John Menezes, MD

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COMMITTED TO EXCELLENCE AND EMPATHY IN PATIENT CARE

SERVING LAS VEGAS SINCE 2002

Meet Dr. Menezes

Dr. Menezes is originally from Minnesota where he graduated from St. Thomas University Summa cum Laude in 1989. He then matriculated at the University of Minnesota School of Medicine after which he completed plastic surgery residency at the University of Southern California, Los Angeles in 2001. This also included a basic science research fellowship year at the University of Pittsburgh. He then went on to complete one of the most comprehensive subspecialty fellowships available in pediatric and adult craniofacial surgery at Johns Hopkins in 2002. He was then recruited by Dr. William Zamboni and was the to be hired to be part of the core faculty and help start the new plastic surgery training program in Las Vegas in 2002. He has subsequently provided educational, research, and clinical services including pediatric and adult craniofacial and cleft surgery, head and neck microsurgery, as well as facial cosmetic and functional and cosmetic rhinoplasty.

Credentials

Diplomate of the American Board of Plastic Surgery (Board Certified in Plastic & Reconstructive Surgery).

Member of the American Cleft Palate Craniofacial Association.

Member of the American Society of Plastic Surgery; member of the American Society of Reconstructive Microsurgery.

Head of only certified Cleft and Craniofacial Team in Nevada since 2002.

Areas of Expertise

Cleft Lip and Palate – from birth to adulthood.
Craniosynostosis
Ear/Microtia Reconstruction
Hemifacial Microsomia
Distraction Osteogenesis
Head and Neck Microsurgery
Hemangioma
Port Wine stain / venous / capillary malformation
Pediatric and Adult Facial Fractures both acute and secondary procedures
Rhinoplasty – functional and aesthetic
Cosmetic Face and neck-lift
Fat grafting, facial fillers, Botox
Skin care and facial peels.

AMERICAN SOCIETY OF PLASTIC SURGEONS

Thousands of Member Surgeons
One High Standard

Importance of a Plastics Board

Be sure that your plastic / aesthetic surgeon meets the highest standard with "Board certification by the American Board of Plastic Surgery". You can then rest assured that your surgeon has the best training. Better than a simple course in aesthetics or merely 1 year beyond some other non-plastics Board. A "Cosmetic Board" certification is not the same. Similarly, in choosing a cleft surgeon, make sure your doctor has done a craniofacial fellowship – an extra year beyond plastics specifically for pediatric reconstruction. That way you can rest assured your doctor has completed the needed training and keeps up with the latest knowledge through continuing medical education in the subspecialty.

ACPA

Maintaining a Leading Edge

Craniofacial Care

If your child has a cleft lip and/or palate or other craniofacial disorder a good place to start is with the University of Nevada Las Vegas School of Medicine and the Division of Plastic & Reconstructive Surgery.

WHAT IS A CRANIOFACIAL TEAM?

It is a multi-disciplinary team which encompasses all the specialties needed for modern gold standard care of patients with cleft lip and palate and other complex craniofacial conditions

Together they provide coordination of care to minimize the number of procedures and anesthetics the patient has to undergo as well as to share information in the diagnosis and treatment of these conditions

To be accredited by the ACPA means that each team meets a specific set of standards and thus families moving between states and teams can expect the same level of expertise and care if transitioning from one team to another.

If your surgeon does not maintain continuing medical education in these specialties or participate in an accredited team encourage them to refer to one.

Specialties on the team include:

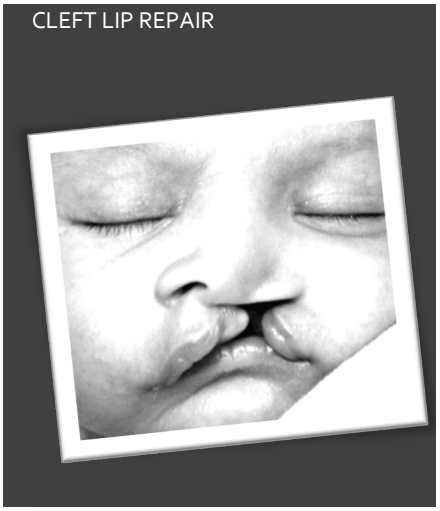
Speech and language pathologists, Audiology, Social work, Optometry, Child Psychology, Oral and Maxillofacial Surgery, Dentistry, Orthodontics, Otolaryngology, Plastic Surgery and Neurosurgery.

The team currently meets on the 4th Tuesday of every month except for December.

Clinics start at 8:00 a.m. and generally run until 12:00 noon. Parents and children rotate between the specialists until they have been seen by everyone. The team then meets for an additional hour to discuss, as a group, the assessment and plan of each specialist and coordinate care and follow-up.

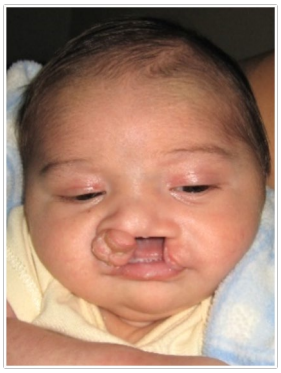
Follow-up is recommended every 1-2 years depending on the needs of the child until 18 years of age.

JOHN MENEZES, MD



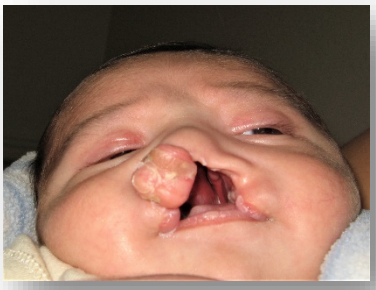
Unilateral Cleft Lip & Palate

The nose and lip are pulled by unopposed action of the facial muscles pulling and distorting tissue. Correction includes rotation and advancement of tissue and repair of muscle, mucosa and skin as well as straightening nasal elements. In wide clefts NAM can help.



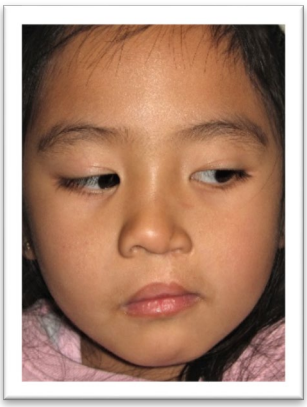
Bilateral Cleft Lip & Palate

The nose and lip are separated on both sides and the central lip element (premaxilla) holds the front teeth and projects beyond the face making it difficult to align lip elements without extreme tension. The nostils are elongated and pulled sideways, the nasal tip is broad, flat and attached to the lip with a foreshortened columella. Repair is in stages and NAM benefits these patients in particular.



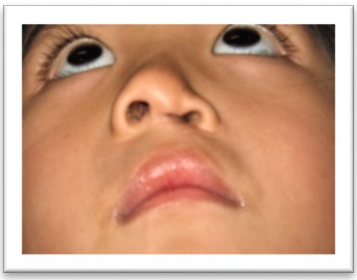
Submental view of bilateral cleft with premaxilla over projecting and deviated severely to the patient's right.

Cleft Lip & Palate Repair



Do Not Cut the Nasal-Cheek Junction

Some surgeons using outdated techniques fail to recognize that the Millard rotation-advancement technique does not require an incision between the nostril and the cheek to achieve a good result. In fact this causes a growth deformity creating an undersized nostril and worsening the cleft appearance. It is virtually impossible to correct later and symmetry is only improved by reducing the normal nostril at the completion of growth which can cause a nasal obstruction.

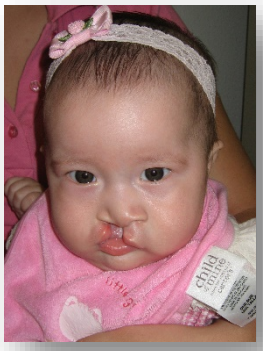


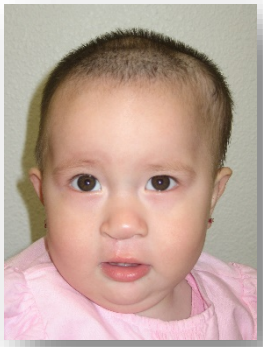
Single vs 2-Stage Palate Repair

Over time is has become apparent that certain procedures will affect the growth potential of the face. Surgical interventions are planned to maximize benefits to appearance, feeding , speech and dentition while minimizing the negative effects on growth that surgery can have due to scarring of important centers of growth. This is why the nasal cheek junction is avoided, and bone grafting to the gumline is timed between years 8-10, and why the nasal septum is not cut or moved until age 13-17. In the U.S. repair of both the hard palate and the soft palate is performed before 1 year of age (less than 8 months has no clear benefit and more airway and feeding issues) as speech development accelerates after 1 year. This can cause scarring of the hard palate which is a center for growth of the midface and results in a narrow upper jaw and in up to 40% midface growth deficiency leaving the lower jaw sticking out farther than the upper. This then requires upper jaw advancement (Lefort I advancement) in the teenage years. To reduce the incidence of this surgically-caused deformity in complete clefts, staged repair is advocated such that the soft palate is repaired at 8 months and the hard palate delayed until 5-6 years. This requires an orthodontic acrylic obturator to plug up the hard palate cleft and allow speech to be normal. Many kids will require speech therapy with either approach.

Complete Cleft Lip: Before and After

Here is a typical early result for a unilateral repair (without preceding NAM in this case)





JOHN MENEZES, MD

The Plastic Surgery Clinic

FOR MORE INFORMATION

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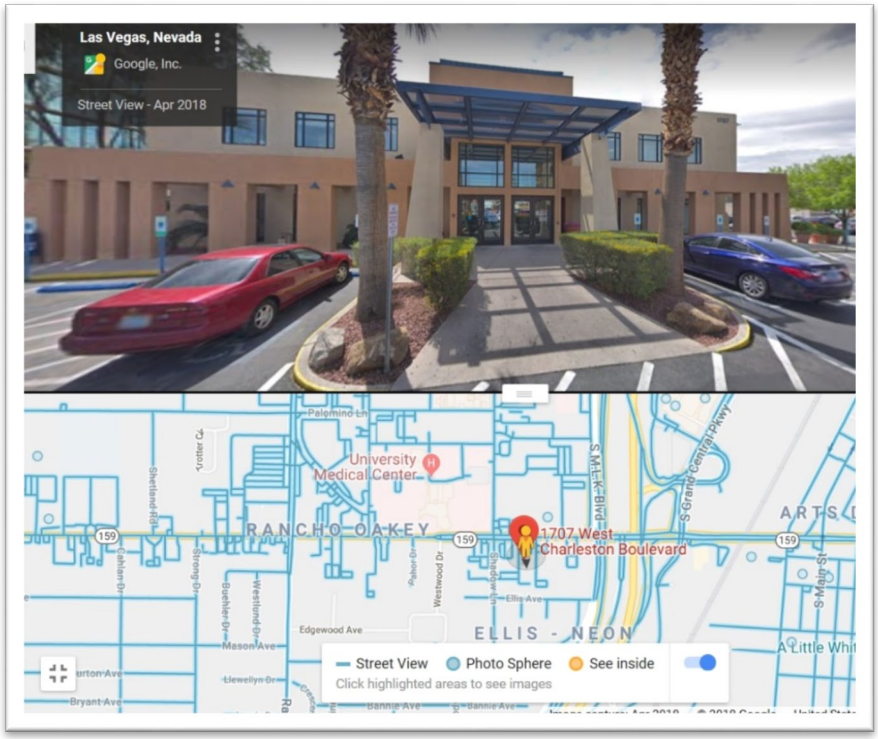
OFFICE HOURS:
8:00 AM to 5 PM , MONDAY-FRIDAY



CLINICAL STAFF

Our Experienced Team

Together, our clinical staff have decades of plastic surgery patient care experience. You can have confidence that they can handle all of the important issues associated with your care and communicate it effectively between you and your doctor.

Cleft Lip and Palate

by John Menezes, M.D.

Cleft lip and palate is one of the most common congenital anomalies occurring at a rate of 1 in 1,000 births. Cleft palate alone occurs at a lower rate of 1 in 2,000 births.

Cleft palate may occur in isolation or in combination with cleft lip and is thought to have different pathogenesis than cleft lip. It has a higher rate of birth defects in other organ systems than cleft lip. Cleft palate has another anomaly 42% of the time compared to only 14% in cleft lip & palate. Some of the same tissues in the heart may fail to fuse normally resulting in a heart defect. It is therefore important for your pediatrician to listen to your baby's heart.

Isolated cleft palate is more common in girls than boys while cleft lip & palate is more common in boys. Among all clefts, 50% are cleft lip and palate, 30% are isolated cleft palate and 20% are cleft lip alone.

Causes

Facial development occurs between weeks 4-12 in the developing embryo. Both environmental and genetic causes can result in the failure of migration and fusion between blocks of tissue in the face resulting in a cleft that can involve bone, muscle and skin. More than 10 different genes have been associated with facial clefting but environment is also a factor. Heavy alcohol use, heavy smoking, Dilantin (anti-epileptic drug) exposure, and folate deficiency have all been associated with facial clefting.

Risks of Inheriting a Cleft

Cleft Lip, With or Without Cleft Palate (0.1 %) :

- One Parent-2%
- One Sibling- 4%
- Two Siblings- 9%
- One Parent + One Sibling- 15%

Cleft Palate: General population : 0.04 %

- One Parent- 7%
- One Sibling- 2%
- Two Siblings- 2%
- One Parent + One Sibling- 17%
- Dizygotic Twins – 3-6%
- Monozygotic Twins – 25-40%

Types of Clefts

- Left > Right > Bilateral: 6:3:1
- Complete vs Incomplete

(only part of the lip or palate may be affected)

Timing of Reconstruction

Nasal-Alveolar-Molding (NAM) by the orthodontist precedes surgery for bilateral or wide clefts and is done between 1 month and 4 months of age with the lip repaired at 4-5 months if molding is started early enough.

For incomplete cleft lip repair is done at 1-3 months of age. Revisions may occur prior to school age.

Cleft palate repair is done at 8-10 months of age coordinated with ENT surgery for placement of myringotomy tubes to assure normal hearing prior to early speech development.

Bone graft to the gumline cleft is done at 8-9 years of age, unless NAM allows for early gumline repair which then prevents the need for grafting in 50%.

Final septo-rhinoplasty is done in the teen years as the curved septum and cannot be addressed earlier without affecting nasal growth.

Feeding

Patients with a cleft of the palate CANNOT generate a normal suction force and so cannot breast feed. They require a cleft bottle with a higher flow Nipple on the bottle or a siphoning bottle such as the Doctor Brown Specialty Bottle. The Haberman or Meade-Johnson also work well and allow the parent to assist in the first month by squeezing the nipple if the child's suction is too weak. Feeding 2-3 oz. of mother's milk or formula should take < 30 minutes or the child will tire and not get enough nutrition. Nevada Early Intervention services has feeding instructions or you can click on the links below for further information.

Feeding Instructions (English)
Feeding Instructions (Spanish)
Postop Care (English)
Postop Care (Spanish)

When to Make an Appointment

Early evaluation will allow for early intervention and in the case of bilateral clefts or wide clefts of the lip, nose and palate will allow for early impression-taking and initiation of NAM. NAM works better the earlier it is started. Call 702-671-5110 for an appointment with Dr. Menezes.

Nasal Alveolar Molding Program

NAM is available in Las Vegas! Thanks to the efforts of Dr. Roberson, who also works with a senior Stanford orthodontist with decades of experience, NAM is available and an important modern adjunct to therapy which can significantly improve cleft outcomes and is most effective in helping the lip, gumline and nasal shape if started in the first month of life. A dental impression is done in the operating room for safety issues and 2 weeks later molding therapy begun with lip repair several months later. Staging palate repair should also be discussed to improve facial growth, and involves soft palate repair before 1 year, hard palate at age 5 with an obturato for speech. Orthodontic follow-up can be arranged when indicated by calling 702-968-5222. (Roseman University Orthodontic Program)

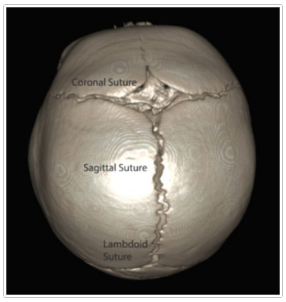
Craniosynostosis

by John Menezes, M.D.

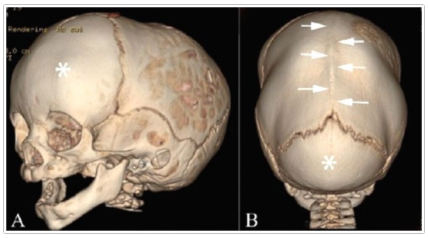
Craniosynostosis results in a deformity of the skull from premature closure of the growth joints or sutures between the skull bones. A CT scan aids in diagnosis.

- Overall 1 in 2500 births for nonsyndromic
- Syndromic 1 in 25,000 to 1 in 100,000
- Syndromic = anomalies in other body systems
- Syndromic more often have multi-suture involvement
- nonsyndromic (80%) > syndromic (20%)

Most of the sutures in the skull normally remain open until adulthood. Early fusion causes not only deformity but can increase pressure on the brain and cause developmental delays.



Normal Sutures



Fused Sagittal Suture

Causes

Nonsyndromic single suture synostosis is often not transmitted in a familial pattern and is probably a sporadic genetic change. Known causes include:

- Hypophosphatemia and rickets,
- Maternal smoking
- Valproic acid

A genome-wide association study identified susceptibility loci for non-syndromic sagittal craniosynostosis near BMP2 (*Nature Genetics)*

- and within BBS9, bone morphogenetic protein 2 (BMP2) and Bardet-Biedl syndrome 9 protein (BBS9, SAG). Both proteins are known to play a role in skeletal development. (*Nature Genetics)*
- *FREM1 , metopic*
- Syndromic: FGFR1,CROUZON, APERT;FGFR1&2PFEIFFER,FGFR3M UENKE)
- TWIST (SAETHRE-CHOTZEN)

The fusion most often occurs during embryonic development. After birth the shape rapidly worsens as the brain grows quickly and the skull is still soft and deformable.

Distribution of Suture Involvement

- Sagittal 40%, >M (73%), 2% Familial)
- Bicoronal 20% >F, (79%)10% Familial
- Unicoronal 15%, >F (68%)
- Coronal + Sagittal 10%
- Total/Microcephaly 10%
- Metopic 7%, >M (82%)
- Lambdoid 1-2%
- Deformational plagiocephaly 5-25% of newborns

Positional Plagiocephaly

In the 1990's pediatricians instituted the "back to sleep" program to lower the incidence of sudden infant death syndrome. This resulted in a sudden rise in flat areas on the back of the head due to mechanical deformation of the soft neonatal skull and preferential lying on one side of the back of the head. This is not craniosynostosis and does not require an operation. It is treated either with repositioning or molding helmet therapy (which is not effective after 1 year of age as the skull becomes harder and less moldable.)

Timing of Reconstruction

Brain volume doubles in the first year year of life and triples by age 3. To maximize the benefit to brain growth and development craniosynostosis, which restricts skull and therefore brain growth, should be surgically released ideally before 1 year of age.

Endoscopic / Minimally Invasive

Strip craniectomy/ endoscopic or conventional is typically done by the neurosurgeon before 4 months of age and requires helmet therapy postop for up to 1 year. This occasionally requires secondary open surgery due to poor shape outcome and is best indicated in sagittal synostosis. Less blood loss and shorter hospital stay are pluses but need for revision for poor shape can be as high as 25%.

Open Reconstruction

If the child is older than 4 months, has a severe deformity or multiple suture involvement the current gold standard is open reconstruction with the craniectomy performed by the neurosurgeon and remodeling of the skull done by the craniofacial plastic surgeon.

Sagittal Synostosis: Before and After

Sagittal Craniosynostosis results in a long narrow skull Preop

6 months Postop

Facial Paralysis and Moebius Syndrome

Moebius Syndrome is a congenital absence of the facial nerve (7th cranial nerve) – the nerve that powers facial movement, and sometime the abducens nerve (6th cranial nerve) – the nerve that moves the eye to the side. If the 8th cranial nerve is affected then hearing can be impaired.

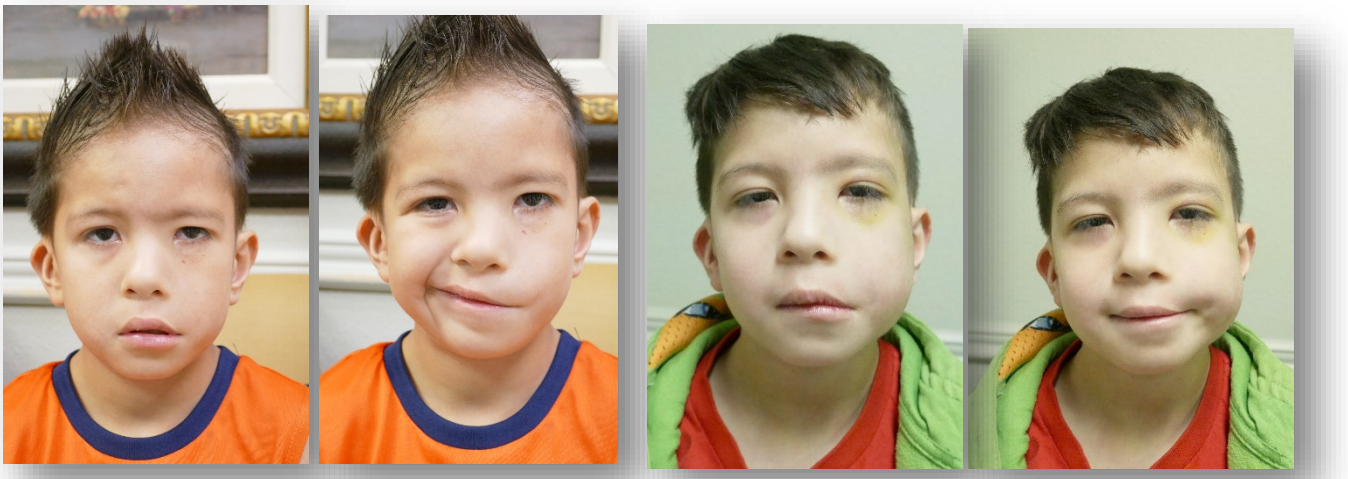
- Overall 1 in 50,000-100,00 births
- Increased risk associated with misoprostol, thalidomide and cocaine use.
- Genetic links to 13q12.2 and 1p22
- Reasons for facial reanimation / reconstruction include
    - Protection of the eye/cornea if the patient has difficulty with lid closure due to paralysis.
    - Smile reanimation as due to the lack of facial expression, normal socialization is difficult. People perceive the facial paralysis as being unfriendly, or a lack of happiness, interest or emotion.

Methods of Reconstruction

The approach for facial reconstruction is similar for anyone with facial paralysis, whether from Moebius syndrome, Bell's palsy, tumor resection or trauma.

- Active smile reanimation with free gracilis muscle flap from the leg to the cheek which is a microsurgical transfer of tissue
    - Nerve attached to cross facial nerve graft placed 9 months before or same side masseteric nerve on same day.
- Active smile reanimation with temporalis myoplasty – transfer of a chewing muscle which does not need microsurgery
- Passive smile with tendon or other graft to hold the corner of the mouth up
- Brow pexy / elevation to address the drooping eyebrow
- Gold or Platinum weight to the upper eyelid to allow for eye closure in the paralyzed lid.
- Lateral canthopexy to elevated a drooping lower eyelid if needed.
- Facelift for older patients with significant skin laxity and descent of the cheek
- Nerve grafting in tumore or trauma if less than 1 year from injury. After 1 year the muscles will likely irreversibly atrophy.

UNLV article link : https://www.unlv.edu/news/article/leaving-them-smiling



8 year-old male with congenital left facial paralysis (Moebius Syndrome) successfully reconstructed with microsurgical free tissue transfer of gracilis muscle from thigh to left face and masseteric nerve. He is happy to be able to smile and interact with his classmates.

Mandibular Hypoplasia and Distraction Osteogenesis

by John Menezes, M.D.

Patients born with a small lower jaw, either on one side or both can be reconstruction by "growing" the mandible with distraction osteogenesis which generates new tissue (bone, nerve, blood vessel and skin) by slowing moving the two edges apart, of a cut in the bone, at a rate of only 1 millimeter per day. This is the same technique originally used by orthopedic surgeons to lengthen limbs and can be used in the skull and face.

- Pierre-Robin Syndrome 1 in 10,000 births
    - Genetic association with SOX9 and KCNJ2 genes which control facial development.
    - Cleft or high-arched palate, small mandible, tongue positioned posteriorly near airway (glossoptosis)
        - Feeding and breathing issues which if severe enough require early movement of the mandible forward
            - Early distraction of the mandible vs tongue adhesion or nasal feeding tube depending on the severity of airway obstruction and presence of apnea caused by the small mandible.
        - Mandible distraction can prevent tracheostomy and feeding tube placement, which have their own set of issues and complications.
        - Cleft palate repair at 8-10 months.
        - Mandible distraction may be contraindicated if patient has tracheal/ other airway issues in the initial phase but can also be used to help with removal of a tracheostomy later.
- Hemifacial Microsomia
    - Unilateral underdevelopment of the jaw, midface and often ear on the same side.
    - 1 in 4,500 births, Type 1, 2 and 3 depending on severity of small mandible and joint involvement.
    - Goldenhar syndrome severe form which can involve internal organs as well as corneal limbal (eye) dermoids.
    - Intevention addresses small mandible with jaw distraction
    - Hearing addressed with hearing aids, BAHA (bone anchored hearing aid)
    - Ear reconstruction if microtia present