SECTION 1. CLINICAL MEDICINE: EXPERIENCE AND INNOVATIONS

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COMPLICATED BEDSORES: COMPLEX SURGICAL STRATEGY IN A PALLIATIVE CARE DEPARTMENT

УСКЛАДНЕНІ ПРОЛЕЖНІ: КОМПЛЕКСНА ХІРУРГІЧНА ТАКТИКА У ВІДДІЛЕННІ ПАЛІАТИВНОЇ ДОПОМОГИ

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Bedsores (syn. Decubitus ulcers – Pressure ulcers) are caused by chronic soft tissues compression. Shear forces, pathological humidity of soft tissues, ingress of physiological secretions on the skin with subsequent maceration against the background of a long-standing forced position of the patient, physical inactivity determine the occurrence of local tissue ischemia. At the same time, with a decrease in the duration of compression or external pressure on the tissues, minimal parabiotic changes occur in the latter without any consequences. There are many classifications of bedsores – pressure ulcers (PrU), both by individual authors and those adopted by major medical forums. From the point of view of clinical application, the optimal classification is one that combines the criteria of epidemiological studies, clinical evaluation and assessment of the effectiveness of patient treatment methods. Some surgeons of the guidelines agreed on four levels of tissue damage, which are designated as stages. Stages of bedsores are defined on the basis of the idea that progression occurs from stage I to stage III or IV, although in practice this is not always the case. The presence and prevalence of severe neurodystrophic, purulent and necrotic process in the soft tissues and osteomyelitis of the underlying bone sometimes sometimes determines the refusal from radical operations.

All healthcare professionals should be trained in the PrU risk assessment system to correctly and reliably assess the bedsores risk and to document the results of all complications risk assessments. The risk assessment takes into account factors that can significantly affect the PrU risk, including nutritional status (hemoglobin and albumin levels, nutrition, weight), tissue circulation (diabetes mellitus, hemodynamic instability, low blood pressure impair microcirculation and oxygenation), skin hydration (dryness and excessive moisture increase the risk of bedsores), general health and advanced age, as well as sensory impairment.

Objective. To optimize of complicated bedsores complex treatment based on specific observation and clinical strategy in a palliative care unit or department.

Materials and methods. The total sample of the retro- and prospective analysis included the results of complex treatment of 412 patients aged 40–93 years: 174 males and 238 females who were treated inpatient over a 10–year period in the palliative care separate departament “Lviv 4th Hospital”, the clinical cases of the disease was characterized by the formation of soft tissue PrU. Stage I and II bedsores were treated conservatively. 128 patients (31.07% of the sample) aged 72–87 years were treated: 82 men and 46 women with stage I and II pressure ulcer with maceration, wetting, desquamation of the epidermis, and formation of superficial ulcers, who were treated in the palliative care unit with decompression measures, the use of antiseptic sanation, antibiotic-containing

powders and a standard treatment regimen according to generally accepted guidelines, clinical strategies, and local protocols. Stage III and IV bedsores with complication were complex surgical treated in the surgical purulent palliative care unit / department (strategy with repeated necrectomy and complex local sanation in main group and primary standard treatment in control group) with secondary decompression measures according to generally clinical. In addition to specific preventive measures, it is necessary to treat any concomitant diseases and syndromes that contribute to the formation of PrU of various localizations of bedsores, especially in diabetes mellitus, occlusive arterial diseases, etc., to provide adequate pain relief and comorbyde changes correction, etc.

Results. Complex surgical sanation has been performed in complicated stage III–IV soft tissue PrU. The structure of the main background pathology was dominated by cardiovascular diseases (coronary artery disease, atherosclerosis, heart rhythm disorders, hypertension) – in 39.29% of cases, neurological pathology (condition after cerebrovascular accident, demyelinating diseases, neuritis, neuropathy) – in 37.5% of patients, obesity of III–IV degree – in 12.5% of cases of a local subsample. Chronic obstructive pulmonary disease was diagnosed in 7.14% of the subsample, and diabetes mellitus in 12.68% of the other patients. We consider it axiomatic that dry skin should be moisturized and wet skin should be dried. The main factor in the successful prevention of bedsores is the prevention of compression of the skin and subcutaneous fat, which is achieved by changing the position of patients in bed every 2 hours, excluding night time. Alternative methods, aimed at reducing pressure are: special plastic splints, anti-decubitus mattresses, beds, pillows, pads, and mattresses filled with water, air, foam, gel, or a combination of these are used to reduce pressure. This point of the strategy also involves the use of decompression. We have developed the small palliative strategy, which is pathogenetically based on the TIME and DOMINATE strategies and adapted to the treatment of bedsores with appropriate implementation of the principles of care and therapy. N (Nutrition), adequate nutritional support with sufficient proteins, amino acids, carbohydrates, and fats. In addition, fluid loss occurs during the hydration phase of the wound process. If the patient has no signs of heart or kidney failure, he or she needs about 30 ml/kg/day of fluid. Multivitamin complexes and necessary trace elements complexes play an additional important role in wound healing. This part of the strategy also includes the use of parenteral nutrition and anabolic steroids (if indicated). O (Offloading), decompression, etc. In this stage, the external pressure on the problem soft tissues and PrU, etc. is reduced by the use of special care products and orthopedic devices. The changes that occur are characteristic of the proliferative phase of the wound process – cell regeneration and healing

of the destroyed tissue. The fact of offloading also ensures marginal epithelialization of the wound. D (Debridement), removal of non-viable tissue from the wound in the presence of colliquative (wet) necrosis or limited (demarcated) areas of dry necrosis in the wound reduces the number of bacteria and the intensity of their growth respectively reduces the perifocal inflammatory process. Adequate surgical interventions was performed in all cases of colliquative necrosis and suppuration. The area of colliquative (wet) necrosis in PrU was precisely surgically removed by excision en block within healthy and / or necrobiotic tissue with the removal of pus and necrotic detritus. The absence of granulations, pathological exudation from the PrU, redness of the skin in the wound area, the presence of non-viable loci, and an unpleasant odor (foul-smelling purulent discharge) indicate critical pathogenic colonization of the bedsores and at the same time the need for combined treatment with general antibiotic therapy and topical use of antiseptics and antibiotics including ofloxacin liniment, etc. In 22% of the subsample of patients, a staged simplified strategy, especially in patients with comorbyde diabetes mellitus adapted for use in palliative care units (department) was used. Under visual and tactile control, purulent leaks were diagnosed, opened, and sanitized intraoperatively in stages with precise step-by-step necro-, and in 7% of patients – sequestrnecrectomy, the formed cavity was washed with a solution of hydrogen peroxide, chlorhexidine, and an aqueous solution of the antiseptic Polividone-iodine, which also achieved complete evacuation of pus and the remains of necrotic detritus. At the same time, simultaneously during necrectomy, cells in the state of necro- and parabiosis are also removed. I (infection), effective antibacterial / antibiotic treatment of this patients. It includes the topical use of antiseptics and antibiotic-containing liniments and, if necessary (if indicated), systemic antibiotic therapy, both empirical, clinically based, and antibiotic therapy according to the results of bacteriological examination (culture of wound). T (Tissue management), creating an appropriate environment in the PrU, wound care and stimulation of marginal epithelialization. Tissue management measures also include mechanical effects, stepwise removal of bacterial and fibrinous layers containing pathogenic microorganisms and small areas of necrosis; the use of wet and dry bandages, sessions of therapeutic ultrasound exposure to wounds, laser therapy, autolytic therapy, gel, and absorbent bandages, which have an osmotic effect. Local enzyme therapy of trypsin, chymotrypsin, collagenase; oxygenation, negative pressure wound therapy, drainage, cell therapy, “artificial skin”, early autodermoplasty, etc. are widely used. E (Educations) – provides adequate care, monitoring of the dynamics of the wound process of bedsores, and correction of local venous or lymphatic stasis.

Conclusions. Successful prevention and treatment of decubitus ulcers (bedsores) in a palliative care department (unit) are possible, appropriate, and reasonable. It is necessary to take into account the peculiarities of the wound process in the formation of purulent bedsores, the composition of the microflora, which affects the course of healing and requires not only antibiotic therapy but also the use of topical antiseptics, the need to correct background and comorbid pathology. The strategy for the complex treatment of bedsores is based on clinical criteria, is simple and easy to use; determines a significant reduction in pain, signs of purulent necrotic inflammation and effective secondary prevention.