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The occurrence and risk factors of new-onset seizures after ventricular shunting procedures

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Purpose: The aim of the current study was to investigate the rate and the risk factors of the occurrence of de novo post-shunt seizures in patients with hydrocephalus (HC). In specific, we hypothesized that shunt location is a significant risk factor for the development of de novo post-shunt seizures in patients with HC.

Methods: In this retrospective longitudinal study, all patients with HC, who have had ventriculo-peritoneal shunt insertion, from 2014-2017, at Namazi Hospital, Shiraz, Iran were studied. We called all the patients to verify their medical information and also to obtain their postoperative seizure outcome (presence of any seizures).

Results: One hundred and fourteen patients were studied. Sixty-eight (60%) patients had a frontal location of shunt insertion and 46 (40%) people had a parietal site. Twenty-four (21%) patients reported experiencing de novo post-shunt seizures; 15 of these had a frontal location and 9 had a parietal location for shunt insertion (p=0.8).

Conclusion: De novo post-shunt seizures are common occurrences. When possible, it is reasonable to consider using alternative techniques instead of ventriculo-extracranial shunting procedures. If it is mandatory to perform ventriculo-extracranial shunting procedures, it is important to try to prevent and minimize the risk factors for the development of de novo post-shunt seizures. It seems that shunt location is not a significant risk factor for the development of de novo post-shunt seizures in patients with HC.