THE POSSIBILITY OF ELABORATION FOR PHARMACOLOGICAL CORRECTION OF WOUNDS

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Introduction. The problem of healing of sores process (purulent, gunshots wound, decubitus ulcer, trophic ulcer etc.) is characterised by one or another measure of expression deviations of stereotype dynamics inflammatory and reparative processes, is still one of the most important in surgery of peaceful and particularly wartime.

Traditional means and methods of the treatment of complicated wounds are ineffective frequently and not always development of various complications is hindered. It means the necessity of further search of new treatments methods.

Modern technique of local treatment wounds provides choice of the medicines, which depend on therapy task. On each phase of wound process (WP) it is necessary to use medicines with accurate kinds of pharmacological action and various osmotic activity. Efficiency of local treatment is defined by rational selection of active and auxiliary substances, medical form of medicines, sorption characteristics of the base. According to modern representations of pathogenesis WP, including scar formation medicines using for the II-nd phase and III-rd phase, must stimulate processes of the granulation and epithelialization (for formation of cosmetic scar with further repair structure of the skin) and to protect a young granulated skin from damage.

Aim. For research of necessity in new wound healing medicines for local wound treatment (II and III phases of wound process) an analysis of medicines, registered on the pharmaceutical market of Ukraine was carried out (on 2018 year).

Materials and methods. To define perspectives of creation of new domestic wound-healing medicines, we considered a pharmaceutical market of medicines, which are used in medicine for treatment wounds. Among medicines, which relaet to pharmacotherapeutic group with ATC codes: D03 – is medicines, which promote wound healing; D06 – antibiotics and chemotherapeutic medicines for use in dermatology, it was conduct a search of soft dosage form medicines with designation of trade name, dosage form, manufacturer country, the kinds of pharmacologic effects and prescription at a certain stage WP. Analysis of medicines was led in accord with following data: indication to application on determined stage WP; spectrum of pharmacologic effects; the composition of the base (fat or hydrophilic); the amount of active substances (combined or monopreparations).

Results and discussion. Results of analysis showed that on pharmaceutical market for local wound treatment among 21 trade names 52% of medicines are produced abroad and 48% – domestic manufacturers. Medicines are presented as 5 soft dosage forms (SDF): ointments – 62%, creams and gels – 19%, jelly – 3%. Regarding indications to application, medicines were distributed as follows: for the II-nd phase – 25%, for the II-nd and III-rd phases – 65% and for the III-rd phase – 4%. The most of medicines for local wound healing are monocompound – 44% and the other part – 56% contains from two to five active components. Among combined medicines intended for local wounds healing 19% are for II-nd phase, 28% for II-nd and III-rd phases and 4% for the III-rd phase.

At present, one of requirements for medicines used in reparation and epithelization is the obstruction of excessive granulation and formation of keloid scars. To combined medications, which are prescription in the II-nd-III-rd phases include: «Alantan», «Vundekhil», «Pantestine», «Riativnik». It should be noted that these medicines accelerate healing of wounds, but among them there are no medicine which would contribute formation of cosmetic scar (smooth, elastic, imperceptible) and the regeneration of the architectonic layers of dermis and epidermis characteristic of normal epithelium. Consequently, such limited amount of medicines may not be sufficient for surgical care and apparently and expediently, to develop wound healing medicines, which not only would accelerate healing of wounds, but also contributed to the reduction of scar defects.

Analysis of the basis of soft drug forms of medicines showed that among medicines nominated on the II-nd and III-rd phases – 20% of medicines are deficiency effective because they are produced on hydrophobic base. This type of the base contains vaseline-lanolin or pork fat, which is a significant barrier for release of active substances from medicine and their penetration into the cell of the injury, resulting in deterioration of condition of wound and an increase in the period of its healing. The amount of active ingredients showed, that 44% of medicines contain one component, which in many clinical cases is insufficient for rational treatment and in actual practice requires simultaneous use of a few medicines, which creates inconvenience and requires higher costs.

Conclusions. In such a manner, need for medicines for local wound treatment is not entirely satisfied today, as many medicines produced by the pharmaceutical companies have a narrow spectrum of pharmacological effects or are made on hydrophobic bases. This condition requires development of the new medicines, created on hydrophilic bases with the appropriate spectrum of pharmacological actions for increase of efficiency of local pharmacokorrection.

HYDROCEPHALUS: ETIOLOGY, PATHOGENESIS AND MODERN METHODS OF TREATMENT (REVIEW)

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Introduction. The number of people who have hydrocephalus or who are currently living with it is difficult to establish, because there are no national registries or a database of people with this disease. However, according to experts, hydrocephalus is diagnosed in about one in every five hundred children.

Aim. Systematization of data about the reasons of emergence, disease mechanisms and modern methods of treatment of hydrocephalus.

During the day, the liquor is renewed 3 times, and its products and absorption are in equilibrium. With excessive accumulation of fluid, when this dynamic equilibrium is disturbed, hydrocephalus is arises.

Before the onset of the disease, 3 pathological mechanisms are cited: hyperproduction of cerebrospinal fluid, impaired absorption or disorder of liquor circulation. Hydrocephalus may be based on one or more of these mechanisms. The reasons for this can appear during the period of intrauterine experience and conduce congenital hydrocephalus or affect the brain after birth and conduce the appearance of acquired hydrocephalus.

The reasons of congenital hydrocephalus include malformations of the cerebrospinal fluid, craniovertebral anomalies, intrauterine infections, birth injuries. Acquired hydrocephalus can occur as a result of inflammatory processes in the brain and its membranes, craniocerebral injuries, vascular disorders. In addition, hydrocephalus often is set within the context of intracerebral tumors that germinate into the ventricles of the brain or squeeze the cerebrospinal fluidways, disrupting the normal circulation of the CSF and its outflow from the cranial cavity.

Isolated atrophic (replacement) form of hydrocephalus, which occurs as a result of post-traumatic death or age-related atrophy of brain tissue. In this case, the cerebrospinal fluid fills the space that forms inside the cranium as a result of a decrease in the volume of the brain. Atrophic hydrocephalus in the elderly can develop due to the violation of the blood supply to the brain in atherosclerosis of cerebral vessels, hypertension, diabetic macroangiopathy.

There are two ways to treat hydrocephalus – conservative and operative. The essence of the conservative method is the reduction of intracranial pressure with the help of drugs. Sometimes the treatment also includes antibacterial therapy. In addition, spinal punctures are used to remove small amounts of CSF.

The drug pathway is often recommended in cases of acquired hydrocephalus due to inflammatory diseases, traumatic brain injury, hemorrhage into the ventricles. In this case, the treatment of the underlying disease is carried out. With a mild form of hydrocephalus, medication usually ends successfully. Most often, neurologists prescribe tandem – Diacarb (diuretic) with Asparkam (source of potassium and magnesium).