

Cerebral Hemorrhage following Chiropractic Activator Treatment: Case Report and Review of Literature

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The author of the article “Cerebral Hemorrhage following Chiropractic Activator Treatment: Case Report and Review of Literature” raises some issues I would like to comment on.¹

Unfortunately, several key questions or clinical information about this case report was not described in the article. For example, there had been a recent change in the patients’ neck problem causing the patient to seek current treatment. Did the clinician question any recent events that may have contributed to the change, and were there any new symptoms (such as new neurological changes, new or changed headaches, mental status change, vision, etc) that may have alerted the clinician to the possibility of hemorrhage? This information may have provided readers with a better understanding of whether serious prior events may have been occurring.² Clearly, the lack of a thorough description of the presenting symptoms and their relevant history did not provide enough information to determine potential clinical negligence for this case. In other words, once the appropriate information is provided, readers may determine that this case could have simply been another example of spontaneous intracranial hemorrhage (which I will discuss below).³

A thorough clinical history would have also included substantial information on the presence of risk factors for stroke, such as smoking, obesity, high cholesterol levels, past use of oral contraceptives, and family history of stroke or cardiovascular disease.⁴

In addition, the author should have provided more information about what “chiropractic” treatment the patient had been receiving, the frequency and scheduling of the treatment, and the response to the treatment (this shall also be discussed later).⁵ It is especially important to know when and for what presenting complaint the patient underwent last chiropractic treatment (before this episode). Last chiropractic treatment had not created any other issues; yet, on this occasion there seemed to have been a problem or adverse event (AE). This begs the question, “What parameter changed at the patient’s

last visit, and why did it change?” This also leads one to ask specific questions about the activator treatment. Did the patient receive previous activator treatment? If yes, why did it not cause earlier AE? If not, why was the activator treatment chosen for this treatment? These are fundamental questions related to this case that are important for any subsequent discussion on safety regarding activator treatment.

As most readers would know, there are many potential causes for intracranial hemorrhage or artery dissection, many of which are described as spontaneous.⁶ Spontaneous intracranial hemorrhage (SICH) accounts for 10 to 15% of all strokes and is associated with a higher mortality rate than either ischemic stroke or subarachnoid hemorrhage. Common causes are reported to include hypertension, amyloid angiopathy, coagulopathy, vascular anomalies, tumors, and various drugs. In this case report, hypertension was reported, but no significant details were provided, including the figures for her diastolic and systolic measurements, the timeframe of onset, medication history, and its effectiveness. It is estimated that each year, approximately 37,000 to 52,400 people in the United States have an intracerebral hemorrhage. The rate is also expected to double during the next 50 years as a result of the increasing age of the population and changes in racial demographics.⁷

Therefore, nearly 1,000 people per week in the United States experience SICH, which is totally independent of any health care provider they have recently consulted. A percentage of the above-mentioned number must have consulted a chiropractor, just like a percentage of them must have consulted a medical practitioner. However, no causality between the two events has been established.

A regular recurring issue regarding chiropractic is that some authors erroneously believe that because an AE followed a treatment, the treatment must have caused the AE.^{8,9} These continuing mistakes have led to the false perception that chiropractic treatment is dangerous and that the benefits do not outweigh the risks. Several recent studies have concluded

that chiropractic treatment is not linked to vertebral or carotid artery dissection.

There have also been many case reports where a vertebral artery dissection (VAD) has been incorrectly reported to occur as a consequence of chiropractic treatment.⁹ However, many of the case reports are poorly written and do not support a causal relationship between chiropractic treatment and VAD.^{2,10,11} In addition, chiropractic care was ascribed to cases of VAD when the practitioner was not a chiropractor.¹²

There are also many other potential scenarios other than activator treatment causing a hemorrhage. For example, if the neck soreness had recently changed or worsened, then the patient may have commenced other treatment or activities to try to improve her complaint. These other possible treatments may have been more significant than the “chiropractic treatment.” It is not inconceivable that given a change in symptoms, the patient may have tried pharmaceuticals (the paper stated she had self-administered nonsteroidal anti-inflammatory drugs (NSAIDs) but did not describe dosage and the potential for accidental overdose).¹³ The patient may have started a new exercise regime, physical therapy, or many other manual therapies such as massage or Pilates. Any one of these could have resulted in a hemorrhage that coincided with a chiropractic visit.

A discussion on the potential mechanism of damage is also warranted. The description of the “activator treatment” did not discuss in any detail the actual application of the activator. For example, at what level was the treatment rendered, was it repeated, if yes, how many times, etc. Also, did treatment include any ancillary therapy, such as massage, electrophysical therapy, and muscle stretching? It is inferred that the activator was applied to the mastoid process, which is only typically performed if a patient presents with headache. However, there was no report of any previous headache, which is contradictory.

Typically, the forces applied with activator are very small and highly unlikely to have caused an intracranial hemorrhage.¹⁴ If this occurred, the patient must have expressed significant pain immediately after the activator treatment was rendered. Again, there was no report of this occurring.

In my opinion, what this case report highlights is that stroke in patients over 70 years of age is common and may have very few obvious symptoms. It does not highlight

chiropractic treatment (including activator) as a high risk for stroke.^{11,15,16}

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