International Journal of Modern Agriculture, Volume 10, No.1, 2021
ISSN: 2305-7246

Secondary Meningoencephalitis in Children

Djurabekova Aziza Taxirovna
Doctor of Medical Sciences,
Prof. Head of the Department of Neurology and Neurosurgery
Samarkand Medical Institute

Niyazov Shuxrat Toshtemirovich
PhD of Medical Sciences.
Assistant of the Department of Neurology and Neurosurgery
Samarkand State Medical Institute, Samarkand, Republic of Uzbekistan

Abstract; In the Samarkand region for 5 years (2015-2020), 172 cases of encephalitis and meningoencephalitis were registered among the child population. Secondary meningoencephalitis is caused by other types of viruses such as influenza virus (37 (21.5%)) and herpes virus (33 (19.1%)). In newborns at 3-4 months of age or from the moment of birth, encephalitis developed. This is because the mother of the child is sick with TORH infection. They developed encephalitis in utero. We found that 33 (19.1%) cases were caused by TORH infection.

Key words: meningoencephalitis, encephalitis, perinatal pathology, syndromic complex.

Complication of somatic diseases (pneumonia, pyelonephritis, etc.) was often encephalitis, and this was found in 17 (9.9%) patients. All these patients were treated at home on an outpatient basis. With complications with the transition to encephalitis, they were hospitalized in a hospital. Encephalitis was also detected after ENT diseases (4 (2.3%)) and after sepsis (7 (4.1%)).

The clinical finding of an altered state of consciousness, ie, encephalopathy, with some or all of headache, neurological signs and fever, presents the physician with a variety of challenges. A number of infectious and noninfectious conditions can present with encephalopathy with or without cerebrospinal fluid (CSF) pleocytosis.

It should be noted that, along with somatic pathology, perinatal pathology is among the most significant risk factors for development. In infants, prenatal risk factors preceded the development of MEF. The study of the anamnesis showed that the influencing factors of this pathology are divided into three periods: prenatal risk factors (15%), postnatal factors (13%).

Thus, the etiological factors in the development of residual effects of ME in our observations were acute viral infections, infectious diseases (mumps, purulent and viral meningitis), somatic diseases (pneumonia, rheumatism), ENT diseases (purulent otitis media, tonsillitis), birth trauma, and others. Despite this, MEF in children often proceeds against the background of one or two, less often more risk factors. In schoolchildren, infectious and somatic diseases play a more important role in the development of ME.

Goal. To study the nature and severity of neurological deficit in terms of the severity and age of meningoencephalitis (ME) in children.

Material and research methods. The examination was carried out in 1 clinic of SamMI, for 5 years (2015-2020). The main examination method, of course, was the standard neurological examination of the syndromic complex. The severity of the condition and the severity of neurological deficits were assessed using the FIN scale. Modified Rankin scale. The FIN scale of functional independence consists of 18 items reflecting the state of motor and intellectual functions. The total score can be from 18 to 126 points; the higher, the more complete the independence of the patient. Additional research methods included neuroimaging of the brain (MRI), consultation with a pediatrician (to clarify the somatic status), an otolaryngologist, and an ophthalmologist. Statistical data were processed on an individual computer.

Research results. Meningoencephalitis is a lesion of the brain with its soft membrane. This, in turn, determines the diversity of the clinical picture with the residual phenomenon of the disease. It is important to note the differential diagnosis of MEF depending on the brain lesion.

Patients with MEF had complaints 33 (58.9%) patients complained (according to the mother) of paresis of the arms and legs and difficulty walking: 12 (52.2%) in preschool children and 21 (66.6%) children of school age ... 33 (58.9%) complained of speech impairment before speech development lag. If divided by age, then in children 4-6 years old, 15 (65.2%) and 18 (54.5%) children aged 7-15 years presented such complaints. 25 (44.6%) patients complained of convulsions. 5.4% of patients complained of unsteadiness when walking.

Disorders from the cranial innervation in various combinations (more often in the form of central paresis of VII, XII pairs, peripheral paresis of III, IX, X, XII pairs of cranial nerves) was almost equally observed in (21 ± 0.185) examined (cranial nerve damage (children from 4 to 6 years old n = 2; 8.7% and children from 7 to 15 years old n = 2; 6.1%)). Oculomotor disorders were noted in both groups. In preschool children (18.3 ± 0.11%), in school age (9.6 ± 0.012%). Swallowing and phonation disorders occurred in 3.1% of all patients.

With a mild course of the disease such as meningoencephalitis or with meningitis, an encephalitic reaction of the brain occurs, then in these cases, a lag in psycho-motor-speech development is revealed in patients. In preschool children, the lag in psycho-motor-speech development was 65.2% (n = 15), and in school-age children, 54.5% in 8 patients.

Often, when the inflammatory focus is widespread, hemi (children from 4 to 6 years old 4 (17.4%) and children from 7 to 15 years old 10 (30.3%)) or tetraparesis (children from 4 to 6 years old 8 (34.8%) and children from 7 to 15 years old 11 (33.3%)). In most cases, seizures in patients were considered residual. Generalized seizures were found in 9 (39.1%) patients with MEF from 4 to 6 years old, while in school-age children it was 15.2% in 5 patients. Focal seizures in preschool children were found in 6 (26.1%) patients and in schoolchildren in 3 (9.1%) patients. With total brain damage, subcortical nodes were affected and hyperkinesis was found in patients (children from 4 to 6 years old n = 2; 8.7% and children from 7 to 15 years old n = 1; 9.1%). In some patients, the inflammatory process reached the cerebellum, and in patients with residual encephalitis, cerebellar ataxia was encountered.

These signs were n = 2 in preschool children; 8.7% and in schoolchildren n = 1; 3.03%. Microcephaly also had the same indicator as ataxia.Of 56 patients with MEF 18 (32.1%) were patients with severe meningoencephalitis, in whom meningoencephalitis was observed in 34.8% of cases in preschool children. The total clinical score on the scale in young patients was 31.4 ± 0.16 points. In all patients of this group, except for the gross focal neurological symptoms, no intellectual disturbances were determined.

The mild degree of the disease was 30.4% of patients, of which children of early age 13.04% and children of school age 42.4%. The neurological status served as the basis for both the diagnosis and the severity of the disease. The study of neurostatus revealed various focal neurological symptoms depending on the localization of the focus in patients with ME. The most frequent consequences of MEF are movement disorders in the form of paresis and paralysis of varying severity. The examination of the motor sphere showed that 33 (62.3%) patients had motor disorders.

Using the FIN questionnaire, the motor function was assessed according to the following parameters: independent food intake for patients, personal hygiene, showering, dressing, and toilet.

Preschool children in 2 (8.7%) patients independently brought food to their mouths, and in school-age children it was 33.3% (in 11 patients), the majority of patients 19 (33.9%) could independently use cutlery, preschool children had no independent chewing and swallowing (n = 21; 82.6%). When observing the performance of personal hygiene in 2 (8.7%) patients of preschool age, independent performance of a personal toilet was noted: brushing teeth, combing, washing, and at school age 27.3% (9 patients).

According to the parents of the patients, 30 (53.6%) had a lack of self-hygiene, as there was a pronounced paresis of the upper limbs. In 16 (69.6%) patients, children from 4 to 6 years old could not dress on their own due to limitation of movements in the upper extremities, could not fasten a button or put on the sleeves of a shirt; at school age, this was 24.2% (n = 8) ...

In patients (preschool age) who had lower paraparesis 16 (69.6%), there was no movement in the lower extremities, who could not put on shoes on their own; at school age, these patients were 7 (30.4%).

During urination control, the absence of spontaneous urination was noted, they had involuntary urination. This indicator in preschool age was 26.1% (n = 6), at school age in 9 patients (27.3%) Children with MEF of preschool age in 13 (56.5%) and school age in 7 (21.2%) patients had a lesion in the control of the act of defecation, which was expressed by fecal incontinence.

The patients we observed could not move easily in their own bed because of persistent tetraparesis. In some patients, 13 (56.5%), due to tetraparesis, could not sit independently on a chair and move in a wheelchair. At school age, 36.4% (n = 12) patients could not move and sit on their own. Also, the questionnaire shows taking a shower or bath, according to the survey results n = 39; 69.6% (preschool age 28 and school age 11 patients) of patients could not take a shower or a bath on their own because of persistent tetraparesis.

When assessing the mobility of patients, we evaluated independent movement, with the help of a wheelchair, or how much the patient can move without independent assistance. And also when climbing the stairs, a significant number of 8 (14.3%) patients climbed 12-14 steps without assistance, a score of 2.1 is the inability to overcome more than 4 steps. Intelligence with meningoencephalitis suffers only in more severe cases, more often when the disease began in early childhood. But even with relatively preserved intelligence, these children cannot learn.

Their activity and initiative are sharply weakened. The function of attention is especially impaired: its stability, ability to switch and distribution are reduced. The study of the peculiarities of intellectual impairments in children and adolescents with long-term epidemic encephalitis reveals in many cases a lack of thinking, which can be considered as a result of mental retardation.

But even with preserved intelligence, attention is drawn to the discrepancy between the ability to comprehend and the lack of a critical attitude towards oneself and the environment, the contrast between a sufficiently developed judgment and grossly disturbed behavior. In older children and adolescents, depressed mood and various reactive disorders often develop in connection with the consciousness of their inferiority.

With intellectual impairment was observed in 29 patients, of whom at school age the intellect was impaired in 16 patients (30.2%), at preschool age - in 6 patients (11.3%). According to the assessment of the degree of impairment of intelligence on a scale, in preschool age in 17.4% of patients (n = 8), intelligence was significantly preserved and was assessed at 21.9 points and in school children in 41.7% of patients (n = 5), intelligence was preserved and was estimated at 23.5 points. A significant decrease in the intelligence of preschool children was noted in 18 (39.1%) patients and was estimated at 7.8 points, in school-age children this indicator was 5 points in 3 (25%) patients.

Based on a comparative analysis of patients of both ages in terms of the level of intelligence upon admission to the hospital, we came to the conclusion that in more than half of older people, the intelligence often remains intact, however, compared with the contingent of younger patients, they more often have more coarse types intellectual disabilities. Thus, our clinical and neurological study revealed the features of the course of MEF in children.

Conclusion: The etiological factors in the development of meningoencephalitis in our observations were acute viral infections, infectious diseases (parotitis), somatic diseases (pneumonia, sepsis), ENT diseases (purulent otitis media, sinusitis), birth trauma and others. Despite this, MEF in children often proceeds against the background of one or two, less often more risk factors. In schoolchildren, infectious and somatic diseases play a more important role in the development of ME. The clinical picture and the severity of the condition of patients with MEF, first of all, was determined by neurological disorders - the brain and focal symptoms.

LITERATURE :

1. Niyazov Sh.T., Djurabekova A.T., Shomurodova D.S., Igamova S.S. Features of the course and complications of secondary meningoencephalitis in children. DOL: 1024411 / 2181-0443 / 2020-1008
2. Niyazov Sh.T., Djurabekova A.T., Shomurodova D.S. Clinical course and features of complications of secondary meningoencephalitis in children. ISSN 2308-4804 / Science and world. 2020. No. 9 (85). Vol. one
3. Niyozov Sh.T., Djurabekova A.T., Igamova S.S. Innovative approach to treatment of effects of encephalitis in children. DOL: https://dol.org/10.31838/ijpr/2020.SP1.264
4. Chukanova E.K. The effectiveness of complex psychosocial care for patients with schizophrenia and schizophrenic spectrum disorders on the basis of a neuropsychiatric dispensary // Social and Clinical Psychiatry. 2014, V.24, No. 1, pp. 21–27.
5. Clinical neuropsychology: a practical guide to assessment and management for clinicians / L.Goldstein, J.E.Mc Neil (Eds.). Wiley-Blackwell, 2013
6. Wilson B.A., Fergus G., Evans J.J., Bateman A. Neuropsycological rehabilitation: theory, models, therapy and outcome. Cambridge University Press, 2013. 456 p.