft side



# Cleft Nose Defect: Problem Pentacle





# Cleft Rhinoplasty

Treatment for the cleft nose has to include all or some of the following

Rhinoplasty with

Secondary lip repair,

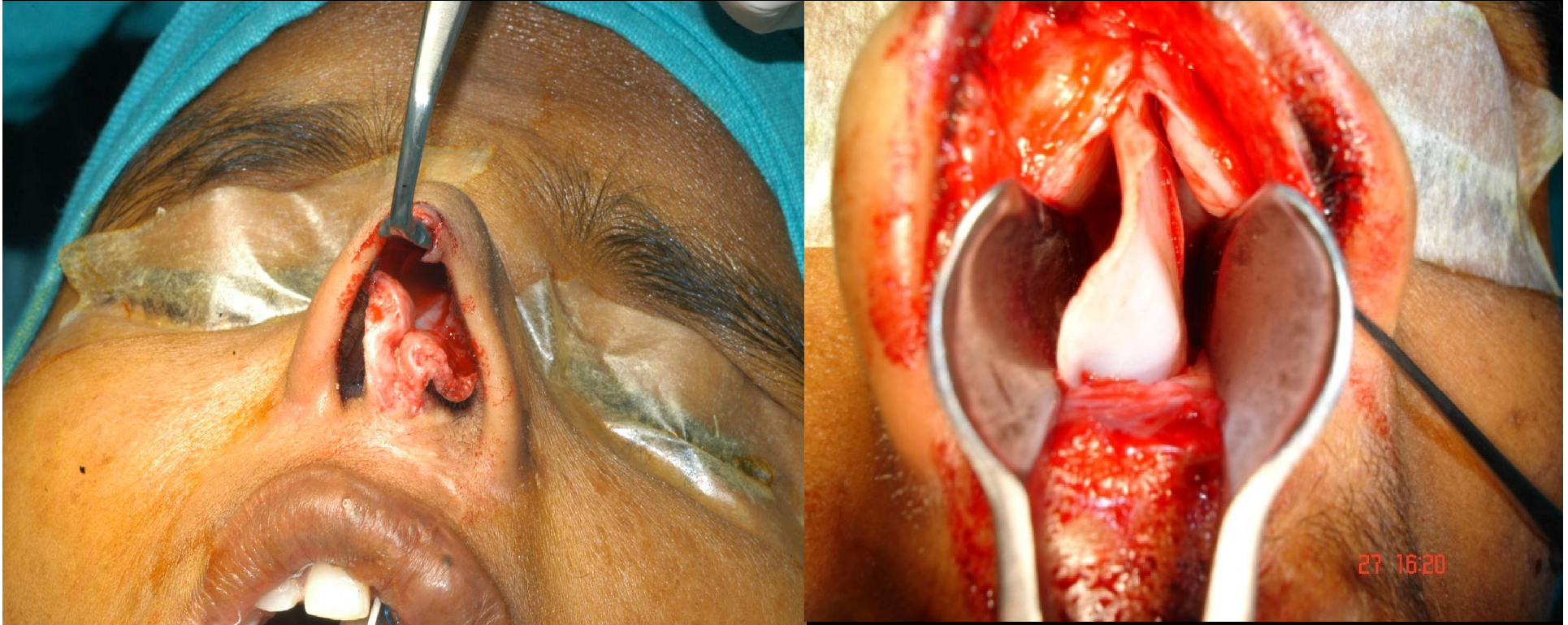
Alveolar bone grafting and

Maxillary advancement

We should call it **PROFILOPLASTY**



# Anatomy of cleft nose : Unilateral Cleft



- The alar cartilages will not be at the same level
- The septum will be deviated towards the non cleft side



# Anatomy of cleft nose : Bilateral Cleft



- The alar cartilages may be at the same level but will be buckled
- The septum will not be deviated but will also be buckled





# Surgical Approach

## Open Rhinoplasty

1. Using Septal Graft
2. Using Costo-chondral or alloplastic implants





# The Need for Maxillary Advancement

Prior to Rhinoplasty



# The Need for Bone Grafting

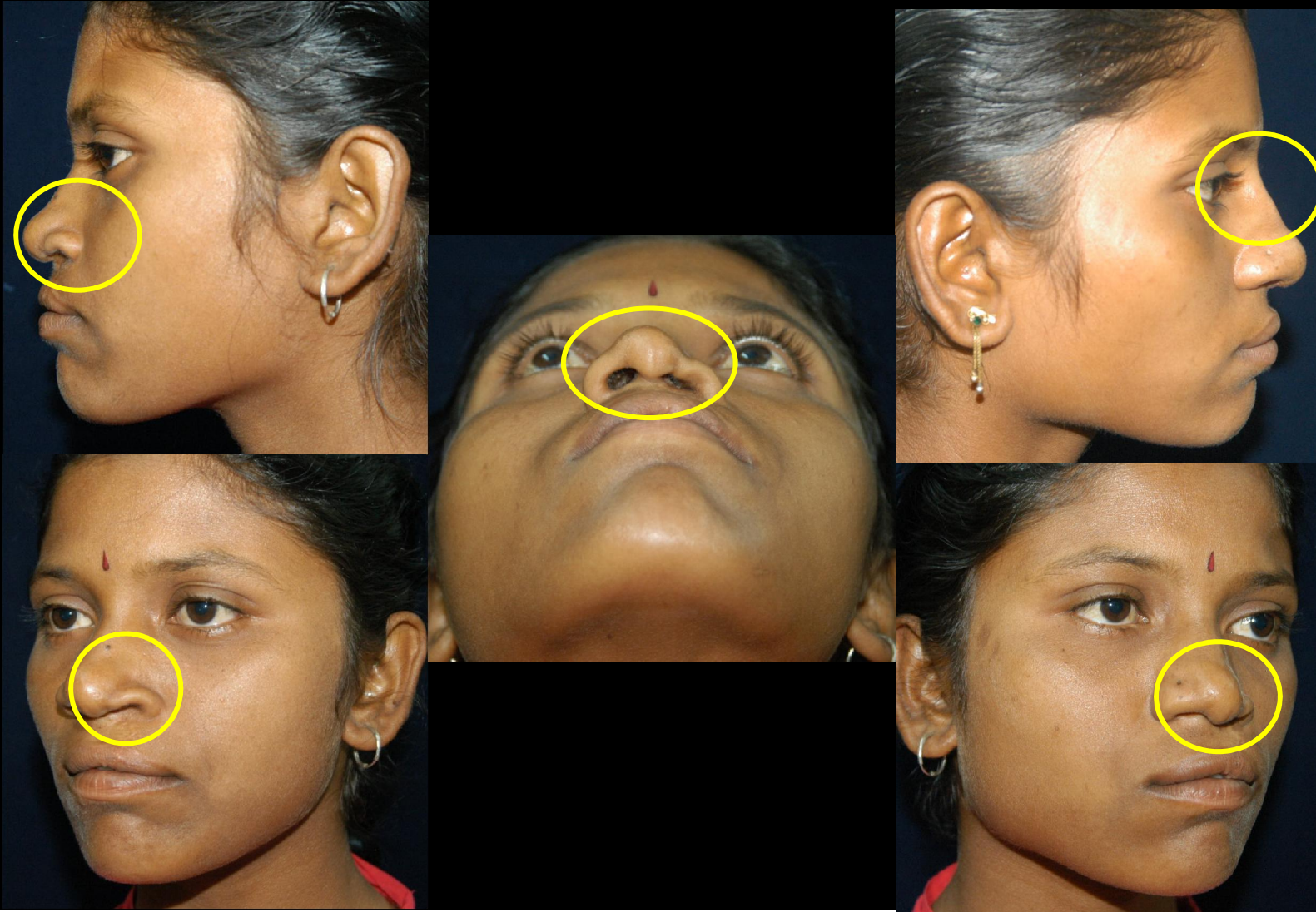
Prior to Rhinoplasty



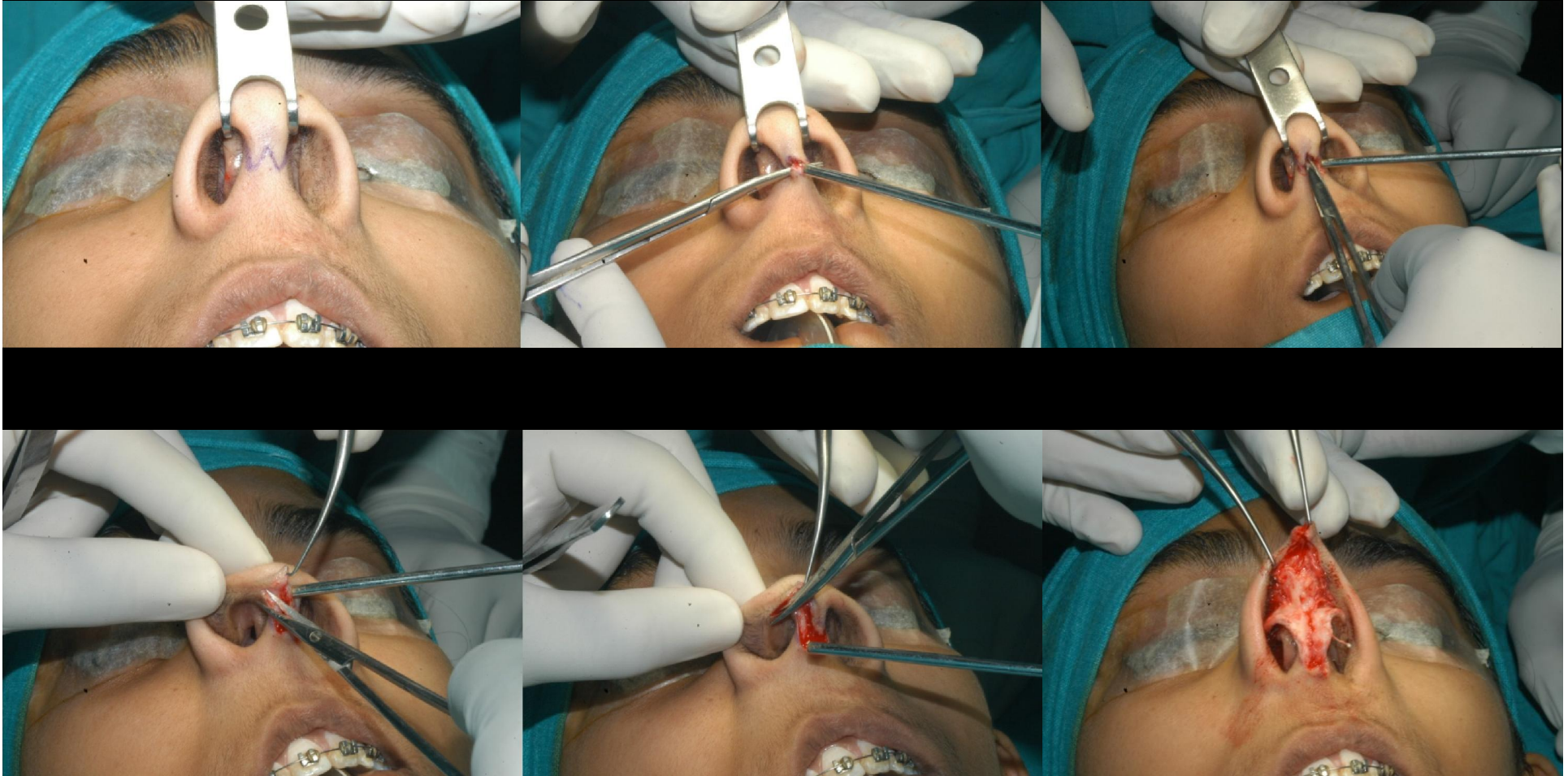
[www.craniofacialinstitute.org](http://www.craniofacialinstitute.org)



# Surgical approach: Unilateral Cleft with Septal Grafting



# Surgical approach: Unilateral Cleft with Septal Grafting

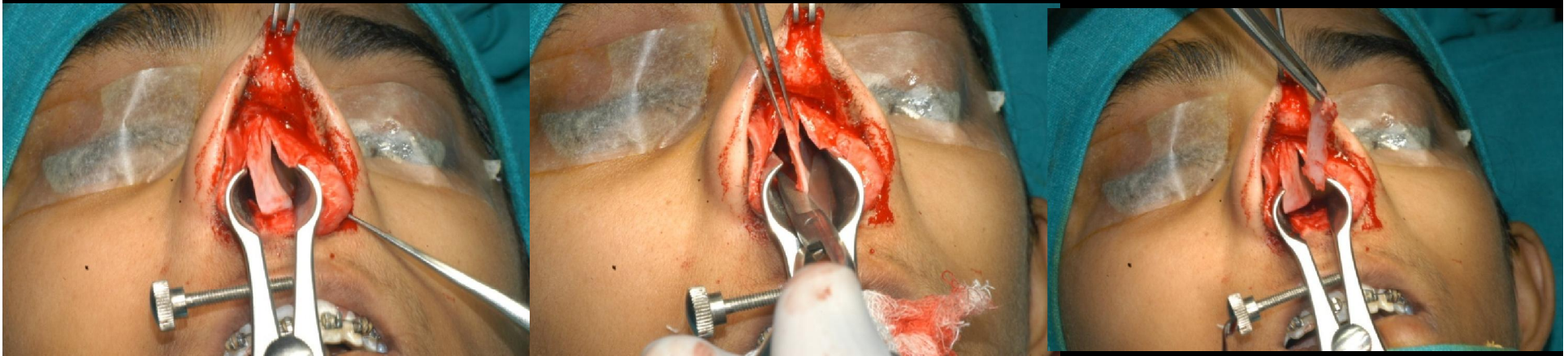


- Marking and opening the nose





# Surgical approach: Unilateral Cleft with Septal Grafting



- Exposing the septum
  - Note the extreme angle of caudal part of the septum due to its attachment to the anterior nasal spine which in cleft defects is lateralized towards the cleft side
  - Septoplasty is done by resecting the posterior and inferior end of the septum



# Surgical approach: Unilateral Cleft with Septal Grafting



- Closing upper lateral cartilage
  - The upper lateral cartilage needs to be opened when there is gross deviation of septum to release the bend in the septum





# Surgical approach: Unilateral Cleft with Septal Grafting



- Positioning the strut made from the excised inferior and posterior part of septum



# Surgical approach: Unilateral Cleft with Septal Grafting



- Closure



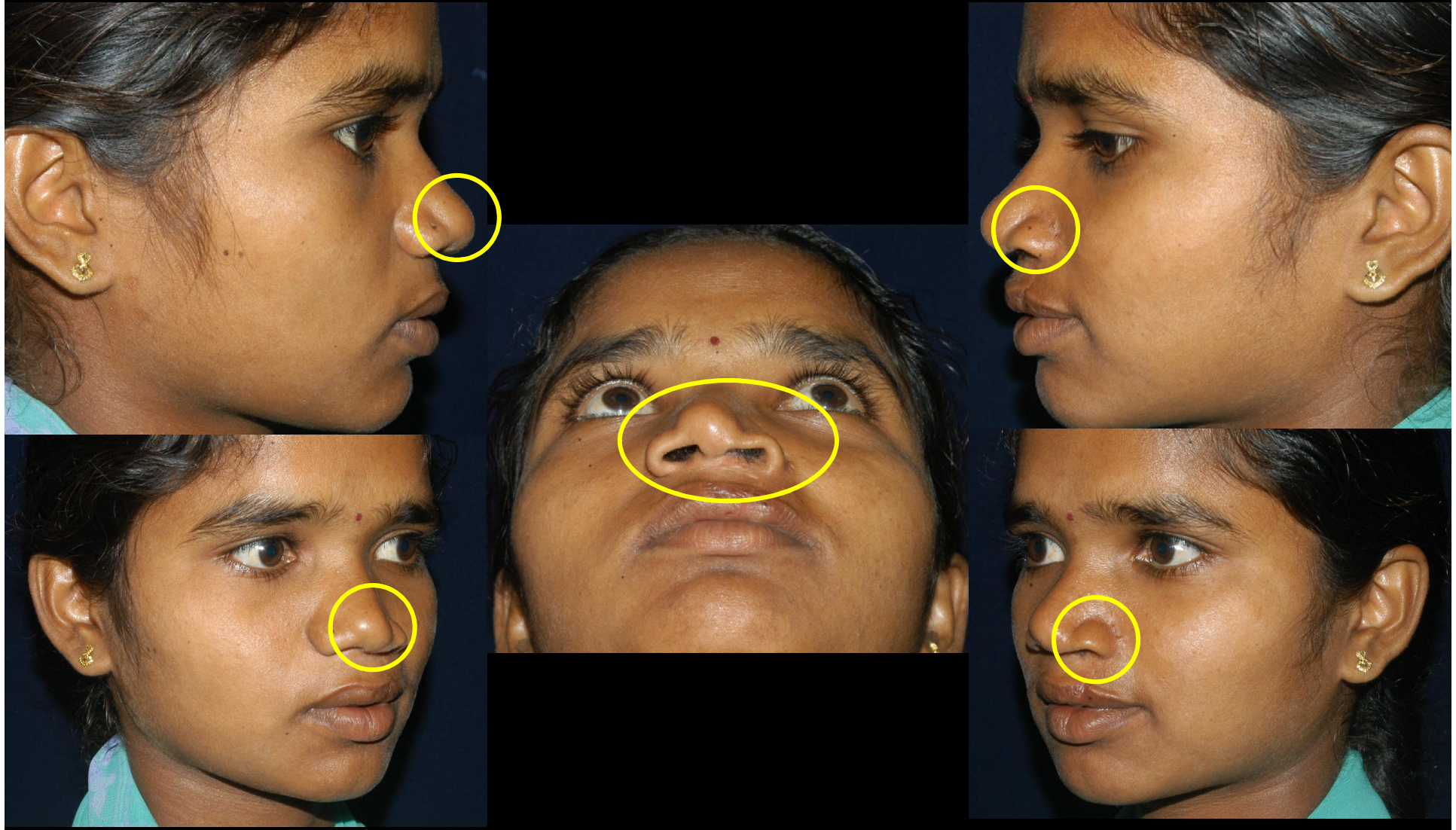


# Surgical approach: Unilateral Cleft with Septal Grafting





# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting





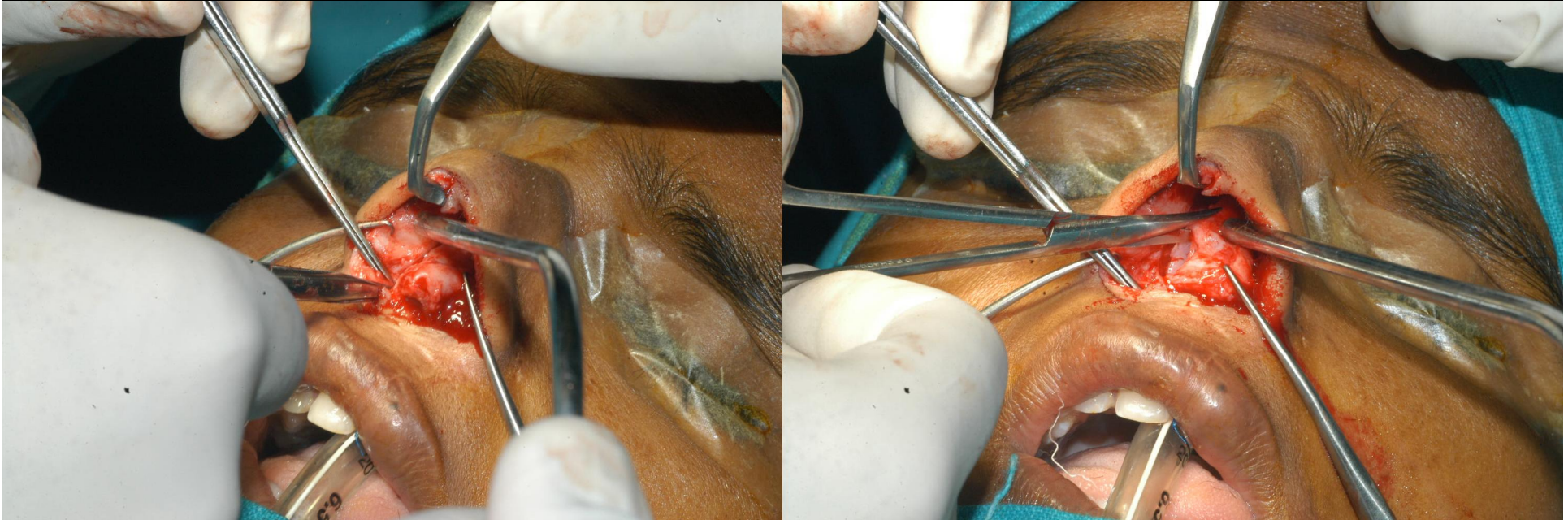
# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting



- Exposure of the alar cartilages



# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting

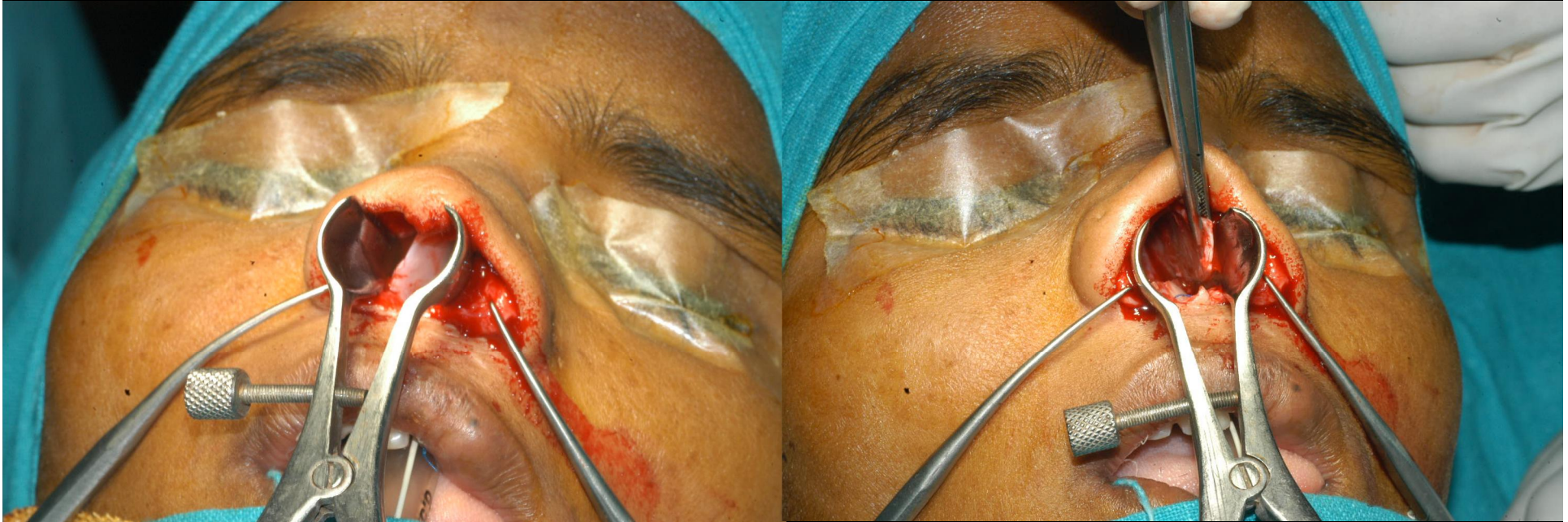


- Exposure of the septum





# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting



- Septoplasty
  - Done by resecting the posterior and inferior end of the septum



# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting



- Dissecting both sides of the alar cartilage to ensure more lift of the cartilages





# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting



- Carving and positioning the costo-chondral dorsal graft



# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting



- Suturing the alar cartilages to the dorsal graft





# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting



- Positioning and fixing the strut



# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting



- Positioning the Baton graft to strengthen the ala on the cleft side





# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting



- Closure



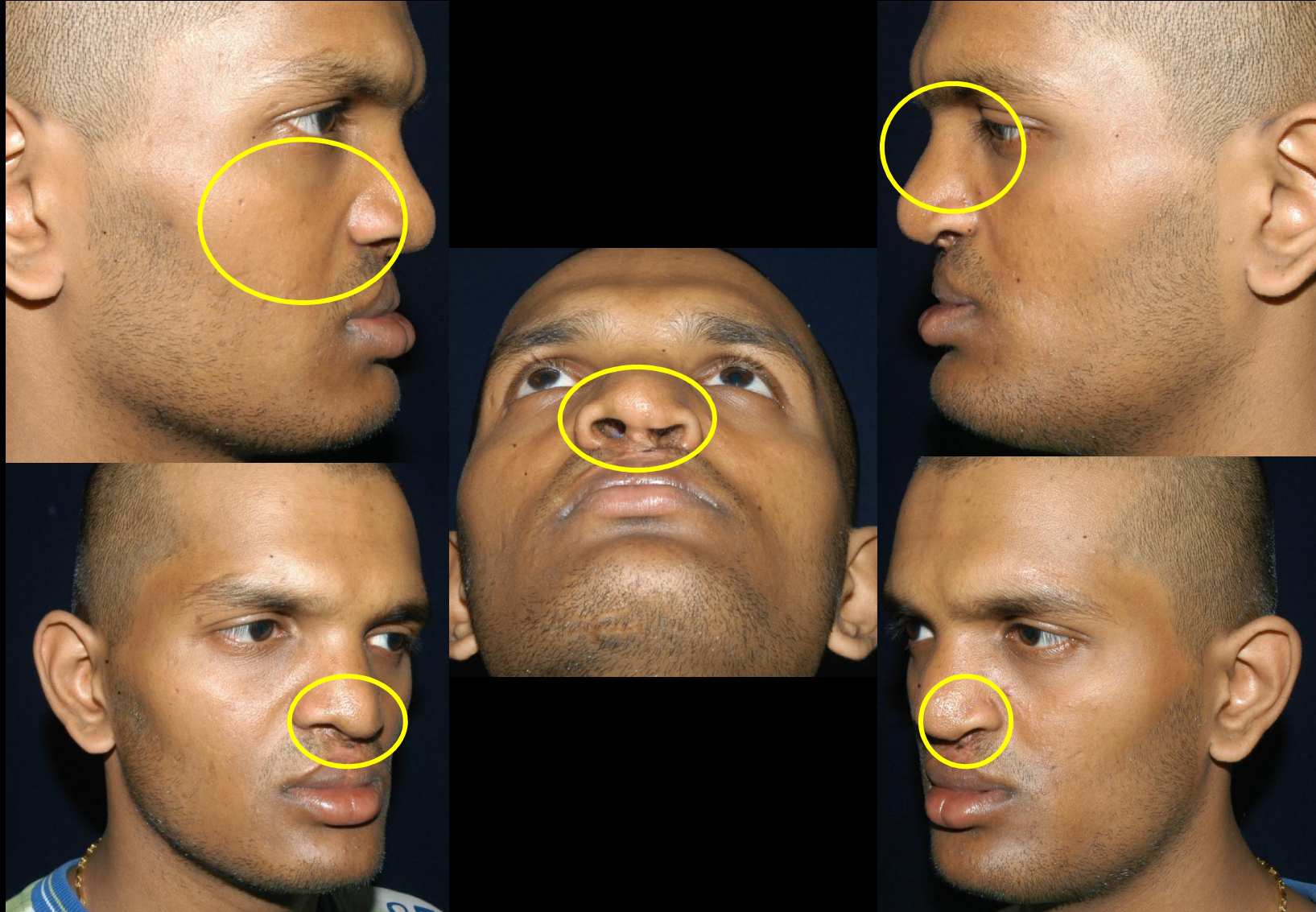
# Surgical approach: Unilateral Cleft with Costo-Chondral Grafting



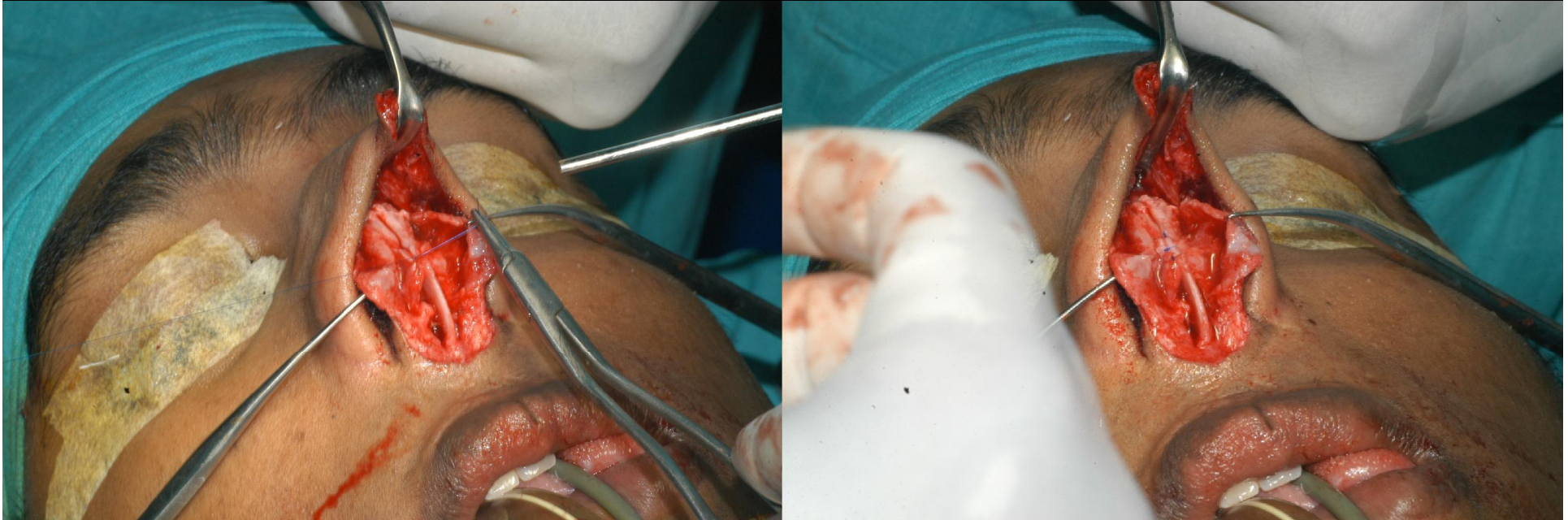


# Surgical approach:

## Bilateral Cleft with Septal Grafting



# Surgical approach: Bilateral Cleft with Septal Grafting



- After exposing the ala and septum as was done in unilateral cleft nose defects, septoplasty is done.
- Mucoperichondrium is closed





# Surgical approach: Bilateral Cleft with Septal Grafting



- Transdomal suture is placed to lift the alar cartilage and remove the buckling



# Surgical approach: Bilateral Cleft with Septal Grafting



- After transdomal sutures are placed on both alar catilages they are tied together to get interdomal suture.
- This is done after the strut is placed and secured.





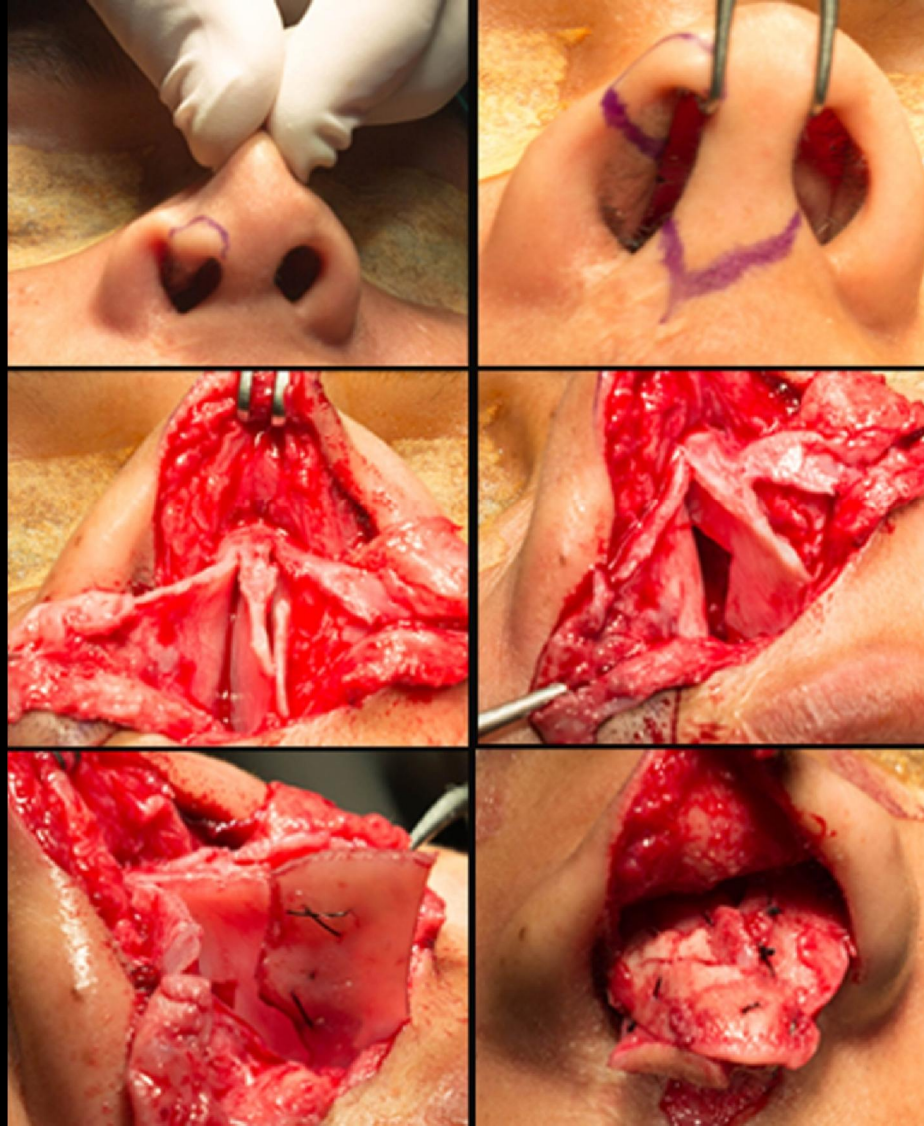
# Surgical approach:

## Bilateral Cleft with Septal Grafting



# Surgical approach:

## Morphofunctional approach





# Surgical approach: Morphfunctional approach



# Surgical approach: Morphfunctional approach







# Bring the Smile Back



[www.craniofacialinstitute.org](http://www.craniofacialinstitute.org)