

Therapy

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**BASIC MEDICAL ASPECTS
OF CEREBRAL PALSY**

Pamela Stretch



The
Spastics
Society
of India

REFERENCE



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INTRODUCTION AND BACKGROUND

Over the last several years medical science and technology have revolutionised care of the mother and infant. Even for very small birth-weight infants survival is now a high probability. The responsibility for early identification of developmental problems and subsequent referrals for treatment is primarily with the medical practitioner. When a child is diagnosed as having cerebral palsy, the physician should provide the necessary information about possible causes, support services, therapy and management.

The parents of a disabled child are confronted with the age-old question - Why us? This developmental disability knows no class, nationality, colour or economic status and it leaves parents feeling helpless. They have very little idea about whom they can turn to for help.

Only a few of them have an idea about the professionals who can offer advice. Unfortunately, it often happens that professionals are either not available or do not have enough time to answer all the queries from parents who receive inadequate or, at times, quite contradictory information which confuses them even more. The basic questions arising in parents' minds are discussed in this



booklet. The information has been collected from available literature and personal discussions with professionals and social workers at The Spastics Society of India.

Cerebral palsy is a complex neurological condition that produces disability because of neuro-muscular incoordination and weakness. The chronic disability is characterised by:

- A disorder of movement and posture
- Early appearance in life
- A persistent but non-progressive nature.

Since cerebral palsy is not a disease, total prevention or a complete cure is not possible. An estimation of the exact number of people with cerebral palsy has not been attempted in India, but according to WHO estimates, there are two to two and a half million reported cases of cerebral palsy in our country. The incidence of cerebral palsy seems slightly higher for boys than for girls. In a worldwide study comprising over 15,000 cases a ratio of 1.4 boys to one girl is reported. In our centre, the ratio is 1.7 boys to one girl.

Up to the present time, there has been very little written material to which families can turn for assistance and information. Well-meaning and sympathetic professionals are not always consistent in their response to questions. Every person with cerebral palsy is a unique individual and there are no ready made solutions or tailor-made answers. This publication is an attempt to serve those who want to know the why and how and gives other related information about cerebral palsy. We hope that it will be able to

clarify common doubts and clear misconceptions arising from old wives' tales.

CAUSES

Problems with the umbilical cord causing lack of oxygen to the foetus (anoxia), maternal infections like rubella, herpes, diabetes, heart and thyroid conditions, asthma and RH sensitivity any time from conception to labour are some of the known causes of cerebral palsy.

During birth, an inadequate oxygen supply due to mechanical respiratory obstruction, use of analgesics, trauma and a too-fast or too-slow delivery are some of the reported causes of cerebral palsy, while childhood diseases like meningitis, encephalitis, brain abscess and trauma due to a wound are the post-natal or after-birth causes. Another common cause which occurs immediately after birth is severe jaundice.

There are some very common misconceptions about the causes. While a combination of several complicating factors may lead to this condition, parents should have a clear understanding of the dimension of the problem.

PREMATURITY AND ITS RELATION TO CEREBRAL PALSY

An infant born before completion of thirty-seven weeks of gestation or with a birth-weight of less than 2.5 kilos is considered premature. Low birth-weight is the single most

common associated factor in cerebral palsy. According to U.S. research reports, 39% of children with cerebral palsy have a history of low birth-weight. In India, unfortunately, the majority of parents do not have a clear idea about their baby's birth-weight. Even today, low birth-weight is considered a sign of bad parenting and, therefore, parents tend to exaggerate the weight of their new-born.

Although home deliveries are becoming less common in urban areas, they are still fairly frequent in rural India. Prematurity and low birth-weight goes unnoticed in such cases. To get a rough idea about prematurity we analysed records from three hospitals in Bombay. The data suggests that about 9.3% of newborns are prematurely born every year.

IT MUST BE REMEMBERED THAT PREMATURETY DOES NOT AUTOMATICALLY MEAN THAT ANY IMPAIRMENT WILL RESULT.

An encouraging research finding is that less than 25% of premature births have any kind of impairment at all.

BREECH (BUTTOCKS OR LEGS FIRST) DELIVERY & CEREBRAL PALSY

Problems with the umbilical cord are rather common in breech labours. Although 3% of all labours result in such a delivery, only 2% of the total sample of cerebral palsy cases studied included

breech delivery. Statistically, there is no correlation between breech babies and cerebral palsy. Parents nevertheless are always concerned about disability and breech deliveries.

In the United States, a major research study was undertaken. It has proven that breech babies are not in a high-risk category. Breech babies in India are more common than in developed countries.

THERE IS NO CORRELATION BETWEEN BREECH BIRTH AND CEREBRAL PALSY

FORCEPS DELIVERY AND BRAIN INJURY

Parents often claim that the cause of cerebral palsy in their child is the damage caused by the obstetrician's forceps. There have been many research studies on birth history and incidence of cerebral palsy.

THERE IS NO CONCLUSIVE EVIDENCE TO SUGGEST THAT FORCEPS DELIVERY CAUSES CEREBRAL PALSY.

However, there are other reported problems associated with forceps. Most of them require no treatment and are completely reversible. The most common among them are:

- Temporary paralysis of muscles near the mouth, caused by compression of the facial nerve. Usually, this lasts for only a few hours and then completely disappears.

- Pressure marks near the scalp. These marks are barely visible and in most cases disappear completely in a few days' time.
- Swelling (Haematoma) - this reduces slowly and disappears within a few days.

If improperly handled, forceps could cause permanent damage involving injury to the eyes, nose, the nerves supplying the shoulder and arm or even a fractured skull. It must be remembered that such cases of damage are very rare.

Obstetricians point out that the use of forceps is the most common assistive procedure in prolonged labour. The decision about the use of forceps should be left to the doctor himself. He can weigh the advantages and problems and make a knowledgeable decision.

ACQUIRED CEREBRAL PALSY

As discussed before, there are pre-natal, peri-natal and post-natal causes of cerebral palsy. It is possible, however, to develop the symptoms of cerebral palsy a long time after birth due to a particular injury, accident or disease. This is called acquired cerebral palsy.

Typical injuries that are reported to cause brain damage among children are severe trauma due to an accident, a fall or being struck on the head and tumours. Smoke inhalation and drowning

are also known to show damage similar to cerebral palsy.

PREVENTIVE ACTION OR MEDICINE AGAINST CEREBRAL PALSY

There is no medicine for prevention or cure of cerebral palsy. Good prenatal care and regular medical supervision during pregnancy help in identification of problems which might cause damage to the foetus. It is also vitally important that the mother has a balanced diet and sufficient rest, especially if any warning signs are detected. **Medication should be kept to a bare minimum and should only be taken on the advice of the doctor in charge.**

Much information is available on the dangers of self-medication, radiation, alcohol, drugs, smoking and other factors related to the total health of the mother. It is encouraging to know that over ninety percent of births are uneventful and healthy babies are born.

CAESAREAN SECTION CAN PREVENT OR REDUCE COMPLICATIONS WHICH MAY LEAD TO CEREBRAL PALSY.

Irregular foetal heartbeat, foetal distress, abnormal posture of the foetus, anticipated breech delivery, prolonged labour and maternal distress are some of the main complications which can be avoided through a caesarean section.

Studies indicate that the incidence of caesarean sections in large metropolitan areas like Bombay has increased at least seven times

during the last fifteen years. Prospective parents should remember that this is a major operation and, like any surgical procedure, can present problems for the mother and child.

INCIDENCE OF CEREBRAL PALSY AND TWIN BIRTH

Twin-births, especially the second-born of twins, seems to be in the high-risk category for cerebral palsy.

There is no systematic analysis available but several texts on cerebral palsy refer to the high-risk factor in multiple births. In a random sampling involving five to six hundred cases, a six percent incidence has been reported. However, these studies are far from conclusive.

MENTAL RETARDATION AND CEREBRAL PALSY

We must keep in mind that persons with cerebral palsy have associated problems of speech, drooling, inco-ordination, peculiar gait, poor posture etc. Due to stereotypes, this outward appearance is often mistaken for mental retardation.

Several research studies on cerebral palsy indicate that nearly fifty percent of children with cerebral palsy have normal or above-normal intelligence. If it is determined that the child does have an associated mental handicap, parents should be guided to the appropriate services and training to meet the needs of their child. When the parents learn that their child has an associated intellectual delay, they often become so discouraged that they

make no attempt to get professional help. They assume that people with mental handicap cannot be trained or become independent. One must help reduce such faulty reactions. Parents' groups, institutions, professionals and counsellors can guide parents and suggest an appropriate course of action.

MORE THAN FIFTY PERCENT OF PEOPLE WITH CEREBRAL PALSY HAVE NORMAL OR ABOVE NORMAL INTELLIGENCE.

LIFE EXPECTANCY

As mentioned before, in India there is virtually no data available on cerebral palsy. Research on the life expectancy of people with cerebral palsy is not reported. Going back again to studies in America and Europe, the results indicate that cerebral palsy alone does not reduce life expectancy or make a person more prone to illness. These observations are non-conclusive and every case must be treated individually.

CONCLUSIONS

The aim of this booklet was to provide baseline or primary information about the condition of cerebral palsy. Research studies and data available all over the world has been taken into account while putting forth these points. This booklet is only meant as a reference and is not an original piece of research. We have only supplemented the available information and hope that it can answer many of the preliminary questions arising in parents' minds when the diagnosis of cerebral palsy is made.

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