

## MODERN PHARMACOTHERAPY OF ADDISON DISEASE

Suiarko B. R.

Scientific supervisor: assoc. prof. Savokhina M.V.  
National University of Pharmacy, Kharkiv, Ukraine  
dana.suyarko@gmail.com

**Introduction.** Addison disease, also known as primary adrenal insufficiency and hypocortisolism, is a long-term endocrine disorder in which the adrenal glands do not produce enough steroid hormones. Addison disease is a rather rare pathology, so creating new guidelines and drugs to cure it is not prioritized. However, pharmacotherapy of Addison disease changes with time and a really good medical specialist should know about latest ways of treatment even for such uncommon disease.

**Aim.** To review treatment protocols of Medscape, MSD Manuals and International Journal of Endocrinology to determine the drugs and dosages, which are the most commonly used nowadays.

**Materials and methods:** Were used for research methods of search, collection, systematization, comparison, analysis and information processing. Foreign treatment protocols from the sources, that have

proven themselves well, were used as materials. Also the article about Addison disease from International Journal of Endocrinology was chosen as the representative of Ukrainian medical publications.

**Results and discussion:** The only way to treat Addison disease is a continuous replacement therapy. Due to chronic insufficiency of the adrenal cortex it is necessary to compensate for the lack of mineralocorticoids and glucocorticoids.

In order to replace glucocorticoids Hydrocortisone is most commonly used. Normally, cortisol is maximally secreted in the early morning and minimally at night. Thus, hydrocortisone (identical to cortisol) is given in 2 or 3 divided doses with a typical total daily dose of 15 to 30 mg. One regimen gives half the total in the morning, and the remaining half split between lunchtime and early evening (e.g., 10 mg, 5 mg, 5 mg). Others give two thirds in the morning and one third in the evening. Doses immediately before bed should generally be avoided because they may cause insomnia.

Less often glucocorticoids are replaced by Prednisone or Prednisolone. Prednisone is a prodrug of Prednisolone with no significant difference in its action, so any of these two drugs can be used for treatment. Alternatively, prednisone 5 mg orally in the morning and possibly an additional 2.5 mg orally in the evening may be used.

Fludrocortisone 0.1 to 0.2 mg orally once a day is recommended to replace aldosterone as the main representative of mineralocorticoids. The easiest way to adjust the Fludrocortisone dosage is to ensure that the renin level is within the normal range and that blood pressure and serum potassium level are normal.

In the pharmaceutical market of Ukraine, Fludrocortisone is represented by the drug CORTINEF in tablets of 0.1 mg AT Adamed Pharma, Poland.

An «adrenal crisis» or «Addisonian crisis» is a constellation of symptoms that indicates severe adrenal insufficiency. It is a medical emergency and potentially life-threatening situation requiring immediate emergency treatment. Standard therapy involves intravenous injections of glucocorticoids and large volumes of intravenous saline solution with dextrose. This treatment usually brings rapid improvement. If aldosterone is deficient, maintenance therapy also includes oral doses of fludrocortisone acetate.

**Conclusions.** Pharmacotherapy of Addison disease includes rather small amount of drugs. For the treatment of Addison's disease hormone replacement therapy is prescribed. With a lack of cortisol hydrocortisone is prescribed, and with a low content of aldosterone fludrocortisone acetate tablets are prescribed.

The main difficulty in therapy can be only the regularity in taking medicine to avoid adrenal crisis.

## **RADIATION HAZARD AND PROTECTION OF POPULATION AT RADIATION DAMAGE**

Tertychna A. A.

Scientific supervisor: assoc. prof. Riabova O. O.

National university of Pharmacy, Kharkiv, Ukraine

tertychnaya.n@gmail.com

**Introduction.** Radiation damage is an important problem of today. It is a dangerous factor that harms the environment and can cause irreversible changes in the human body. The provision of first aid in the event of a radiation accident and implementation of phased evacuation are the main factors for saving health of people.

**Aim.** To study actions for protection and evacuation of the population in case of radiation damage.

**Materials and methods.** We have conducted an analysis of state laws, orders and Code of Civil Protection of Ukraine for the protection of the population from radiation exposure in case of radiation accident.