Diagnostic Indicator for Cerebral Venous Sinus Thrombosis in Suspected Patients

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**Background:** Cerebral Venous Sinus Thrombosis (CVST) is the presence of thrombosis in the dural venous sinuses. Symptoms may include headache, seizure, weakness, sensory deficit, dysphasia, abnormal vision, impaired consciousness, nausea or fever. The incidence of cerebral venous sinus thrombosis is difficult to determine. CVST is believed to be more common in women than men. A uniform age distribution in women with CVST was aged 20-35 years. This difference may be related to pregnancy or use of oral contraceptives. The spectrum of clinical presentations ranges from mild to severe or acute to subacute. A high index of clinical suspicion is needed to diagnose this uncommon condition so that appropriate treatment can be initiated. This study was established to find the diagnostic indicator for CVST in suspected patients.

**Objective:** The primary outcome was to determine the clinical characteristic of CVST in Lampang Hospital for early detection in suspected patients.

**Methods:** This was a retrospective cohort study. A total of 206 patients with clinical suspected CVST underwent further investigations including noncontrast brain CT and lumbar puncture with CSF analysis. The final gold standard was CT cerebral venogram.

**Results:** A number of 65 CVST patients (37 women, 56.9%), aged 15-88 years, were diagnosed with CT cerebral venogram. There were 33 cases (51.6%) of acute onset (less than 48 hours), followed by 45 (80.4%) headache, 19 (40.4%) seizure, 33 (53.2%) motor deficit, 8 (21.6%) sensory deficit, 8 (21.6%) dysphasia, 13 (31.0%) visual impairment, 19 (30.2%) impaired consciousness, 26 (44.1%) nausea, and 10 (16.1%) fever.

**Conclusion:** The usual clinical presentations of CVST in Lampang Hospital were motor deficit (p-value = 0.001) and sensory deficit (p-value = 0.072). Only Motor deficit had clinical significance (p-value < 0.05), while motor deficit and sensory deficit were not the clinical characteristics of CVST. However, other clinical presentations with non clinical significance may be due to small size of samples following the limitations of time and rare incidence of CVST.

**Keywords:** Cerebral venous sinus thrombosis, Diagnostic indicator, Characteristics