

# Investigations into Headache

*Vast majority of Headaches DO NOT require Tests*

*In majority of patients tests are either normal or don't throw any light on the cause*

*Detailed History and thorough examination are the key to diagnosis*

## **Haematology**

- Low Hb in Anaemia which is one of the causes of obscure headache
- Raised WBC in infections with differential Neutrophil or Lymphocyte or eosinophil count can point toward the specific diagnosis, including meningitis
- Raised ESR and Raised CRP are important clinical clues in Temporal arteritis

## **Biochemistry**

- Deranged U&Es including urea & Creatinine can indicate renal failure.
- Deranged LFTs can indicate hepato-biliary problem
- Hypoglycemia is a recognised cause of Headache
- Deranged TFTs can indicate thyroid problem.
- Hypercalcaemia is a cause of headache

## **ABGs**

- Low Pao<sub>2</sub>
- Hypercarbia
- Raised carboxyhaemoglobin

## **Urinalysis**

- UTI can be picked up

### **X-Rays**

- Generally not helpful in diagnosis of headache
- C-spine X-Ray can indicate osteoarthritis which can be the cause of Headache
- X-Ray of nasal sinuses can indicate the sinus pathology

### **EEG**

- Generally not considered to be useful investigation for diagnosis of headache
- Mostly reserved for headache associated with seizure like activity

### **CT Scan**

- Majority have normal results
- In many instances Insurance companies do not reimburse for this test and MRI because they actually diagnose few headaches.
- In patients with no neurological findings, the yield of CT and MRI is only 2%.
- Most useful in detecting blood clot in acute head trauma and SAH.
- Cannot detect intracranial aneurysms

### **MR Scan**

- Generally preferred over CT in diagnosis of Headache.
- Can demonstrate pathology not seen in CT.
- Can detect abnormalities including:
  1. PNS abnormalities
  2. Pituitary pathology
  3. Posterior fossa abnormalities
  4. Superior sagittal sinus thrombosis
  5. Cervico-medullary junction pathology
  6. Aneurysms
  7. Carotid dissection
  8. Infarcts

9. White matter abnormalities
10. Herpes simplex infection
11. Neoplasms

## **LP**

- LP can be useful in diagnosis of:
  1. Meningitis
  2. Encephalitis
  3. Meningeal Carcinomatosis
  4. Lymphomatosis
  5. SAH
  6. High CSF pressure (pseudotumour cerebri)
- LP should always be preceded by CT or MRI
- LP is often indicated:
  1. in the first or the worst headache to rule out SAH
  2. Headache with fever that suggest infective cause
  3. A subacute or progressive headache in a patient with HIV or carcinoma
  4. An atypical chronic headache to rule out pseudotumour cerebri in an obese woman without papilloedema

*Thank you*

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