

Letter to the Editor



Letter to the Editor: Commentary on Predictor of the Postoperative Swelling After Craniotomy for Spontaneous Intracerebral Hemorrhage: Sphericity Index as a Novel Parameter (*Korean J Neurotrauma* 2023;19:333-347)

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Conflict of Interest

The author has no financial conflicts of interest.

► See the article "Predictor of the Postoperative Swelling After Craniotomy for Spontaneous Intracerebral Hemorrhage: Sphericity Index as a Novel Parameter" in volume 19 on page 333.

In this study, the authors predicted postoperative edema based on the shape of the hematoma.³⁾ The sphericity index was retrospectively calculated in 56 cases of spontaneous intracerebral hemorrhage, and the authors ultimately concluded that the closer the postoperative swelling is to the round, the more severe it is. Thus, the shape of the hematoma affecting postoperative swelling is unique and excellent. Conversely, previous studies have predicted postoperative edema by focusing on hematoma size of the hematoma.⁷⁾

Edema developing late after intracerebral hemorrhage surgery is a major cause of poor patient prognosis.^{5,7)} Surgeons may need to perform decompressive craniectomy or attempt aggressive medical treatments, such as barbiturate coma therapy, to resolve this problem.^{4,6)} Therefore, if it were possible to predict whether edema will worsen in advance, based only on the shape of the hematoma, it may be possible to prevent secondary injury caused by edema by performing decompressive craniectomy before worsening. Further, for patients with a low risk of edema, minimally invasive surgery may be performed more safely.^{1,7)} The resulting concentration of medical resources would also result in a reduction in overall expenditures.

In this study, the authors hypothesized that a rounder hematoma harbors higher internal pressure than an elongated hematoma. As a follow-up study, we recommend that the authors attempt to find a method to measure this. As the authors pointed out, the small number of samples and the high heterogeneity of patients are limitations of this study. Recently, with the development of artificial intelligence, various prediction models have been developed.²⁾ As such, there is a need to prove the above using more data in the future. This would require a large amount of data, and this is believed to be the direction in which the Korean Neurotraumatology Society will move.

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