What Happens to Neonates Discharged After Management of Birth Asphyxia?

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INTRODUCTION

Birth asphyxia is defined as a delay in establishing spontaneous breathing/crying immediately after birth of the newborn.

Hypoxic Ischemic Encephalopathy (HIE) is the term commonly used to describe the neurological syndrome that occur following perinatal asphyxia. It is usually caused by severe birth asphyxia with secondary cerebral ischemia. It is an important cause of permanent damage to the Central Nervous System (CNS) which may result in neonatal death or manifest later as cerebral palsy or mental deficits.

There is dearth of studies in India especially regarding long term follow up of infants of HIE due to birth asphyxia. Also, due to neuronal plasticity of brain in first two years of life, early follow up and treatment can diagnose neurological/visual/hearing deficits and give scope to provide supportive care and improve outcome.

So need for this study to know outcome of birth asphyxia so also improve quality of care and to give them a better quality of life.

OBJECTIVE

We administered questionnaire to parents of neonates who were discharged with a diagnosis of BA and ascertained their current medical status.

Materials and Method:

Patient admitted in Shree Krishna Hospital NICU in neonatal period due to BA, and discharged alive from NICU were assessed at follow up. **Parents of 50 children from 2014 to 2016 were approached.** Descriptive statistics (mean SD, frequency percentage) was used.

Results:

- **Five neonates had died.**
- 32 of remaining 45 children, 77% had NICU stay of 7-30 days.
- 71% had HIE grade II and 13% had HIE grade II.
- **64% had hypertonic limbs and 36% had hypotonia.**
- 25% had bowel disturbances.
- 16% had breathing difficulty and 4 were on regular inhaled bronchodilators.
- **Social interaction was grossly inadequate in 66%.**
- **10 infants had convulsions starting by one month, all 5 HIE grade III patients had epilepsy.**
- **69% had weight <3 centile and 56% had height <3 centile and thus short stature.**
- **44% had visual problems; of which 11 were on regular follow up.**
- 31% had hearing problems; of which 8 were on follow up.
- **81% had delayed developmental milestones.**

Conclusion

The first 28 days of life – the neonatal period – represent the most vulnerable time for a child's survival. Survivors of Birth Asphyxia have neurodevelopmental deficits and need to be managed on a regular follow up.

The small cohort of infants had large number of disabilities and it indicates the burden of Birth Asphyxia in the community.

Interventions that treat birth asphyxia well need to be expanded across India to reduce long term burden.

A sustained rehabilitation program with multidisciplinary involvement is required to ensure that these children are provided the chance of developing to full potential.