



## **Post-Mumps extrapyramidal syndrome in a young child**

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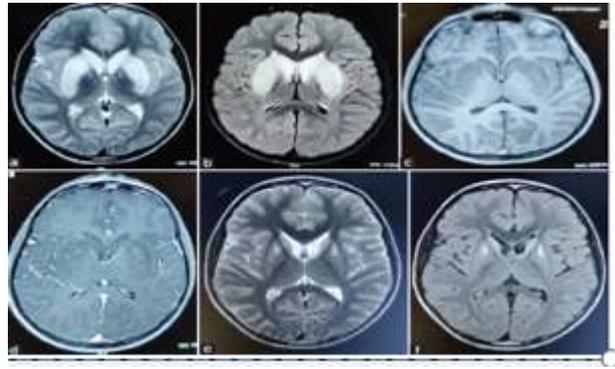
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Mumps is an acute contagious RNA viral infection of children and adolescents, manifesting initially as fever with parotid swelling. Neurological involvement is an important post-infectious complication manifesting commonly as aseptic meningitis, encephalitis, and sensorineural deafness<sup>1</sup>. Post-mumps extrapyramidal syndrome is very rare, but it is one of the vital entity in the spectrum of neurological complications of mumps<sup>2</sup>. The exact pathogenesis of such neurological manifestation is yet to be determined<sup>3</sup>. A 9 year old boy presented with fever and swelling of both parotids for 1 month followed by altered behaviour and extrapyramidal features like limb rigidity, tremulousness of limbs and abnormal limb posturing (figure 1). He was diagnosed as post-mumps extrapyramidal syndrome based on IgM & IgG positivity in serum with negative CSF PCR for mumps. His MRI brain scans showed T1 hypo-intensities, T2 hyper-intensities, FLAIR hyperintensities, and DWI restriction in corpus striatum symmetrically without contrast enhancement (figure 2). There was a unique finding of increased lactate levels in arterial, venous blood and CSF for which genetic study was done. His whole-genome sequencing was done to look for any underlying mitochondrial disease that could have been precipitated by the mumps infection, which reported a heterozygous “variant of uncertain significance” variant in SGCE (epsilon-sarcoglycan) gene of chromosome 7:94232639. We tried to explore some of the possible causes that might present or precipitate extrapyramidal syndrome in young. However, our findings led us to scope for lactate study in post-mumps pyramidal syndrome, and for finding pathological correlation of mumps antibodies with target-specific loci on basal ganglia, and searching any other genetic or metabolic predilection for the occurrence of extrapyramidal syndrome as a post mumps sequelae.



**Fig.1 – abnormal body posturing**



**Fig.2 – MRI images**

#### References

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