- Abstract -

## A Case of Pure Trigeminal Motor Neuropathy

Sang-Beom Kim, M.D., Gue-Yong Lee, M.D., Jung-Ho Seo, M.D., Jung-Yong Ahn, M.D.\*, Pyeong Ho Yoon, M.D.<sup>†</sup>, Byung-Ok Choi, M.D., Ok-Joon Kim, M.D.

Department of Neurology, Neurosurgery\*, Radiology', Pochon CHA University, College of Medicine, Sungnam, Korea

Pure trigeminal motor neuropathy is a trigeminal motor dysfunction, unaccompanied by trigeminal sensory signs and without affecting other cranial nerves. A 61-year-old woman was found to have left hemifacial swelling and trigeminal motor paralysis without sensory symptoms. Blink reflex and trigeminal nerve somatosensory evoked potentials were normal. Needle electromyographic examination showed neurogenic changes in the left temporalis and masseter muscles. Brain MRI revealed wasting and fatty degeneration of muscles innervated by trigeminal nerve. We report here on a case of pure trigeminal motor neuropathy with a review of the literature.

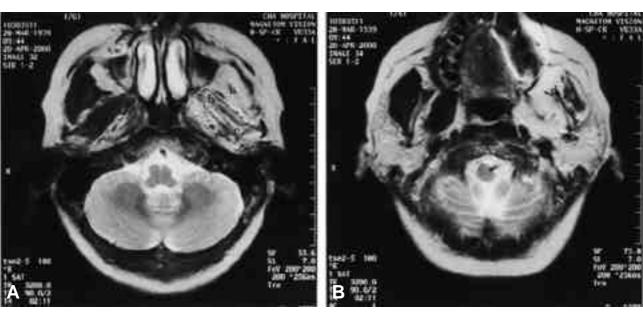
**Key Words**: Trigeminal nerve, Motor neuropathy, Fatty degeneration

Address reprint requests to Ok-Joon Kim, M.D.

Department of Neurology, Pochon CHA University College of Medicine #351 Yatap-dong, Pundang-gu, Sungnam 463-712, Korea

Tel: 82-31-780-5481, Fax: 82-31-780-6200, E-mail: okjun77@cha.ac.kr

(Fig. 1). 가 , lupus anticoagulant, antineutrophil cytoplasmic antibody(ANCA), antinuclear antibody(ANA), (IgG), HIV , VDRL, rheumatoid factor , angiotensin-converting enzyme, 가 anti-GM1  $0/\text{mm}^3$ ,  $0/\text{mm}^3$ , 74 mg/dL가 . IgG index 0.486 , oligoclonal band T1



**Fig. 1.** Magnetic resonance image. Wasting and fat replacement of muscles innervated by trigeminal nerve: (a) temporalis, (b) lateral pterygoid, (c) medial pterygoid, and (d) masseter muscle(A & B axial T2WI).

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, Guillain-Barre , Charcot-Marie-Tooth ,12 2 1,2 가 chronic inflammatory demyelinating polyneuropathy(CIDP) motor nucleus 가 IgG index 가 choline acetylase 가 acetylcholinesterase 가 immunoglobulin M monosialo GM1 가 .6 synaptobrevin , synaptobrevin I gadolinium T2 , synaptobrevin II 가 가 가 T1 T2 가 가 . Chang Mulford 가 61 Goldstein 48% 29 .º 가 가 가 가 1,2,13 가 가 가 가 가

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## **REFERENCES**

- Kang YK, Lee EH, Hwang M: Pure trigeminal motor neuropathy: a case report. Arch Phys Med Rehabil 2000: 81: 995-998
- 2. Ko KF, Chan KL: A case of isolated pure trigeminal motor neuropathy. Clin Neurol Neurosurg 1997: 2: 199-200
- Shotts RH, Porter SR, Kumar N, Scully C: Longstanding trigeminal sensory neuropathy of nontraumatic cause. Oral surg oral med oral pathol oral radiol endod 1999: 87: 572-576
- Dominguez J, Lobato RD, Madero S, Benito-Leon J, Rivas JJ, Gomez PA: Surgical findings in idiopathic trigeminal neuropathy mimicking a trigeminal neurinoma. Acta Neurochir(Wien) 1999: 141: 269-272
- Engel J, Ganel A, Melamed R, Simon S, Farine I: Choline acetyltransferase for differentiation between human motor and sensory nerve fibers. Ann Plastic Surg 980: 4: 376-380
- Taylor BV, Gross L, Windebank AJ: The sensitivity and specificity of anti-GM1 antibody testing. Neurology 1996: 47: 951-955

- Li JY, Edelmann L, Jahn R, Dahlstrom A: Axonal transport and distribution of synaptobrevin I and II in the rat peripheral nervous system. J Neurosci 1996: 16: 137-147
- 8. Chang WK, Mulford GJ: Iatrogenic trigeminal sensorimotor neuropathy resulting from local anesthesia: a case report. Arch Phys Med Rehabil 2000: 81: 1591-1593
- 9. Goldstein NP, Gibilisco JA, Rushton JG: Trigeminal neuropathy and neuritis. J Am med Ass 1963: 184: 458-462
- Campbell WW, Vasconcelos O, Laine FJ: Focal atrophy of the multifidus muscle in lumbosacral radiculopathy. Muscle Nerve 1998: 21: 1350-1353
- Petersilge CA, Pathria MN, Gentili A, Recht MP, Resnick
   D: Denervation hypertrophy of muscle: MR features. J
   Comput Assist Tomogr 1995: 19: 596-600
- Seidel E, Hansen C, Urban PP, Vogt T, Muller-Forell W, Hopf HC: Idiopathic trigeminal sensory neuropathy with gadolinium enhancement in the cisternal segment. Neurology 2000: 54: 1191-1192
- 13. , , , , : 1 . 1993: 12: 555-558
- Sevick RJ, Dillon WP, Engstrom J, Bergman WP, Harnsberger HR: Trigeminal neuropathy. Gd-DTPA enhanced MR imaging. J Comput Assist Tomogr 1991: 15: 605-611