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A rare complication of gullian barre syndrome secondary to typhoid fever

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Abstract

Guillain-Barre syndrome (GBS) following typhoid is extremely uncommon and only few case reports are available in literature. The importance of this case report is to highlight upon the fact that a diagnosis of GBS should always be kept in mind whenever a patient of typhoid fever develops weakness. We report a young girl with blood culture proven typhoid fever that developed this very rare neurological complication quite early in the course of the disease. Following treatment with intravenous antibiotics and intravenous immunoglobulin, she was improved.

Keywords: Guillain-Barre syndrome, IVIG, Typhoid fever, Encephalopathy, albumin cytological association.

Introduction

Salmonella group of organisms causes typhoid fever. It has a high prevalence in tropical countries. The typical symptoms may not be seen in all patients and the disease may have unusual manifestations.[1] The incidence of neurological manifestations in typhoid fever varies widely. Central or peripheral system or both are additionally affected.2Encephalopathy is perhaps the foremost common neurological complication of typhoid fever.[2] Aphasia, benign intracranial hypertension, and cerebellar ataxia are other possiblemanifestations.[3.4.5] The cranial nerve palsies within the sort of palatal palsy and abducens palsy are noted.6 The precise pathogenesis of those neurological manifestations is solely postulatory till now. Probably toxemia and metabolic dysregulation together with non-specific cerebral changes like edema and hemorrhage are to blame for the neurological manifestations.[2,7] Vasculitis or some ill-defined immune-mediated mechanisms might also be responsible. 2 GBS following typhoid is extremely uncommon and only some case reports are available inliterature.[4, 8,9,10] The importance of this case report is to spotlight the actual proven fact that a diagnosis of GBS must always be kept in mind whenever a patient communicable disease develops weakness. This case report is to highlight a rare neurological complication of typhoid fever that physicians need to be aware of.

Case Report

A 19 yr old female presented with complains of fever for 2 weeks, Urinary incontinence for 5 days and generalised weakness for 2Weeks All routine investigations were done. On performing widal test H titer was found to be

1:320, O titer was 1:100.On doing a blood culture the causative organism was found to be salmonella typhi. Since the patient complains of weakness of all four limbs CNS examination was performed .On examination - Power was found to be 3/5 in all four limbs, Tone was found to be normal Plantar- flexor, Deep tendon reflex was absent in both the lower limbs. On cranial nerve examination of 2ndnerve- blurring of vision and diplopia was found .Lumbar puncture has been done Single breath count -25. A nerve conduction study was done showing F reflex shows latency period increased which is suggestive of Guillain barre syndrome. MRI spine shows features of demyelination. Lumbar puncture procedure done which revealed csf protein is elevated, albumin cytological dissociation is present. Patient was started on IVIg 10gram per day twice daily for five days, following this the patient condition improved.

Discussion

Typhoid fever is a common infectious disease in developing countries like Bangladesh. Two thirds of people with GBS have experienced an infection before the onset of the condition. In many cases, the exact nature of the infection can be confirmed.12 Neurological complications are not uncommon. In children, known and reported neurological complications are encephalopathy, meningism, spastic paralysis- cerebral origin, convulsions, meningitis, parkinsonian syndrome, sensory motor neuropathy, cerebellar involvement, and schizophrenic psychosis.[1,13] However, GBS is not common neurological presentation in typhoid fever. GBS is an immune-mediated polyneuropathy that has often been associated with a variety of infectious agents such as bacteria, and virus.[13] A plausible mechanism for GBS in typhoid is that the generation of IgM antibodies against the bacterial capsule by a non- T cell-mediated mechanism, which crossreact with myelin gangliosides.[11] There are, however, very few reports of GBS associated with typhoid fever in pediatric age group [11, 14, 15] Datta et al. also reported a case of typhoid fever in a 10-year-old girl, who developed GBS subsequently as a complication of typhoid fever.[16] The present case report differs from the previous reports in age of presentation (presented at the age of 17 years), early development of GBS following typhoid fever (by day 8 of illness).

Conclusion

This case report attempts to highlight the fact that typhoid fever can be associated with unusual neurological complication like GBS quite early in the course of the illness; also, prognosis in such cases seems to be relatively good. In contrast to the usual benign course of uncomplicated typhoid fever, development of GBS can dramatically change the course as without prompt diagnosis and institution of management, the condition may be life threatening.

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