Case Report

Quadriplegia Following Chiropractic Manipulation

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Summary

Chiropractic manipulation is considered as a way of treatment for patients who have neck pain without any neurological symptoms. However complications of spinal manipulation are usually underestimated and could be dangerous especially when performed by non-trained personnel. Following the sudden onset of spinal manipulation, massage this paper, we identified 33 year-old man presented a case of quadriplegia C8. MRI scans showed cervical stenosis with C6-T1 right para central disc herniation.

Key words: Chiropractic manipulation, quadriplegia, C6-T1 paracentral disc herniation

INTRODUCTION

Neck pain is a common illness seen throughout the world[1]. Its lifetime prevalence is found to be 67%[2]. Chiropractic manipulation is an alternative way of treatment technique widely used for mechanical disorders of the musculoskeletal system in the world. Throughout the literature stroke, basilar and vertebral artery trauma, spinal epidural hematoma, herniated nucleus pulposus have been reported as well as minor complications such as pain, discomfort, dizziness[5,9]. These complications are usually underestimated and may cause even death especially when performed by non educated personnel. We report sudden onset of quadriplegia following cervical spinal manipulation due to disc herniation.

CASE PRESENTATION

33-year old male was admitted to our hospital emergency room with sudden onset of quadriplegia. He had told that he had flue 1 week before and also severe neck pain. His neurological exam showed he had C8 quadriplegia with no anal reflex. He was diagnosed transverse myelitis and was given intravenous prednisolone therapy. In the first 24 hours of admission to the hospital, MRI scan showed C 6-7-T1 disk herniation with cervical stenosis (Figure). He was immediately taken into surgery where anterior discectomy (C6-7) with fusion was performed. After the surgery his neurological examination was
the same, C8 quadriplegia, no anal reflex. One week later, second operation was performed posteriorly, C3-7 spinal enstrumentation with decompression. Later on, he confessed that he had undergone cervical spinal manipulation on the day of quadriplegia. He was transferred to a rehabilitation clinic after discharge.

Figure 1: Preop MRG appearance
**Figure 2:** Postop MRG appearance

**Figure 3:** Postop X-Ray
DISCUSSION

Since neck pain is widely seen in the world, as reported by Shekelle, 18 million people get treatment by chiropractors each year due to this disorder\(^8\). Many adverse effects are seen after chiropractic and most of them are negligible and short lasting\(^7\). According to many studies, patients are relieved from neck pain after spinal manipulation\(^6,4\). However, incidence of severe neurological complications are found to be 1 in 5 million after cervical neck manipulations\(^3\). Spinal hematomas, disc herniation, stroke are the most common complications. Patient selection, correct diagnosis and trained chiropractors are important factors for decreasing the severe neurological complications.

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