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WAR PERIOD OF THE LENINGRAD INSTITUTE OF AMBULANCE AID

Authors

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annotation

Introduction: In connection with the anniversary date - the 75th anniversary of Victory in the Great Patriotic War of 1941-1945. We present unforgettable historical pages of heroism and courage of the inhabitants of the city of Leningrad, who lived and fought in the enemy's ring (09/08/1941 – 01/27/1944) in conditions of bombing, artillery shelling, cold and hunger. The Leningrad Institute of Emergency Medicine worked and fought together with everyone.

Material and methods: The main materials were archival data from the State Budgetary Institution "St. Petersburg Research Institute of Emergency Medicine named after. I.I. Dzhanelidze" and the State Budgetary Healthcare Institution "City Emergency Medical Care Station", historical and analytical research methods were used.

Keywords: Leningrad Institute of Emergency Medicine, Siege of Leningrad, Great Patriotic War

HOW TO QUOTE: Parfenov V.E., Barsukova I.M., Ershova I.N. The war period of the Leningrad Institute of Emergency Medicine. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2020; 1; 7-11

SANITARY AVIATION EVACUATION: ORGANIZATIONAL AND METHODOLOGICAL ASPECTS

Authors

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Introduction: The active development of air ambulance in the Russian Federation helps to increase the availability and quality of emergency specialized, including high-tech, medical care for patients, regardless of their place of residence. At the same time, the organizational and methodological aspects of sanitary aviation evacuation, including the rules for its implementation, are not sufficiently covered in the domestic scientific literature.

Purpose of the study: generalization and systematization of the provisions of regulatory legal documents regulating the issues of sanitary aviation evacuation of patients and the activities of aeromedical teams.

Material and methods: The study examined regulatory legal documents and scientific publications on the issues of sanitary aviation evacuation of patients and the activities of aeromedical teams.

Results: Modern ideas about sanitary aviation evacuation of patients, the composition and equipment of aeromedical teams, medical indications and contraindications for sanitary aviation evacuation are presented. An algorithm for the actions of an aeromedical team doctor during sanitary aviation evacuation of a patient has been developed.

Conclusion: It is advisable to use the results of the study in the work of the National Air Ambulance Service and in the work of unified regional emergency medical dispatch systems.

Keywords:air ambulance, air ambulance evacuation, aeromedical team.

HOW TO QUOTE: Ergashev O.N., Barsukova I.M., Miroshnichenko A.G., Makhnovsky A.I., Kasimov R.R., Isaev M.V. Sanitary aviation evacuation: organizational and methodological aspects. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2020; 1; 12-20

CLINICAL AND MORPHOLOGICAL RATIONALE FOR MINIMALLY INVASIVE OSTEOSYNTHESIS OF BONE FRACTURES OF THE DISTAL FOREARM

Authors

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annotation

Introduction: The problem of surgical treatment of fractures of the distal forearm continues to remain relevant, and therefore new minimally invasive methods of osteosynthesis are being developed.

Purpose of the study:improving the results of treatment of fractures of the distal forearm through the introduction of new minimally invasive methods of osteosynthesis.

Material and methods: In the period from 2015 to 2019, treatment using the developed method was carried out in 129 victims with various types of fractures of the distal forearm in the metaepiphyseal zone and duration from the moment of injury to three weeks. The functional outcome of care was assessed 3 and 12 months after surgery. Treatment results were studied using the PRWE subjective rating scale (1998). Results. The percentage of excellent and good treatment results was 89.4%.

Conclusion: The conducted anatomical and morphological study showed the safety of the proposed method of treatment when used in clinical practice.

Keywords:forearm fracture, osteosynthesis, Kirschner wires.

HOW TO QUOTE: Polikarpov A.V., Vashetko R.V., Kashansky Yu.B., Kondratiev I.P., Tsapenko V.O. Clinical and morphological rationale for minimally invasive osteosynthesis of bone fractures of the distal forearm. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2020; 1; 21-27.

SURGICAL AND EVACUATION TACTICS IN PATIENTS WITH POLYTRAUMA IN LEVEL II and III TRAUMA CENTERS

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Introduction: To date, prognostic criteria have not been developed to justify surgical and evacuation tactics in patients with polytrauma in level II and III trauma centers.

Purpose of the study:improving treatment outcomes for patients with polytrauma.

Material and methods: At the first stage of the study, the course of traumatic illness was studied in 207 patients with polytrauma in level II and III trauma centers. The study gave a comparative assessment of various scales as criteria for predicting the course of a traumatic illness. During the second stage of the study, based on the obtained prognostic criteria, an algorithm was developed to justify surgical and evacuation tactics in 82 patients with polytrauma in a level II trauma center. The control group consisted of 78 patients in whom the algorithm was not applied.

Results: The implementation of the developed algorithm in a level II trauma center when justifying surgical and evacuation tactics in patients with polytrauma contributed to a significant reduction in mortality by 12.0% ($p < 0.05$).

Conclusion: It is advisable to use the results of the study in the development of clinical recommendations and criteria for the quality of medical care for patients with polytrauma.

Keywords:polytrauma, traumatic disease, prognostic scales

HOW TO QUOTE: Makhnovsky A.I., Ergashev O.N., Barsukova I.M., Miroshnichenko A.G., Kasimov R.R., Isaev M.V., Krivonosov S.I. Surgical and evacuation tactics in patients with polytrauma in level II and III trauma centers. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2020; 1; 28-34.

OPTIMIZATION OF SKIN RESTORATION TACTICS FOR DEEP BURNS

Authors

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Introduction: Improving the results of treatment of victims with deep burns while simultaneously reducing the time required to restore the integrity of the skin and, accordingly, the period of the patient's stay in the hospital - an urgent socio-economic problem of modern combustiology

Purpose of the study:improving the results of treatment of victims with deep burns by conducting a comparative analysis of the effectiveness of skin grafting techniques and developing an optimal algorithm for surgical treatment. Based on an analysis of the results of an open comparative study, which included 93 patients with deep third-degree burns, a variant of preparing burn wounds for free autotransplantation was developed, which allows to achieve a reduction in hospitalization and improve immediate and long-term results of treatment of victims with deep skin burns.

Conclusions:

1. Modernization of the technical equipment of specialized burn hospitals dictates the need to correct traditional approaches to surgical algorithms.

2. The results of the study confirmed the feasibility of intensifying the formation of a demarcation line of deep lesions through the application of necrolytic compositions.

3. Ultrasonic cavitation after excision of necrotic elements ensures selective cleansing and decontamination of the wound surface before autotransplantation.

4. The implementation of these effects determines the possibility of significantly reducing the time required to prepare wounds for plastic closure with a corresponding minimization of the period of hospital treatment.

Keywords:deep skin burns, ultrasonic cavitation, necrolytic therapy, free autodermoplasty, antibacterial therapy

HOW TO QUOTE: Krylov P.K., Zinoviev E.V., Krylov K.M., Orlova O.V., Vegera D.S. Optimization of skin restoration tactics for deep burns. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2020; 1; 35-40.

POSSIBILITIES OF APPLYING BIOMEDICAL CELL PRODUCTS BASED ON MESENCHYMAL STEM CELLS IN COMBUSTIOLOGY AND PLASTIC SURGERY

Authors

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Introduction: Since the beginning of this century, according to world literature, more than 30 clinical trials have been conducted using biomedical cell products in the treatment of burnt patients. Based on the results of these studies, a positive effect of this type of agent on the wound process is stated, a positive reaction to the proliferative activity of fibroblasts and keratinocytes, paracrine effects are noted, a decrease in the frequency of infectious complications, and an improvement in tissue perfusion are revealed.

Purpose of the study:to evaluate the effectiveness of the use of drugs containing multipotent human mesenchymal stromal cells in the treatment of superficial and deep skin burns.

Material and methods: The studied biomedical cell product was presented in two versions: “Cell-collagen complex product” (CCCP™) in the form of a gel for external application to wounds and a suspension of “Multipotent mesenchymal stromal cells” (MMSC™), for injection in the defect area. The work was divided into three stages: the first - a clinical study involving 30 victims with II-IIIa degree skin burns; the second and third stages included an experiment on 48 rats and the results of treatment of three victims with IIIb-IV degree burns.

Results: The use of the drug KKKP™ makes it possible to achieve wound healing within 6–7 days of observation, which is 47% faster compared to cases of using levomekol ointment.

Conclusion: Local application of a gel with mesenchymal stem cells helps to optimize and improve the course of reparative regeneration processes, and also ensures a reduction in healing time and a reduction in the frequency of suppuration in superficial and deep burns. Intramuscular or subfascial administration of an MSC suspension in a deep burn area can increase the rate of skin grafting and the effectiveness of surgical skin restoration techniques, as well as reduce the frequency of graft lysis.

Keywords:burns, biomedical cell products, mesenchymal stem cells

HOW TO QUOTE: Zinoviev E.V., Kostyakov D.V., Movchan K.N., Morozov Yu.M., Rusakevich K.I. Possibility of using biomedical cell products based on mesenchymal stem cells in combustiology and plastic surgery. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2020; 1; 36-51.

POSSIBILITY OF PREDICTING THE OUTCOME OF SKIN PLASTY CONSIDERING IMMUNE REACTIVITY

Authors

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Introduction: One of the most significant medical and social problems is burn injury. A significant reason for the failure of skin transplantation for burn disease is the lack of objective methods for assessing the patient's condition on the eve of free autodermoplasty surgery. Determination of indicators of the immune status of patients is not included in the algorithm for examining and monitoring the condition of burn patients.

Purpose of the study:study of cellular immunity indicators to expand the laboratory examination algorithm when preparing patients for free autodermoplasty.

Material and methods: The subpopulation composition of lymphocytes, including T-regulatory cells, was studied using flow cytometry in 50 patients with burn injury in comparison with healthy individuals.

Results:A number of indicators have been identified that influence the mortality of patients with burn injury and the outcome of free autodermoplasty surgery. The time frame for ordering an immunological examination has been clarified. Unfavorable indicators are high leukocytosis with severe absolute and relative lymphopenia, an imbalance of the main lymphocyte populations, an increase in the number of T-regulatory cells and activated T-lymphocytes expressing HLA DR.

Conclusion: Expanding the algorithm for laboratory examination of patients with burns by identifying the main subpopulations of lymphocytes, as well as T-regulatory cells and activated T-lymphocytes, will optimize the treatment of burn patients.

Keywords:burns, autodermoplasty, and flow cytometry, cellular immunity

HOW TO QUOTE: Semiglazov A.V., Zinoviev E.V., Krylov P.K., Orlova O.V., Selivanov P.A. The ability to predict the outcome of skin grafting taking into account immune reactivity. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2020; 1; 52-59.

PREVENTION OF INFECTIONS ASSOCIATED WITH CARE IN A SURGICAL HOSPITAL

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Introduction: Improvement of technical support, the emergence of innovative treatment and diagnostic techniques, improvement of life support systems - the emergence of expert breathing apparatus, significant advances in pharmacology, progress in oncology and chemotherapy, etc. significantly improved the quality of patient treatment and reduced mortality in many severe pathologies. But along with successes, a new problem has emerged - the problem of infections developing in a patient in a hospital. In this article, we wanted to dwell on the problem of preventing hospital infections from the perspective of a clinician. The most common and problematic are, of course, surgical site infections, hospital-acquired pneumonia, catheter-associated infections, and antibiotic-associated colitis, but this is also a large list of other types of infections that occur in a hospital and, by definition, are hospital-acquired. Progress in medicine and the emergence of new innovative diagnostic and treatment procedures entail the emergence of new problems of an infectious nature: endovascular interventions - an increase in bloodstream infections, an increase in the number of prosthetics - an increase in the number of implant-related infections. The doctor’s task in these conditions is to direct all his efforts to reduce the risk of developing an infection or to reduce the risk of developing an infection associated with problematic antibiotic-resistant hospital strains.

Keywords: Infections in surgery, infections associated with medical care, prevention of hospital infections, antibiotic prophylaxis, complications of antibacterial therapy

HOW TO QUOTE: Shlyapnikov S.A., Nasser N.R. Prevention of infections associated with the provision of care in a surgical hospital. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2020; 1; 60-65.

TACTICS OF CERVICAL PREGNANCY MANAGEMENT IN AN EMERGENCY HOSPITAL

Authors

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annotation

Introduction: Just a few years ago, conservative treatment of cervical pregnancy was not possible; the only treatment method was hysterectomy, which deprived the woman of reproductive function. However, at present, thanks to modern techniques, there is an organ-preserving treatment tactic: it consists of embolization of the branches of the uterine artery, which leads to the cessation of blood flow through the branches of the uterine arteries that supply blood to the cervix, followed by the administration of cytostatics and removal of the fertilized egg.

Purpose of the study:using the example of a clinical case to show the effectiveness of embolization of the uterine arteries with the subsequent use of cytostatics (methotrexate) during cervical pregnancy with further removal of the fertilized egg from the cervical canal.

Material and methods: The article presents a clinical observation of the examination and treatment of a patient with cervical pregnancy using modern X-ray surgery methods in combination with the administration of cytostatics.

results: The use of X-ray endovascular treatment in combination with drug therapy with cytostatics made it possible to preserve the patient's reproductive function.

Conclusion: Organ-sparing treatment of cervical pregnancy using embolization of the uterine arteries and the administration of cytostatics in emergency gynecology in a multidisciplinary medical institution made it possible to reduce the risk of bleeding and preserve reproductive function in a young woman.

Keywords:ectopic pregnancy, cervical pregnancy, methotrexate, embolization of uterine vessels.

HOW TO QUOTE: Tsechoeva L.Sh., Naumova A.D., Kiselev M.A. Tactics for managing cervical pregnancy in an emergency hospital. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2020; 1; 66-71

RADIATION DIAGNOSIS OF COMPLICATIONS AFTER SURGICAL TREATMENT OF DISEASES AND DAMAGES OF THE SPINE

Authors

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annotation

Introduction: The article highlights the role of radiation diagnostic methods (radiography, computed tomography and magnetic resonance imaging) in identifying early signs of complications of surgical treatment for diseases and injuries of the spine.

Purpose of the study:studying the capabilities of various methods of radiation diagnostics in identifying postoperative complications of diseases and injuries of the spine.

Material and methods: We analyzed data from comprehensive radiation and clinical examinations of 215 patients (of which 109 (50.7%) were men and 106 (49.3%) women, aged from 39 to 71 years), admitted to the St. Petersburg Research Institute ambulance named after I.I. Dzhanelidze" with diseases and injuries of the spine in the period from 2015 to 2020.

Conclusion: Diagnosis of complications of surgical treatment of various diseases and injuries of the spine is an urgent problem in radiation diagnostics and neurosurgery. High-quality and timely radiation diagnostics is the basis for choosing an adequate treatment method, and, therefore, helps reduce the percentage of complications, adverse outcomes, disability and mortality.

Conclusions: An integrated approach to radiation examination of patients with complications of treatment for diseases and injuries of the spine (radiography, MSCT, MRI) is optimal and most adapted for a detailed assessment of the pathological process in the vertebrae, spinal cord, spinal canal, paravertebral tissues, and distantly located organs.

Keywords:computed tomography, magnetic resonance imaging, vertebral fracture, spondylodiscitis, nonspecific purulent-inflammatory diseases of the spine, thromboembolism.

HOW TO QUOTE: Afanasyeva I.S., Savello V.E., Manukovsky V.A., Shumakova T.A., Serikov V.V. Radiation diagnostics of complications after surgical treatment of diseases and injuries of the spine. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2020; 1; 72-78.