

Tetany

Tetania is a syndrome of *increased irritability CNS and PNS* caused by changes in ion concentrations in *ECT*.

- Tetany can be manifest or latent, hypocalcemia or normocalcemic.
- Main changes of ions leading to tetany:
 - decrease: Ca^{2+} (hypocalcemia), H^{+} (alkalosis), Mg^{2+} (hypomagnesemia);
 - rise: K^{+} (hyperkalemia), Na^{+} (hypernatremia) (and indirectly P - this reduces Ca^{2+} ...).
- Neuromuscular excitability = $(\text{Ca}^{2+} \times \text{H}^{+} \times \text{Mg}^{2+}) / (\text{K}^{+} \times \text{PO}_4^{2-} \times \text{OH}^{-})$.

Causes

Hypocalcemic tetany

- Early and late neonatal tetany;
- deficiency vitamin D;
- congenital parathyroid defects (isolated or DiGeorg's syndrome);
- losses calcium;
- alkalosis (hyperventilation, hysterical seizures...);
- renal insufficiency.

Normocalcemic tetany

- Hypomagnesaemia;
- neurogenic (organic CNS disorders - inflammation, tumor, injuries, CNS functional disorders - neurosis, psychosis);
- spasmophilia syndrome.

Manifest tetany

- Classically, it manifests itself in three forms:
 1. recurring **generalized tonic cramps in patient s full consciousness** - starting at the fingertips and spreading cranially;
 2. **carpopedal spasm** (tonic wrist flexion, finger extension, thumb adduction into the palm), spasms are very painful, paraesthesia persists between seizures - increased irritability of peripheral nerves of the limbs;
 3. **laryngospasm** - laryngeal muscle spasm, loud strenuous inspiration, dyspnoea, cyanosis.

Latent tetany

- It manifests itself as a so-called **spasmophilia** - a tendency to convulsions;
- manifests as convulsions after ischemia or after electrical or mechanical irritation.
- It shows various symptoms:
 - **Chvostek sign** - tap in front of the ear on n. & Nbsp; VII → the corner twitches;
 - **Lust's symptom** - phenomenon of nerve peronei - tapping over the proximal head of the fibula → lifting of the lateral edge of the foot;
 - **Trousseau's symptom** - inflate the cuff of the tonometer on the arm, it is ischemic to the nerves of the arm - spasm.

Differential diagnostics

- Eg. aminoaciduria and other inherited metabolic disorders, epilepsy, CNS inflammation.

Links

References

- Disorders of calcium-phosphate metabolism

External links

- Tetanie (česká wikipedie)
- Tetany (medical sign) (anglická wikipedie)

Zdroj

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Kategorie:Pediatrie Kategorie:Fyziologie Kategorie:Patofyziologie