ABSTRACT

INTRODUCTION

Normal pressure hydrocephalus (NPH) is a syndrome found in the elderly, which is characterized by the clinical triad of gait disturbance, dementia, and urinary incontinence without overt signs and symptoms of elevated intracranial pressure. NPH has been estimated to account for up to 10% of cases of dementia and is significant because it is treatable by ventriculoperitoneal shunting.

NPH can be idiopathic or can be secondary. The secondary causes are: traumatic brain injury, meningitis, subarachnoid hemorrhage (SAH) or intracranial surgery. Patients with Idiopathic NPH respond better to treatment than secondary NPH.

AIMS AND OBJECTIVES

• To describe the various imaging patterns helpful in the diagnosis of normal pressure hydrocephalus

MATERIALS AND METHODS

It is a prospective cross-sectional study. Inpatients and outpatients of age group more than 40 years of age, of both gender (males and females) diagnosed with normal pressure hydrocephalus as per consensus criteria were referred to Department of Radiodiagnosis from the department of Neurology of Sree Mookambika Institute Of Medical Sciences were enrolled in the study. The patients underwent Magnetic resonance imaging / computed tomography study of brain. The study period was 18 months.
RESULTS

40 patients were included in this study according to consensus criteria. Computed tomography (CT) and Magnetic resonance imaging (MRI) show ventricular enlargement disproportionate to cerebral atrophy, with associated ballooning of frontal horns, periventricular hyperintensities, thinning and elevation of the corpus callosum, and widening of temporal horns without evidence of hippocampal atrophy in NPH.

CONCLUSION

Although diagnosis can be made based on CT findings alone, MRI is more accurate for disclosing associated pathologies (such as cerebrovascular disease) and for detecting NPH typical signs of prognostic value, besides avoiding exposure to ionizing radiation. MRI is the best modality to image anatomical changes and can further support the diagnosis with CSF flow studies.

KEY WORDS: normal pressure hydrocephalus, neuroimaging, magnetic resonance imaging, computed tomography, cerebrospinal fluid pressure, shunt surgery