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HEADACHE IN ACUTE CEREBROVASCULAR ACCIDENT

Neurology

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ABSTRACT

INTRODUCTION: Headache often occurs in acute ischemic stroke. About 15-45% of patients with acute ischemic stroke report headache in close relation to the event. The onset of headache is more common in posterior circulation stroke. Headache is the leading symptom in subarachnoid hemorrhage. Acute severe headache with neurological deficit needs neuroimaging.

AIM: Headache is a common symptom in acute stroke. Here we studied the headache in an acute cerebrovascular accident.

METHODS: This study is done in the Department of Neurology in Coimbatore Medical college hospital from December 2018 to April 2019.

INCLUSION CRITERIA: All patients with acute headache due to the cerebrovascular accident are included.

EXCLUSION CRITERIA: Headache due to non-stroke causes were excluded.

RESULTS: This study is done in 56 patients with acute cerebrovascular accident presented with headache. Mean age in males 50.25 years. Mean age in females 57 years. Ischemic stroke is 75%. Hemorrhagic stroke 25%. Ischemic stroke showed statistically significant frontal headache($p<0.001$) in anterior circulation stroke and occipital headache in ($p<0.001$) posterior circulation stroke. Hemorrhagic stroke showed 50% frontal, 25% occipital,12.5% parietal and 12.5% diffuse headache according to the site of bleed. Common risk factors were HTN, diabetes and dyslipidemia. A thunderclap headache is common in sub Arachnoid bleed. Headache in cerebral venous thrombosis is diffuse dull aching or thunderclap headache according to the site of thrombosis

KEYWORDS

Headache, ischemic stroke, hemorrhagic stroke

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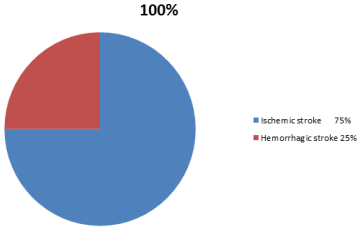
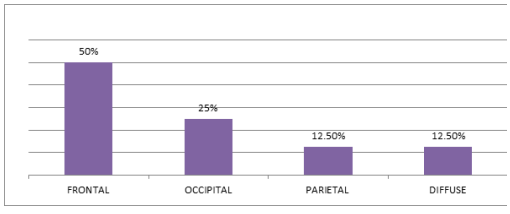
HEADACHE IN STROKE



HEADACHE IN HEMORRHAGIC STROKE



DISCUSSION

Headache is the symptom of pain anywhere in the region of head and neck. Headache is divided into Primary and secondary headache by International headache.

Primary headache includes Migraine headache, tension type headache, cluster headaches, trigeminal neuralgia or occipital neuralgia, hemicranias continua, primary cough headache, primary exertional headache, primary sex headache, hypnic headache.

Secondary headaches are classified based on their cause and not on their symptoms. Headaches caused by cranial or cervical vascular disorders such as ischemic stroke, TIA, non traumatic intracranial hemorrhage, vascular malformations, or arteritis are also defined as secondary headache due to stroke. Headache in stroke is due to hemorrhagic stroke (50%), ischemic stroke(25%) , sub arachnoid bleed and venous stroke.

Secondary headache causes include meningitis, intracranial hemorrhage, sub arachnoids hemorrhage , brain tumor, temporal arteritis, acute closure angle glaucoma, post-ictal headache.

Red flags for identifying secondary headache includes systemic symptoms such as fever or weight loss, systemic disease, neurological symptoms or signs, onset sudden as in thunder clap headache, age onset after 40 years, history of the previous headache.

Headache occurs both in anterior and posterior circulation stroke. Headache is more common in posterior circulation stroke than anterior circulation stroke.

The pathophysiology of headache associated with acute ischemic stroke include edema, hemorrhagic transformation and changes in trigeminal vascular system.

Headache in Anterior circulation stroke manifests as frontal headache . Headache in posterior circulation stroke manifests as occipital headache. MRI imaging in stroke patients remain in insular cortex as region of maximal lesion overlap in those with stroke headache.

Most of the patients reported bilateral pain and the location of pain was more in frontal region in anterior circulation stroke than temporal and parietal region. Posterior circulation stroke pain is more in occipital and neck region. Patients with unilateral ischemic infarct have same sided headache.

The common risk factors associated with headache in stroke patients are hypertension, smoking, hyperlipidemia, obesity, diabetes mellitus, atrial fibrillation, prior TIA, prior stroke.

In AC stroke cerebral artery, the common vascular territory involved is middle cerebral artery. In PC stroke posterior inferior cerebellar artery.

Headache in hemorrhagic stroke is due to intra cerebral hemorrhage , sub arachnoid hemorrhage due to raised ICT treated with anti edema drugs such as mannitol , symptoms such as altered sensorium, nausea, vomiting indicates increased intra cranial pressure.

The important feature of classic sub arachnoid hemorrhage is sudden onset of severe headache (thunder-clap headache), often described as "worst headache of my life". SAH patients with normal level of consciousness and no focal deficits who all used analgesics, headache disappeared around in 10% within 48 hours.

CVT patients show holocranial headache as most common type . The common description of headache was throbbing and aching. These patients may have thunder-clap headache. Headache is most frequent in CVT and usually the first. It has rarely been reported as the only symptom of CVT. MRI should be used to look for signs of CVT in all patients with recent headache.

In this study, patients had frontal headache as common type in anterior circulation stroke , occipital headache in posterior circulation stroke, diffuse headache type in sub arachnoid bleed and cerebral venous thrombosis.

CONCLUSION

This study revealed frontal headache is common in AC stroke, occipital headache is common in PC stroke. MCA stroke is Common in AC stroke , PICA is common in PC stroke. Headache in hemorrhagic stroke depends on the site of bleed. CVA is one of the commonest cause of secondary headache in recent world.

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