

FOCAL HAND DYSTONIA IN INSTRUMENTALIST MUSICIANS: A NEW INDICATION OF STEREOTACTIC SURGERY

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[Background] Focal dystonia of the hand is common among instrumentalist musicians, and it is known as a type of occupational dystonia. The natural prognosis of this disorder is poor in terms of playing musical instruments, and most musicians have to give up their professional activity. The history of neurosurgical treatment of dystonia has shown that thalamotomy is effective for dystonic symptom of the distal part of the extremity. We have been successfully treating task-specific focal dystonia of the hand (writer's cramp) with stereotactic coagulation of the ventrooralis (Vo) nucleus of thalamus

[Subjects and methods] .Based on our experience in writer's cramp, we have treated focal hand dystonia in four instrumentalist musicians. Three patients were guitarists and one was Koto (traditional Japanese string instrument) player. The all had difficulty in playing the instruments due to tightness and freezing of the fingers, but had no dystonic symptoms at all in ordinary daily activities. Electromyography of the forearm showed co-contraction of flexor and extensor muscles. After detailed informed consent, they underwent stereotactic left Vo thalamotomy. The target was chosen at 2mm posterior to midcommissural point, 1mm above the intercommissural line, and 13.5mm lateral from the midline. During the operation, the patients were asked to play the musical instrument to confirm the effects of thalamotomy.

[Results] The symptoms improved immediately after thermocoagulation of the Vo nucleus. They all became able to play without difficulty. During the follow-up period of 10-30 months, the effect is persisted. One patient had transient weakness of the arm that recovered completely after three months. No other complications were noted.

[Conclusions] Though longer follow-up is needed, and indication of such an invasive treatment for otherwise healthy subjects may be debatable, Vo thalamotomy is effective to control focal hand dystonia in instrumentalist musicians.