 

**Libyan International Medical University**

**Faculty of Basic Medical Science**

Cleft lip and palate

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**Abstract:**

Cleft lip and palate is the most common craniofacial malformation, comprising 65 per cent of all anomalies affecting the head and neck.It is caused by failure fusion of the embryological processes that comprise the upper lip occurs around the sixth week of 'mtra-uterine life.The aim of this report is to determine the management of cleft lip and palate.

**Introduction:**

**Cleft lip and cleft palate**, also known as **orofacial cleft**, is a group of conditions that includes cleft lip (CL), cleft palate (CP), and both together (CLP).[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1)[[2]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-Wat2014-2) A cleft lip contains an opening in the upper lip that may extend into the nose.[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1) The opening may be on one side, both sides, or in the middle.[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1) A cleft [palate](https://en.wikipedia.org/wiki/Palate) is when the roof of the mouth contains an opening into the [nose](https://en.wikipedia.org/wiki/Nasal_cavity).[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1) These disorders can result in feeding problems, speech problems, hearing problems, and frequent [ear infections](https://en.wikipedia.org/wiki/Otitis_media).[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1) Less than half the time the condition is associated with other disorders.[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1)Cleft lip and palate are the result of tissues of the face not joining properly during [development](https://en.wikipedia.org/wiki/Prenatal_development).[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1) As such, they are a type of [birth defect](https://en.wikipedia.org/wiki/Congenital_deformity).[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1) The cause is unknown in most cases.[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1) [Risk factors](https://en.wikipedia.org/wiki/Risk_factor) include [smoking during pregnancy](https://en.wikipedia.org/wiki/Smoking_and_pregnancy), [diabetes](https://en.wikipedia.org/wiki/Diabetes_mellitus_and_pregnancy), [obesity](https://en.wikipedia.org/wiki/Obesity), [an older mother](https://en.wikipedia.org/wiki/Advanced_maternal_age), and certain [medications](https://en.wikipedia.org/wiki/Drugs_in_pregnancy) (such as some used to treat [seizures](https://en.wikipedia.org/wiki/Seizures)).[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1)[[2]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-Wat2014-2) Cleft lip and cleft palate can often be diagnosed during pregnancy with an [ultrasound exam](https://en.wikipedia.org/wiki/Obstetric_ultrasonography).[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1)A cleft lip or palate can be successfully treated with [surgery](https://en.wikipedia.org/wiki/Surgery).[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1) This is often done in the first few months of life for cleft lip and before eighteen months for cleft palate.[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1) [Speech therapy](https://en.wikipedia.org/wiki/Speech_therapy) and dental care may also be needed.[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1) With appropriate treatment, outcomes are good.[[1]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-CDC2014-1)Cleft lip and palate occurs in about 1 to 2 per 1000 births in the [developed world](https://en.wikipedia.org/wiki/Developed_world).[[2]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-Wat2014-2) CL is about twice as common in males as females, while CP without CL is more common in females.[[2]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-Wat2014-2) In 2013, it resulted in about 3,300 deaths globally, down from 7,600 deaths in 1990.[[3]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-GDB2013-3) The condition was formerly known as a "hare-lip" because of its resemblance to a [hare](https://en.wikipedia.org/wiki/Hare) or [rabbit](https://en.wikipedia.org/wiki/Rabbit), but that term is now generally considered to be offensive.[[4]](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_note-4)

**Discussion:**

cleft lip and palate is described as exhibiting polygenic inheritance with a threshold. Environmental factors (for example anticonvulsant drugs. folic acid deficiency, or steroid therapy.The causes may be Unknown,Medications,Smoking,Parental Age,Family History,Racial or Gender,Problems in management such as Congenital anomalies .The disturbances in dental and skeletal development caused by the clefting process itself depend upon the site and severity of the cleft. Lip only, There is little effect in this type, although notching of the alveolus adjacent to the cleft lip may sometimes be seen.Cleft lip is in unilateral clefts rotation and collapse of both segments inwards anteriorly is usually seen. although this is usually more marked on the side of the cleft (the lesser segment). In bilateral clefts both lateral segments are often collapsed behind a prominent premaxilla.Cleft palate only is A widening of the arch posteriorly is usually seen.more concave profile. and whilst a degree of this is due to a restriction of growth.a more retrognathic maxilla and mandible and also a reduced upper face height compared with the normal population.In order to build up expertise within the team and for meaningful audit, care should be centralized within a region. The core members usually include orthodontist,cleft surgeon, psychologist, speech therapist,ear, nose, and throat (ENT) surgeon health visitor.Management can be at birth ,Lip repair ,Palate repair.,primary dentition mixed dentition or Permanent dentition The Care will entail attention, not only to surgical repair, but also more immediate needs such as feeding. Primary lip repairs can often be undertaken at three months of age with palatal repairs around six months. Additional surgeries as well as speech and orthodontic therapies are often needed. Cleft palate post operative care :Arm splints for 10 days,Breast feed best,Syringe feed,cup and spoon,Avoid hard teats,Home at 24-48 hours,If required, sutures out at 1 week.Massage scar tds, warn about contraction.Palate post operative, risks are airway and bleeding, Arm splints ,Clear fluids overnight.,Syringe, sipper cup,spoon soft diet as tolerated , Home at 48-72 hrs and Secondary bleed at 7-8 days.In vicinity of cleft alveolus ….delayed eruption, malformation or absence of deciduous lateral incisor, Unilateral or bilateral cross bites often present…often associated with functional shift. And soft tissue drape often disguises skeletal defect at this stage.Treat with expansion now.. Together with protraction headgear to ‘develop the maxilla’Definitely effective at the time…can exhaust patient cooperation.No solid data that in the long term benefits.Mixed dentition…common since event of alveolar bone grafts (ABG)Requires careful assessment of problem, risks and benefits timing of treatment closely related to timing of planed bone graft.. either before lateral incisor erupts (argued can effect maxillary growth), or before canine erupts.When root of canine 1/3 to ½ developed.Orthodontic treatment involves expansion to develop favourable arch form, alignment ..care not to move roots into cleft defect.. correct root angulation post grafting.Alveolar bone grafting (ABG).Provides continuity of alveolar ridge…Provides bone for canine to erupt.Osseous support for adjacent teeth,Majority of canines erupt spontaneously…others require surgical exposure often in combination with orthodontics.The erupting teeth often appear to then stimulate the formation of new alveolar bone

**Conclusion**:

The etiology is unknown it effects females more than males and the left side is effected more than right. management needs team work including surgeon psychologist and ENT and pediatric.

**References:**

* 1. ^ [Jump up to: ***a***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-0) [***b***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-1) [***c***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-2) [***d***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-3) [***e***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-4) [***f***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-5) [***g***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-6) [***h***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-7) [***i***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-8) [***j***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-9) [***k***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-10) [***l***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-11) [***m***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-12) [***n***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-13) [***o***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-14) [***p***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-15) [***q***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-16) [***r***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-17) [***s***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-18) [***t***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-19) [***u***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-20) [***v***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-CDC2014_1-21) [*"Facts about Cleft Lip and Cleft Palate"*](https://www.cdc.gov/ncbddd/birthdefects/cleftlip.html). October 20, 2014. [*Archived*](https://web.archive.org/web/20150508162121/http:/www.cdc.gov/ncbddd/birthdefects/CleftLip.html) from the original on 8 May 2015*. Retrieved 8 May 2015*.
  2. ^ [Jump up to: ***a***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-Wat2014_2-0) [***b***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-Wat2014_2-1) [***c***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-Wat2014_2-2) [***d***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-Wat2014_2-3) [***e***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-Wat2014_2-4) [***f***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-Wat2014_2-5) [***g***](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-Wat2014_2-6) Watkins, SE; Meyer, RE; Strauss, RP; Aylsworth, AS (April 2014). "Classification, epidemiology, and genetics of orofacial clefts". Clinics in plastic surgery. **41** (2): 149–63. [*doi*](https://en.wikipedia.org/wiki/Digital_object_identifier):[*10.1016/j.cps.2013.12.003*](https://doi.org/10.1016%2Fj.cps.2013.12.003). [*PMID*](https://en.wikipedia.org/wiki/PubMed_Identifier) [*24607185*](https://www.ncbi.nlm.nih.gov/pubmed/24607185).
  3. [**Jump up ^**](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-GDB2013_3-0) GBD 2013 Mortality and Causes of Death, Collaborators (17 December 2014). [*"Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013"*](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4340604). Lancet. **385**: 117–71. [*doi*](https://en.wikipedia.org/wiki/Digital_object_identifier):[*10.1016/S0140-6736(14)61682-2*](https://doi.org/10.1016%2FS0140-6736%2814%2961682-2). [*PMC*](https://en.wikipedia.org/wiki/PubMed_Central) [*4340604*](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4340604)*Freely accessible*. [PMID](https://en.wikipedia.org/wiki/PubMed_Identifier) [*25530442*](https://www.ncbi.nlm.nih.gov/pubmed/25530442).
  4. [**Jump up ^**](https://en.wikipedia.org/wiki/Cleft_lip_and_cleft_palate#cite_ref-4) Boklage, Charles E. (2010). [*How new humans are made cells and embryos, twins and chimeras, left and right, mind/selfsoul, sex, and schizophrenia*](https://books.google.com/books?id=j7GfgRIgP9YC&pg=PT299). Singapore: World Scientific. p. 283. [*ISBN*](https://en.wikipedia.org/wiki/International_Standard_Book_Number) [*9789812835147*](https://en.wikipedia.org/wiki/Special:BookSources/9789812835147). [*Archived*](https://web.archive.org/web/20170910234036/https:/books.google.com/books?id=j7GfgRIgP9YC&pg=PT299) from the original on 2017-09-10.