Value of ICP monitoring in patients with suspected CSF leaks

Objectives:
Spontaneous and iatrogenic cerebrospinal fluid (CSF) leaks present with orthostatic headaches. Despite the availability of multiple imaging techniques, a CSF leak can be difficult to identify in a significant proportion of these patients. This study aims to describe the role of intracranial pressure (ICP) monitoring in the management of patients with suspected CSF leaks.

Design:
Single centre retrospective observational study.

Subjects:
Seventy patients with suspected but unidentifiable CSF leaks admitted for 24 hours ICP monitoring. The mean age at the time of ICP monitoring was 46 years (± 13 SD), 44 were female and 26 male.

Methods:
The patients were retrospectively identified from a prospective database.
Information regarding clinical presentation, investigations, conservative and surgical treatments was collected using the electronic patients' records, clinical notes and picture archiving and communication system (PACS). The ICP monitoring data were collected and analysed following a standardised local protocol.

Results:
The analysis of the day ICP results confirmed the presence of a low pressure state in 33 of the selected patients (47%) despite the absence of an identifiable CSF leak. Seven patients (10%) demonstrated raised ICP in keeping with a diagnosis of idiopathic intracranial hypertension.

Conclusions:
Continuous ICP monitoring is a useful technique to guide the management of patients with suspected CSF leaks.