

# Meningeal syndrome

**Meningeal syndrome** is a complex of subjective and objective symptoms arising from irritation of the meninges pathologically.

## Etiology

The most common evoking factors are:

- neuroinfection;
- subarachnoid hemorrhage;
- tumors – especially meningioma (diffuse tumor infiltration of meninges).

Another cause can be for example lesion of the brain tissue etc.

## Clinically

Meninges irritation leads to irritation of the nerve roots (passing through meninges) and to contraction of the neck and paravertebral muscles. Typically the patient has tilted head back, lies on their back with flexed lower limbs, states subjective meningeal symptoms and they also can be proved.

### Subjective meningeal symptoms

- headache – typically diffuse;
- vomiting;
- photo- and phonophobia;
- hyperesthesia;
- fever;
- in advanced stages also qualitative and quantitative disorders of consciousness.

Variably can be nausea and stiff neck.

### Objective meningeal symptoms

#### Upper

- Symptom of neck opposition – impossibility of head anteflex (patient can't put their chin to their sternum);
- Brudzinski's sign – patient lies on their back and while passive flexing of the head also flexes lower limb in knee
- spine sign – patient is not able to touch their knee with their forehead
- Amos's sign – patient is supporting themselves with their hand while sitting, always sitting on three limbs
- Lasegue's sign – reduction of ventral flexion in stretched limbs;
- Kernig's sign – in a patient lying on his back, we try to extend the lower leg during flexion in the hip joints.

## Diagnosis

- Lumbar puncture and examination of cerebrospinal fluid;
- CT – in suspicion of a subarachnoid hemorrhage, inflammatory deposits can be displayed

## Differential diagnosis

- Meningism;
- vertebrogenic disease;
- intracranial expansion processes etc.

## References

1. AMBLER, Zdeněk. *Základy neurologie*. 6. vydání. Praha : Galén, 2006. 351 s. ISBN 80-7262-433-4.

## Used literature

- DOSTÁL, Václav, et al. *Infektologie*. 1. vydání. Praha : Karolinum, 2004. 338 s. ISBN 80-246-0749-2.