Successful Treatment of Spasmodic Torticollis with Triazolam

Torticollis, the most common form of cervical dystonia, consists of an involuntary, either spasmodic sustained, contraction of neck muscles producing abnormal turning of the head. There is no specific therapy for torticollis. Among the available pharmacologic agents, diazepam and anticholinergics have been reported to be effective in some patients (1). However in some patients, most pharmacologic agents are not effective. Another approach to spasmodic torticollis involves focal botulinum toxin injections. However, at present it is not easy to obtain botulinum toxin in Japan, and it has been reported that effect is not permanent (2). Therefore, we tried triazolam for spasmodic torticollis and found it to be effective. In March 1993, a 32-year-old Japanese man presented complaints of abnormal turning of the head to the left. In January 1994, he complained of pain in the neck and shoulder, and the severity of abnormal head turning increased. He had been treated for neurosis with minor tranquilizers from 1989. Laboratory data was normal. Gamma-aminobutyric acid (GABA) of the cerebrospinal fluid (CSF) was 154 pmol/ml (normal range; 150–342). Plain X-ray films of the cervical spine, computed tomography (CT) and magnetic resonance image of the head did not demonstrate any abnormal signs. CT of the neck muscles demonstrated hypertrophy of the right sternocleidomastoid muscle. Surface electromyogram demonstrated increased discharge of the right sternocleidomastoid muscle and bilateral trapezius muscles. These abnormal discharges were decreased by 1% lidocaine HCl injections (approximately 20 ml) to these muscles, however the involuntary turning of the head persisted. Various pharmacological agents were prescribed, including anticholinergics (trihexyphenidyl HCl), dopamine antagonists (tiapride, haloperidol, pimozide), dopamine agonist (levodopa), antidepressant, anticonvulsants, muscle relaxants, and hypnotic (triazolam). Clonazepam (3 mg/day) had been prescribed for neurosis for several years. Of these pharmacologic agents, trihexyphenidyl HCl worsened the torticollis. Baclofen (30 mg/day) decreased the pain in the neck and shoulder. Triazolam (1 mg/day, 4 times a day), prescribed from February 1994, has improved the pain and torticollis, and does not induce sleep. He is still on this medication without any additional drugs. The torticollis has not worsened and has been kept under good control. To our knowledge, triazolam has not previously been reported to be effective for torticollis. However, the mechanism of the effect of triazolam on torticollis is unknown. Triazolam is an allosteric modulator of GABA receptor (3). GABA is an inhibitory neurotransmitter. The majority of neurons within the external globus pallidus and the pars reticulata of the substantia nigra are GABA-ergic. And the globus pallidus and the substantia nigra are associated with involuntary movement (4). In this case, GABA of CSF was in the lower limits of the normal range. Thus, the torticollis of the present case likely improved because triazolam stimulated the GABA-ergic neurons. Therefore, we propose that triazolam is useful as a treatment for spasmodic torticollis.

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