

Diabetes Mellitus Presenting as One and Half Syndrome

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1. Introduction

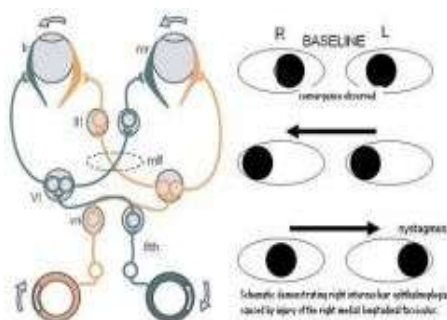
Internuclear ophthalmoplegia (INO) is a disorder of conjugate lateral gaze in which the affected eye shows impairment of adduction. When an attempt is made to gaze contralaterally the affected eye adducts minimally, if at all. The contralateral eye abducts however with nystagmus. Additionally the divergence of eyes leads to horizontal diplopia. This disorder is usually caused by injury or dysfunction of medial longitudinal fasciculus.

2. Materials and Methods

51 year old male patient presented with diplopia, giddiness and vertigo with no significant past history.

3. Observation

Ocular examination revealed loss of extraocular movements on left side and convergence nystagmus of right eye. Systemic examination was within normal limits. Hematological investigations revealed elevated blood glucose with elevated HbA1c values suggestive of newly detected Diabetes mellitus. MRI and MRA was within normal limits. Patient was started on with oral hypoglycemic agents and steroids of 1mg/kg/day in divided doses. His symptoms started improving in a week and the steroid dose was tapered over a period of 4 months and blood sugar levels were within control. After 4 weeks of review he was completely recovered with no residual symptoms.



4. Discussion

Ophthalmoplegia can also be seen with progressive supranuclear palsy, thyroid disease, diabetes mellitus, brainstem tumors, migraine, basilar artery stroke, pituitary stroke, myasthenia gravis, muscular dystrophy, and the Fisher variant of Guillain-Barré syndrome. A tumor or aneurysm in the cavernous sinus, located behind the eyes,

can cause painful ophthalmoplegia. Painful ophthalmoplegia can also be caused by an inflammatory process in the same area, called Tolosa-Hunt syndrome. All these causes to be ruled out in a case of ONE AND HALF SYNDROME. ONE AND HALF SYNDROME is specific for site of disease never the cause. Diabetes Mellitus can be presented rarely with ONE AND HALF SYNDROME being the first presentation. Diabetic third nerve palsies may be caused by ischemia in midbrain or along peripheral nerve sparing the autonomic fibres. Thus it will be pupillary sparing ophthalmoplegia.

5. Conclusion

As the above mentioned case early detection of cause of ONE AND HALF SYNDROME can lead us to prevent complications of complex disease like Diabetes mellitus as well as treat and revert symptoms of ONE AND HALF SYNDROME without residual paralysis. A simple clinical examination can lead us to diagnosis of a disease which is one among the major causes of morbidity in day to day life.

References

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