

Cleft lip and palate

The cleft lip and palate is one of the most common deformations of humankind. The clefts in the face can develop in the area of the upper lip, the bones of the maxilla and the hard and soft upper palate in the fourth to eighth week of pregnancy. They can occur in various combinations, either on the left or the right hand side of the face or bilateral.

Cleft children are born on all continents and in each and every country. Estimates on the frequency of the cases vary. In Europe it is assumed that one in 500 to 800 births are affected. In Asia these numbers are probably considerably higher. In Africa they are a little bit lower. The most affected areas are those with poor environmental conditions: regions contaminated with dioxins or coal dust or those lying in considerable altitude (Andes or Himalaya Mountains).

Causes

Even though cleft lips and palates are the most common congenital deformations of humankind it is still not fully clear from the medial point of view what actually causes them. It is known that the risks for cleft deformations are increased by several external factors such as pollution of the environment and food, hypoxia of the embryo and malnutrition of the mother (folic acid and vitamin C deficiency) as well as possibly being of hereditary origin. Cleft lips and palates develop during the fourth week of pregnancy when the separate parts of the face begin joining together starting from the outside and proceeding inwards. If the embryo's development is in some way disturbed during this phase the layers of tissue do not fuse completely. The various types of clefts are then the result.

Types of cleft lips and palates

Cleft deformations can vary considerably. They can occur as a cleft lip either on one side of the face or bilaterally on both sides of the upper lip, as a cleft palate or a combined cleft lip and palate. Other types of cranio-facial clefts such as lateral clefts of facial clefts are more seldom. Cleft lips and palates account to seventy per cent of the cases.

Comprehensive care for children with cleft lips and palates

The operation on a cleft lip and palate immediately frees the children from the deformation itself. A prerequisite for successful further treatment is, however, the so-called "functional operation". Therefore, these complex operations should only be performed by experienced maxillo-facial surgeon. The child can only hear and learn to speak properly when the cleft is closed, ensuring the joining of the facial muscles and when the hearing ability is safeguarded with the completion of the soft palate. Hearing shall be checked regularly during growth (increased up to at least 7 years). Accumulation of fluid behind the eardrum, which can lead to hearing problems and ear infections need to be drained by grommets. Subsequent surgery is often necessary due to the growth of the child in order to prevent new facial deformities caused by displacements. Additionally, a correction of the malpositioning of the teeth is necessary with braces for the teeth and jaw. With these procedures and a subsequent speech therapy the children have the best chances for a complete recovery.

The cooperation of an interdisciplinary team of surgeons, orthodontists, ENT-specialists and speech therapists is therefore extremely important for the treatment of cleft children. This is the only way that the deformity is rectified in all of its complexity and the children are provided with a chance for a positive development.

Help for cleft children: a matter of course in Germany - in many parts of the world unachievable.

In Germany cleft children are usually treated in the first months of their life. All that is normally left is an almost unrecognisable scar. The children are then continuously in medical and therapeutic treatment until they reach adolescence. The successes of this interdisciplinary treatment are very good. No child has to grow up with a deformity here.

In countries like Vietnam, Cameroon, Peru, Bolivia or the Philippines things are quite a different matter. A large number of cleft children are denied help even though the treatment is quite simple. Health insurance is virtually non-existent and the poorer families simply cannot afford the surgery of their children. Surgeons, medical and therapeutic know-how, ear, nose and throat treatment, orthodontics, medical aftercare and interdisciplinary therapy are all lacking - but what is lacking most is money.

The aim of our projects is to enable a sustainable, comprehensive treatment of cleft children combining high-quality surgery of the cleft deformation with an interdisciplinary treatment of the children. Children that have received specialist surgery and the correct aftercare can then eat, drink and talk properly. But much more than that, they also for the first time have a real chance for full participation: in social life, with playmates and through a school education.