

assay for the TB antigen were again negative. Furthermore, findings of this CSF sample showed other improvements, including fewer WBC (138/ μ l, all mononuclear) and decreased levels of α 2 microglobulin (46 mg/L), ADA (31 U/L), and IL-6 (48 pg/ml). In contrast, CSF protein level alone remained increased to 61 mg/dl.

On Day 18, PCR analysis of the first CSF sample (Day 1) showed it to be positive for mumps RNA. Serologic testing for mumps performed on Day 18 demonstrated remarkable elevation of the specific IgG titer in serum (372) and the CSF (106). Based on these results, we made a definitive diagnosis of mumps meningitis due to reinfection. The clinical condition of the patient rapidly improved and complete recovery was noted on Day 21.

Discussion

It has been reported that severe mumps cases are characterized by elevated levels of IL-6 and IFN- γ in plasma [6], while another study also noted that IL-2 and IFN- γ were increased in serum of patients with acute mumps infection, thus indicating an important role for T_H1 cells in this disease [7]. Likewise, inflammatory processes occurring in meninges during mumps meningitis seem to be similar, as IFN- γ , IL-2, and IL-6 levels are significantly elevated in the CSF of affected patients, while TNF- α in the CSF does not show an elevated level [8], though an increased level of that cytokine is a feature of patients with tuberculous meningitis [9].

Conclusion

In the present case, we found it necessary to consider the latter possibility because of persistent severe headache and vomiting along with the progressive course associated with elevation of ADA and TNF- α level in the CSF. Therefore, we consider it important to emphasize that reinfection by the mumps virus can potentially cause severe meningitis without parotitis and may mimic tuberculous

meningitis. Careful neurological and radiological follow-up examinations, as well as repeated analyses of CSF samples using detailed immunological measurements in addition to routine studies are necessary for proper diagnosis and avoiding unnecessary treatment.

References

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