

CASE REPORT

“CONGENITAL FACIAL PALSY” - A CASE REPORT AND LITERATURE REVIEW

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ABSTRACT: Congenital facial paralysis or facial paralysis at birth may be partial or complete. It may be idiopathic in nature or secondary to either birth trauma, tumors or other intrauterine environmental anomalies. Prompt diagnosis and appropriate timing of surgical intervention would improve quality of life if not complete functional restoration. Present article reports one such 60 years old male still waiting for treatment.

KEY WORDS: Congenital facial paralysis, Bells palsy, timely surgical intervention.

CASE REPORT: A 60 year old male patient reported to our dental college with a chief complaint of generalized dentinal hypersensitivity. No relevant family, medical or dental history was found. No habit of tobacco abuse in any form was reported. On detailed clinical extra oral examination patient exhibited typical signs and symptoms of unilateral bells palsy that are inability to wrinkle the forehead and raise the eyebrow on right side and in an attempt to close eyelid, the eyeballs roll upwards while portion of white sclera is seen –Bells sign. Inability to close the eye, increased lacrimation, conjunctivitis, corneal damage, inability to blow the mouth, constant drooling of saliva from corner of the mouth and asymmetry on smiling were the other signs noticed. Apart from these classical features he had scrotal tongue. He remembers as having this deformity from childhood but was unaware about any obstetrical trauma during birth.

Patient was explained surgical options like eye closure with implants, reanimation with nerve and muscle grafts to restore functions of facial muscles though partially but failed to turn up for treatment for unknown reasons.

DISCUSSION: Facial nerve, the seventh cranial nerve, is a mixed motor and sensory nerve. It supplies structures of second branchial arch and thus chief motor nerve for muscles of facial expression¹. Facial paralysis may be partial or complete, unilateral or bilateral, lower face or

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upper face and or combination of these. Congenital facial paralysis could be idiopathic in nature or secondary to birth trauma, tumors or other intrauterine environmental anomalies. Any injury to facial nerve from its origin in caudal pons to peripheral branches can cause serious changes in facial expressions². This in turn causes social and mental trauma^{3,4}

Moebius syndrome also known as congenital oculo-facial paralysis or congenital facial diplegia is a full blown syndrome involving bilateral facial paralysis, paralysis of the lateral rectus or 6th abducens nerve, tongue hypoplasia, mental retardation, absence of the pectoral muscle, syndactyly and brachydactyly.^{5, 6} Others conditions that are associated with facial paralysis are Pseudo-mobius syndrome⁷, hemifacial microsomia⁸, Hypoplasia of depressor anguli oris syndrome also known as Cayler syndrome or asymmetrical crying facies⁹ and CULLIP syndrome or Congenital lower lip palsy.⁶

Hereditary congenital facial paralysis is a rare unusual condition. Johnson-McMillan syndrome is one rare autosomal dominant condition associated with facial paralysis and multiple truncal café-au-lait spots, hyposmia, poor growth and development, microtia and mental retardation¹⁰.

Certain cranial bone anomalies are associated with facial paralysis secondary to compression of facial nerve at various areas through its course.

- (a) Cranial diaphyseal dysplasia involves thickening of all the cranial bones, with facial paralysis, blindness, mental retardation, seizures and death usually by second or third decade¹¹
- (b) Dominant osteopetrosis involves hyperostosis of the petrous bones with secondary cranial palsies of nerve II, III, VII and an autosomal dominant condition¹²
- (c) Hyperostosis corticalis generalisata involves hyperostosis of the mandible, cranial base, facial palsy, blindness and deafness and an autosomal recessive condition¹³.

Other complex syndromes where facial paralysis is expressed in various degrees of intensity as a part of multiple syndromes are Treacher Collins syndrome, CHARGE syndrome, FSH- fascio-scapulo- humeral dystrophy, Melkersson syndrome.

Treacher Collins syndrome or Mandibulofacial dysostosis (also known as Franceschetti-Lwalen-Kline syndrome) is autosomal dominant deformity of first and second branchial arches¹⁰. It is usually bilateral, with antimongolid obliquity of the palpebral fissures, notched lower eyelids coloboma of iris, ovoid orbital apertures, micrognathia, hypoplasia of malar and mandibular bones, large mouth, malocclusion, deformity of external (and occasionally inner ear), deafness, preauricular sinuses, dwarfism, cardiac and skeletal defects and anomalies of upper airway and varying degrees of facial paralysis.¹⁴

The CHARGE syndrome is a complex autosomal dominant deformity in which mnemonic stands for coloboma, heart disease, atresia chonal, retardation of mental and skeletal growth, genital hyoplasia and ear deformities¹⁵.

FSH- fascio- scapulo- humeral dystrophy is an autosomal dominant condition associated with weakness of face and shoulder muscles and the legs, plus hearing loss¹⁶. CBPS, congenital bilateral perisylvian syndrome, involves weakness of facial and pharyngeal muscles and muscles of mastication, of variable severity. There can be dysarthria to no intelligible speech, mental retardation and epilepsy¹⁷.

TREATMENT: The correction of facial asymmetry in congenital facial palsy presents a challenging problem for reconstructive surgeons. Patients with chronic facial palsy first need an

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exact classification of the etiology.¹⁸ A standardised clinical examination, if necessary MRI imaging and an electromyographic examination allow determination of the severity of the palsy and the functional deficits. Considering the patient's desire, age and life expectancy an individual treatment plan can be made.

Surgical treatment is targeted at achieving 3 main objectives, eye closure and protection of the globe, oral continence and spontaneous animation. Eye closure can be achieved through many surgical procedures like implantation of gold weight in upper eye lid for gravity closure. Various types of springs and magnetic implants which reproduce passive blink reflex have been tried but have inherent problems of fixation and erosion through skin.¹⁹

Reanimation technique using cross facial nerve grafts have been tried with good results.²⁰ Cross facial nerve graft as preliminary procedure followed by functional muscle transplant after nerve has regenerated across the face to the paralyzed side is most preferred. Functional muscle transplant is done mostly with temporalis muscle and fascia lata but to a lesser extent with platysma and masseter. Temporalis muscle transposition is a single-stage procedure, easily adapted for the pediatric condition of congenital facial paralysis.²¹ The gracilis muscle free transfer can also be considered as a safe and reliable technique for facial reanimation with good aesthetic and functional results.²² In long standing cases results of microsurgical nerve anastomosis are unfavorable due to atrophy of the facial muscles.²⁰

CONCLUSION: Congenital facial palsy requires multidisciplinary approach with Neurologist, Plastic surgeon, Maxillofacial surgeon, Otolaryngologist and Physiotherapist. Early surgical intervention (three and a half years or earlier) to correct facial expression with nerve grafts and muscle repositioning have poor to acceptable results. Long term follow up of the patient by surgeons and the physiotherapist is required for better results.

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Fig 1: Patient of congenital facial palsy

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Figure 2: Patient of congenital facial palsy with fissured tongue.