

Prevention of secondary damage to the spinal cord, indications for urgent surgery in terms of spinal cord decompression

- secondary damage to the spinal cord – a series of biochemical events that lead to the expansion of the original lesion after the trauma,
 - primary changes – injury → in a few minutes – petechiae in the tissue, in an hour gray matter perfusion decreases, tissue acidosis occurs, in 4 h hemorrhagic necrosis already occurs,
 - reduction of blood flow causes edema, progresses longitudinally and radially, tightens the pia mater, and this leads to compression of small subpial vessels, which does not exactly add much → deterioration of microcirculation,
 - free radicals (VR) are formed and these cause further (secondary) damage,
- the key substance limiting the occurrence of VR is methylprednisolone– we start the therapy 3 hours after the injury – initially a bolus of about 30 mg/kg weight, then after a 45-minute break we administer it continuously for 23 hours at a rate of 5.4 mg/h/kg,
- the administration makes sense even after 8 hours after damage,
- diagnosis - if damage to the spine is suspected - x-ray in two projections, CT aimed at the site of the lesion, MRI to clarify the diagnosis, exclusion of compression by a hernia or hematoma

Indications for urgent surgery in terms of spinal cord decompression

- current methods of repositioning and stabilization of the spine usually also ensure the restoration of the patency of the spinal canal (and thus decompression of the spinal cord),
- therefore, decompression laminectomies previously performed today are not indicated,
- we resort to laminectomy (as a complement to repositioning and stabilization) when we need to revise the canal (remove fragments, protrusions, dura plastic, ...),
- urgent decompression is necessary in all syndromes of partial spinal cord injury, especially in:
 - progression of neurological findings,
 - proven channel impassability,
 - proof of bone fragments, hematoma or disc,
 - in open wounds,
- on the contrary, with symptoms of a transverse lesion lasting longer than 24 hours, emergency decompression usually does not improve the condition.

Care of patients with spinal cord injury

- have a high susceptibility to the formation of pressure ulcers,
- a long-term problem is bladder care,
 - in the stage of spinal shock, there is urinary retention - frequent catheterization is necessary (it has fewer complications than a permanent catheter),
 - when the micturition center is preserved (lesions above S2–S4) – practicing reflex automatic emptying,
 - the reflex is triggered by intramural ggl. in the wall of the bladder - by pressure,
- often in the first days there is a decrease in GIT peristalsis, up to paralytic ileus,
- in Th spine lesions – care for breathing.

Links

External links

- <http://mefanet.lfp.cuni.cz/clanky.php?aid=327>

Source

- BENEŠ, Jiří. *study material* [online]. ©2007. [cit. 2010]. <<http://www.jirben.wz.cz/>>.

References

- ZEMAN, Miroslav. *special surgery*. 2. edition. Galén, 2004. 575 pp. ISBN 80-7262-260-9.