Neurological conditions – a permanent challenge from pregnancy to childhood

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The human brain begins to develop from intrauterine life and continues to develop throughout childhood until adolescence. Brain cells are mostly formed before birth, although nerve connections develop later. Neurological disorders have a wide spectrum and can have various causes, complications, symptoms and effects.

These neurological conditions can affect people regardless of age, however, few neurological conditions are present only in the early years of development.

Diagnosis and treatment of neurological diseases during pregnancy and postpartum represent significant challenges for neurologists, psychiatrists, obstetricians and other health professionals. Pregnancy is associated with physiological changes, especially significant hormonal ones, which can generate new neurological or psychiatric diseases or which can cause the recurrence of pre-existing ones. The differential diagnosis of these conditions during pregnancy must include certain diseases that manifest almost exclusively during pregnancy. Any diagnostic and therapeutic decision must be made with careful consideration of the risks and benefits to the developing fetus and the expectant mother.

Improving knowledge about the safety of breastfeeding in patients under neurological treatment, increases the rate of exclusive breastfeeding in these cases. Pregnant patients with neurological or psychiatric disorders who are being treated should receive folic acid and other vitamin supplements to reduce the risk of certain birth defects.

The most common neurological diagnoses in the neonatal population are brain injuries related to prematurity, hypoxic-ischemic encephalopathy, seizures, strokes, brain malformations, and muscle tone disorders. These issues are best addressed by multidisciplinary teams of pediatric neurologists with experience in neonatal neurology and neonatologists, trying to improve neurological development. Neonatal neurology has evolved over time, and neuroprotection with therapeutic hypothermia has become a standard of care for the term neonate with hypoxic-ischemic encephalopathy [1,2,3]. Prevention of brain damage in premature newborns is now an important concern for neonatologists. Practices for treating convulsions in newborns are also actively studied and periodically improved.[4]. Despite widespread advances in neurologic care, few centers have a neurologist dedicated specifically to neonatal care [5].

There are various neurological disorders that affect the pediatric-age population. Autism, epilepsy, cerebral palsy, and brain injury sequelae are the most common neurological disorders in children. Each disorder and the symptoms associated with it vary.

Children hospitalized with neurological diagnoses have substantially higher use of pediatric intensive care services, a higher risk of death, and higher overall use of health system resources than children hospitalized with other conditions. The complexity of the care required for children diagnosed with neurological conditions is also reflected by the higher rate of admission to children’s hospitals, longer lengths of stay, and higher hospitalization costs [6].

The thorough study of neurological disorders during pregnancy and up to the pediatric age has a positive impact on the quality of life of patients and can have a positive impact on the reduction of hospitalization costs.

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REFERENCES


