

Hypovolemic state

Dehydration is a hypovolemic state with a negative water balance (almost always associated with hyponatremia). It manifests itself with reduced skin turgor, dryness and stickiness of the mucous membranes and serosas, the cheeks are sunken and the nose protrudes sharply - **facies Hippokratika**.

Hyperosmolar dehydration

- serum concentration of Na + > 150 mmol/l
- greater loss of water than of solutes
- occurs either when **hypoosmolar fluid is lost**: vomiting, diarrhea, profuse sweating, disorders of urine production (polyuria in Acute failure, osmotic diuresis, central/peripheral diabetes insipidus) or when **water intake is reduced**: inability to drink, communicate, reduced thirst
- the reaction is a decrease in ECT osmolality and *the movement of water from the cells* (their volume decreases), a feeling of thirst, the concentration of plasma proteins increases

Isoosmolar dehydration

- serum concentration of Na + 150–130 mmol/l
- isoosmotic fluid loss
- burns, ascites buds, loss of blood or plasma, leakage of water into the third space (paralytic ileus,...), overdose of

diuretics (then K loss occur hard diarriha (!))

- the result is a decrease in the effective circulating volume of blood (fluid does not pass from the cells) - tachycardia, peripheral vasoconstriction, increase in blood pressure, activation of ADH a RAAS, concerted urine (without Na)

Hypoosmolar dehydration

- serum concentration of Na + < 130 mmol/l
- greater loss of solutes than water
- endocrine disorders (mineralocorticoid deficiency), lack of salt in the diet, nephritis with salt loss, osmotic diuresis, diuretic overdose, Bartte's syndrome (hypochloremic alkalosis with hypokalemia)
- the consequence is the movement of water into the cells (increasing their volume)

This division mainly helps in determining the cause of the pathological condition and the method of treatment.

Links

related articles

- Dehydration (pediatrics)
- Hypovolemic shock

External links

References

- NEČAS, Emanuel. *Obecná patologická fyziologie*. 2. vydání. Praha : Nakladatelství Karolinum, 2007. 377 s. ISBN 978-80-246-1291-1

