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Content

ORIGINAL ARTICLES

FACTORS ASSOCIATED WITH INCREASED MORTALITY IN PATIENTS WITH UNFORMED LATERAL DUODENAL FISTULAS

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ABSTRACT

The article analyzes the factors that increase mortality in 74 patients with unformed lateral fistulas of the duodenum during organ-preserving treatment. It was revealed that the most significant factors were the presence of common infectious complications upon admission, the persistence of high irretrievable losses of chyme through fistulas during treatment, the development of malnutrition and secondary infectious complications during the treatment of patients in a specialized department.

KEYWORDS: duodenum, intestinal fistulas, surgical treatment, mortality, prognostic factors.

TO CITE THIS ARTICLE. Levchik E.Yu., Gorodetsky E.B., Kashtanova K.V. Factors associated with increased mortality in patients with unformed lateral duodenal fistulas. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):8-14 (In Russ.).

SECONDARY PULMONARY ALVEOLAR PROTEINOSIS IN EXOGENOUS TOXIC ALVEOLITIS

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ABSTRACT

RATIONALE. Pulmonary alveolar proteinosis (PAP) is a rare disease characterized by the accumulation of surfactant proteins and lipids in the alveoli, impaired gas exchange and the progression of respiratory failure. Secondary PAP can develop in patients with exogenous toxic alveolitis (ETA). Of interest is the clinical observation of the combination of secondary PAP with the ETA as background condition, with a detailed analysis of the difficulties in interpretation of computed tomography (CT) picture, the reasons for the late diagnosis of the disease, and the errors in treatment tactics. **The purpose** of the article was to show the specific features of the course, diagnosis and treatment of PAP.

METHODS. Data of dynamic observation of 85 patients with PAP for the period from 1982 to 2020 are presented. General clinical examination of patients, chest CT scan, and a comprehensive functional study of external respiration were carried out. Histological verification of the diagnosis was carried out in 84 patients. In 12 patients, the diagnosis of idiopathic (autoimmune) PAP was confirmed immunologically evidenced by increased level of autoantibodies to GM-CSF in blood.

RESULTS. The authors presented the incidence of secondary PAP in ETA. The article discusses the most characteristic clinical, radiological, functional and morphological manifestations of PAP. Diagnostic CT scans, functional and morphological signs were analyzed in 4 patients with PAP that developed with ETA as a background condition. It was noted that clinical manifestations of PAP are nonspecific, which makes it difficult to diagnose secondary PAP, and the radiological manifestations of primary and secondary PAP are similar. Based on the study, in cases of combination of LAP and ETA, the feasibility of using a combination of systemic glucocorticosteroids with courses of subsegmental bronchoalveolar lavages was substantiated.

CONCLUSION. Currently, the incidence of this pathology is increasing, which may indicate the need to compare clinical, functional, morphological data and features of the CT image of lungs with a complicated occupational history.

KEYWORDS: computed tomography, secondary pulmonary alveolar proteinosis, exogenous toxic alveolitis.

TO CITE THIS ARTICLE. Speranskaya AA, Baranova OP, Orlova GP, Zinchenko AV. Secondary pulmonary alveolar proteinosis in exogenous toxic alveolitis. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):15-23 (In Russ.).

VIRTUAL PLANNING OF OSTEOSYNTHESIS SURGERY FOR PATIENTS WITH ANKLES FRACTURES AND THE POSTERIOR EDGE OF TIBIA, ACCORDING TO COMPUTED TOMOGRAPHIC RESULTS: A CLINICAL CASE

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Introduction. Osteosynthesis operations for fractures of the ankle and the posterior edge of the tibia are performed quite often, but they are accompanied by a high proportion of complications and unsatisfactory treatment outcomes. One of the main reasons for treatment failure is the lack of anatomical repositioning of fracture fragments containing the articular surface. This proves a direct correlation between the quality of surgical treatment and its outcome. The open reposition and internal fixation of fragments of the posterior tibial edge is a complex operation that should be carefully planned. It is necessary to determine the order of fixing fracture elements and choose the surgical approach necessary for this. Inadequate preoperative planning may lead to deficiencies in surgical treatment.

The purpose of the study: using the example of a presented clinical case, to describe the technology of diagnosis, virtual planning of surgery, and evaluation of results of osteosynthesis in patients with ankle fractures and posterior edge fracture of the tibia, according to computed tomography findings.

The presented clinical example demonstrates a technique for virtual planning of osteosynthesis surgery and evaluating the results of surgery in patients with fractures of the ankles and the posterior edge of the tibia. As part of preoperative planning, computed tomography of ankle joints was performed, capturing the lower third of shins and tarsal parts of feet. On virtual volumetric reconstruction, spatial location and displacement direction of fragments were estimated, and type of fracture determined. Using mainly multiplanar reconstruction (MPR) and volumetric rendering (VR) images, planning of surgical approaches and implants sizes were performed. Technique used in clinical example is detailed and illustrated by drawings.

Discussion. The use of radiographic diagnostic methods, such as radiography and CT, allows the surgeon to obtain a complete picture of a fracture and properly plan surgery. Neglecting available examination methods and preoperative planning reduces the quality of surgery and worsens functional results.

Conclusion. Radiographic examination plays a major role in planning traumatological and orthopaedic surgery. The paper demonstrates the adequacy of planning and the ability to implement planned plans during surgery. For comprehensive planning, a CT scan should be performed before surgery. Additionally, to assess the quality of an operation, control computed tomography should be performed.

KEYWORDS: ankle fracture, posterior edge of tibia fracture, osteosynthesis, preoperative planning, CT

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PECULIARITIES OF CLINIC, DIAGNOSTICS AND SURGICAL TREATMENT TEMPORAL-FRONTAL FORM OF FOCAL EPILEPSY

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ABSTRACT

BACKGROUND. The issues of diagnostics and treatment of various forms of focal epilepsy up to the present time remain relevant, as this pathology of the central nervous system is a severe and widespread disease with a high degree of invalidization and permanent reduction in the quality of life of patients.

AIM. To study the peculiarities of clinic and diagnostics of temporal-frontal form of epilepsy in order to solve fundamental questions of optimization of strategy and tactics of surgical treatment of this complex pharmacoresistant form.

METHODS. The report is based on the retrospective analysis of the results of complex examination and surgical treatment of 55 patients (30 men, 25 women) aged 16–43 years with the diagnosis of “epilepsy” (ICD-10 code G40). All patients were examined according to the program of neurosurgical diagnostic complex taking into account modern standards of epilepsy patients management recommended by the International Antiepileptic League.

RESULTS AND DISCUSSION. The main electroclinical and neuroimaging diagnostic features of complex pharmacoresistant temporal-frontal focal epilepsy, important for the development of indications and tactics of surgical treatment, were considered. The results of the complex examination showed the legitimacy of distinguishing the considered form of focal epilepsy and the objective possibility of correct and timely diagnosis. The preoperative EEG data clearly indicating the temporal-frontal-lobe topical epileptic focus (epileptic zone) in correlation with the semiology of paroxysmal clinical symptomatology allow us to understand the pathological process formation pathways at the late stages of epileptogenesis, which should be taken into account in the surgical treatment of temporal-frontal epilepsy.

CONCLUSION. The performed retrospective analysis allowed us to evaluate the neurodynamics and the role of electroclinical criteria at late stages of temporal lobe epileptogenesis. It was shown that the semiology of paroxysmal clinical symptoms in direct correlation with EEG monitoring data indicating temporal-frontal localization of the epileptic focus (epileptic zone) clearly determine the validity of the temporal-frontal form of focal epilepsy and the objective possibility of its correct and timely diagnosis.

KEYWORDS: focal epilepsy, temporal-frontal epilepsy, surgical treatment, pharmacoresistance.

TO CITE THIS ARTICLE. Kasumov VR, Manukovsky VA, Parfenov VE, Kravtsov MN, Vereshchako AV. Peculiarities of clinic, diagnostics and surgical treatment temporal-frontal form of focal epilepsy. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):34-42. (In Russ.).

FEATURES OF TREATMENT OF VICTIMS WITH DAMAGE TO THE PELVIC RING AND URETHRA IN SEVERE COMBINED TRAUMA

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Summary

Justification. In the mid-twentieth century, pelvic injuries accounted for 4–7% of all skeletal fractures, and by the early twenty-first century, this percentage had increased to over 20. Currently, in case of accidents, this number exceeds 30%, with no signs of decreasing. The overall mortality rate for pelvic fractures is in the range 2.8-27%, although it can rise to 38–62% in cases of hemodynamic instability. All these factors make the treatment of pelvic fractures a pressing issue.

The purpose of the article is to demonstrate successful treatment of a long-standing deformity of pelvic bones with a ruptured urethra, and the importance of strict adherence to modern clinical recommendations for this condition immediately after injury.

MATERIALS AND METHODS: Modern methods, including MSCT, ultrasound, urethrography, minimally invasive osteosynthesis using an external fixator and cannulated screws, closed repositioning of the pelvic ring under anesthesia, urethroscopy, and urethral augmentation were used to examine and treat the patient 4 months after injury at the department of combined trauma at the St. Petersburg Emergency Medicine Institute named after I.I. Janelidze.

The result. Reliable restoration of the structure and function of the pelvic ring and urethra has been achieved. A conclusion is made about the need for adequate repositioning and reliable fixation of pelvic bone fragments in the acute and early stages of traumatic illness.

Keywords: combined trauma, poly traumatic injury, unstable pelvic injuries, urethral rupture, osteosynthesis of pubic joint.

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EARLY APPLICATION OF NPWT IN COMPLICATED NECROTIZING SOFT TISSUE INFECTIONS

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ABSTRACT
RATIONALE. Necrotizing soft tissue infections remain an urgent issue of emergency surgery due to high lethality (up to 70 %). The role of the method of local negative pressure therapy at the early stage of treatment of patients with necrotizing soft tissue infections, before the necrobiotic stage of the wound process is completed, has been insufficiently defined to date.
OBJECTIVE: to study the effectiveness of local negative pressure therapy at the early stages of treatment of patients with necrotizing soft tissue infections.
METHODS. Between 2019 and 2023, 24 patients were treated at the "City Center for Severe Sepsis Treatment" of the I.I. Dzhanelidze St. Petersburg Research Institute of Emergency Medicine, in whose treatment local negative pressure therapy was applied at the early stages of treatment. The results of treatment of patients were compared with a retrospective control group, which included 54 patients in whose treatment LOD therapy was not applied. Both groups were comparable in all demographic data and in the severity of the initial condition. To objectively assess the severity of the patients' condition, as well as to evaluate the effectiveness of the ongoing complex therapy, an extended clinical monitoring of the signs of systemic inflammatory reaction and organ dysfunction assessed by the SOFA scale was performed at the time of admission and on each subsequent day.
RESULTS. The mortality in the study group was 7 (29.1 %) patients, which was statistically significantly lower than in the control group 30 (55.6 %) ($p = 0.032$; Mann-Whitney test). When analyzing the statistical significance of differences in Kaplan-Meier survival curves using the log-rank test (Log-rank), a significantly lower mortality rate was noted in patients in the study group (Log-rank $\chi^2 = 6.8$; $p = 0.0076$). The non-parametric repeated measures ANOVA analysis revealed that between the second and third days of observation in patients with LOD (study group) there is a significant decrease in the severity of organ dysfunction, which, most likely, is crucial for survival in this group of patients.
CONCLUSIONS. Early application of the method of local negative pressure leads to a decrease in organ dysfunction already a day after the beginning of therapy, which is accompanied by a decrease in mortality, compared with the control group, to 29.1% ($p = 0.032$).
KEYWORDS: necrotizing soft tissue infection, sepsis, early application of NPWT.
TO CITE THIS ARTICLE. Sklizkov DS, Shlyapnikov SA, Batyrshin IM, Naser NR. Early NPWT application in surgical treatment of necrotizing soft tissue infections. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):51-60. (In Russ.).

GROUP MEMBERSHIP ACCORDING TO THE AB0 SYSTEM AS A RISK FACTOR FOR SEVERE PERIPHERAL ARTERY DISEASE

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ABSTRACT

RATIONALE. Chronic limb threatening ischemia is a severe manifestation of peripheral arterial diseases. This disease is associated with a high risk of amputation and death. The epidemiology and risk factors of the disease are being actively studied.

AIM: to evaluate the frequency of occurrence of AB0 antigens in patients with chronic limb threatening ischemia in comparison with the blood group in the population, and complications risks of surgical treatment in patients depending on the blood antigen.

MATERIAL AND METHODS. A retrospective analysis of AB0 blood type was carried out in 538 patients who underwent arterial reconstructions for chronic limb threatening ischemia.

RESULTS. The frequency of occurrence of antigens of the AB0 system in the study group differed significantly from the frequency of occurrence in the population: antigen 0 was found less often by 27.3 %, antigen A is more often by 19.9 %, antigen B is more often by 16.8 %. Blood group in the study group did not correlate with the risk of complications and major adverse cardiovascular events.

CONCLUSION. In the risk group for developing chronic limb threatening ischemia, patients with the 0 blood group are significantly less likely than in the population, but more often patients with non-0 blood group. The study found no association between the patient's blood group and the risk of complications and major adverse cardiovascular events.

KEYWORDS: atherosclerosis; chronic limb threatening ischemia; AB0 blood group system; AB0 antigens; vascular surgery.

TO CITE THIS ARTICLE. Borisov A.G., Atmadzas K.A., Gruzdev N.N., Kozhevnikov V.B., Kuchay A.A., Lipin A.N., Orlov A.G., Pak S.E., Khokhlova I.M.AB0 group as a risk factor for severe peripheral artery disease *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):61-66. (In Russ.).

ANALYSIS OF EPIDEMIOLOGY, COURSE, COMPLICATIONS AND TACTICS OF TREATMENT OF ACUTE APPENDICITIS IN THE CONDITIONS OF VORONEZH

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ABSTRACT

RATIONALE. acute appendicitis is one of the most common surgical diseases requiring emergency care. The issues of establishing a reliable preoperative diagnosis and choosing tactics for the treatment of acute appendicitis remain relevant.

OBJECTIVE: to study the epidemiology, course, complications and tactics of treatment of acute appendicitis in the conditions of a city hospital.

MATERIAL AND METHODS. The case histories of 134 patients admitted to Voronezh City Hospital No. 2 in 2023 were analyzed, of which 126 were diagnosed with acute appendicitis. Gender, age, body mass index, clinical picture and duration of the disease, laboratory data, treatment tactics, complications, and histological examination results were evaluated.

RESULTS. In 6 % of patients another pathology was revealed, in 1.5 % appendicitis was diagnosed intraoperatively. The age of patients with a confirmed diagnosis was 34 (23; 46) years. In three of the four age groups, women predominated, most significantly among patients over 60 years of age. In most cases, subfebrile body temperature, positive Volkovich-Kocher symptom (93 %) with a lower frequency of other symptoms, moderate leukocytosis, destructive forms of appendicitis, more often phlegmonous, late seeking medical help were observed. In 25.4 % of cases, there was no increase in body temperature; leukocytosis was absent in 27 %, in the older age group — in 52.9 % of cases. The time from the onset of symptoms to admission to the hospital was 24 (10; 36) hours, in 38.8 % of patients it exceeded a day. Laparoscopic and laparoscopically assisted appendectomy was performed in 81.6 % of cases. The frequency of open surgeries in the first 24 hours of the disease was 7.8 %, from 24 to 72 hours — 26.8 %, more than 72 hours — 75 %. Complicated forms accounted for 26.2 % of cases, peritonitis and appendicular infiltration prevailed; the incidence of complications increased with age, duration of the disease, was associated with the female sex. Postoperative complications were observed in 5.6 % of patients, less often with laparoscopic interventions.

CONCLUSION. Patients under 40 years of age predominate among patients with acute appendicitis. The absence of a pronounced systemic inflammatory reaction and a number of appendicular symptoms can make it difficult to diagnose the disease. Laparoscopic methods dominate the treatment. The issues of timely treatment of patients and reducing the incidence of complications need to be addressed.

KEYWORDS: acute appendicitis, morbidity, treatment, complications.

TO CITE THIS ARTICLE. Matvienko MD, Boev SN. Analysis of epidemiology, course, complications and tactics of acute appendicitis in the conditions of Voronezh. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):67-75.

PROGNOSTIC SCALE FOR PATIENTS OPERATED ON FOR RECURRENT GLIOBLASTOMAS

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ABSTRACT

INTRODUCTION. Glioblastoma is the most malignant brain tumor. With standard treatment, in the vast majority of cases, there is a relapse of the disease, for which there is no consensus on the effectiveness of repeated surgical removal. The lack of level 1 evidence on the effectiveness of surgical removal of recurrent glioblastomas (RG) indicates an unresolved problem and stimulates interest in this disease.

THE OBJECTIVE. To conduct a comparative analysis of the overall survival of groups of patients operated on and not operated on for recurrent glioblastomas. To develop a predictive model for the overall survival of patients with recurrent glioblastomas.

MATERIALS AND METHODS. The analysis was performed on the data of 116 patients: 43 (37.1 %) women and 73 (62.9 %) men. The average age at the time of diagnosis (primary surgery) was 52 ± 12 completed years. Surgical interventions were performed in one institution in the period from 1999 to 2017. The main group included patients who underwent RG removal (n = 50). The control group consisted of patients who did not undergo resection of a recurrent tumor (n = 66). To achieve homogeneity (comparability) of groups for all the studied variables, the method of pseudo-randomization was used. Statistical analysis was performed using the SPSS version 26 statistical application. The fatality probability calculator was developed in the spreadsheet editor Microsoft Excel.

RESULTS. The median overall life expectancy after RG removal was 23.6 (95 % CI = 18.1–29.1) months, which is 2.6 months longer than in patients who underwent conservative therapy (Log-rank test: $\chi^2 = 1.254$, $p = 0.263$). In the control group, this indicator was 21.0 (95 % CI = 12.8–29.2) month. The results of Cox's multivariate regression indicate that for patients operated on for RG, two signs simultaneously influenced the lethal outcome: the duration of the relapse-free period ($p = 0.003$) and the volume of recurrent tumor ($p = 0.050$). For patients in the control group, only the duration of the relapse-free period ($p < 0.001$). Based on the absolute values of these parameters (time in months and volume in cm^3), the developed calculator makes it possible to predict the expected probability of death over a certain time period at 6-month intervals.

CONCLUSIONS. For patients with RG, the duration of the relapse-free period and the volume of the recurrent tumor are prognostically significant. An offline calculator allows you to predict the probability of a lethal outcome in a patient with RG.

KEYWORDS: glioblastoma, recurrence, repeated removal.

TO CITE THIS ARTICLE. Martynov R.S., Martynov B.V., Babichev K.N., Rafaelyan A.A., Chemodakova K.A., Prokudin M.Yu., Alekseeva N.P., Zhigadlo Yu.Yu., Parfenov V.E.,

Svistov D.V. Prognostic scale for patients operated on for recurrent glioblastomas. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):76-88.

REVIEWS AND CLINICAL CASES

INFUSION-TRANSFUSION THERAPY FOR SHOCKOGENIC INJURIES IN THE ACUTE PERIOD OF TRAUMATIC ILLNESS. A CLINICAL APPROACH

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ABSTRACT

Based on well-established theoretical ideas about the pathogenesis of shock and taking into account many years of experience in providing intensive care to victims with shockogenic injuries, the article highlights the features of infusion-transfusion therapy in the acute period of traumatic illness, that is, during the first day of intensive observation and treatment. A clinical assessment of some medications and infusion media is given, the timely administration of which in many cases positively influenced the course of the pathological process and the outcome of the injury. The paper presents data that indicate the need for the use of drugs with antioxidant-antihypoxant properties in complex intensive therapy of shock and blood loss containing succinate and fumarate, normalizing cell metabolism in hypoxia conditions.

KEYWORDS: hospital stage, shockogenic trauma, acute period of traumatic illness, infusion-transfusion therapy.

TO CITE THIS ARTICLE. Lapshin VN, Shah BN. Infusion-transfusion therapy for shockogenic trauma in the acute period of traumatic illness. A clinical approach. *The Journal of Emergency Surgery named after I.I. Dzhanelidze.* 2024;(1):89-94. (In Russ.).

IMPROVING SURGICAL TACTICS FOR TREATING PATIENTS WITH INTRA-ARTICULAR FRACTURES OF THE DISTAL RADIUS

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ABSTRACT

RATIONALE. The problem of achieving an acceptable result of surgical treatment in patients with fractures of the distal radius (DR) remains relevant.

THE PURPOSE our work was to improve the results of surgical treatment of patients with complete articular fractures of DR (type 2R3C according to the AO classification) by applying an algorithm for choosing treatment tactics, which included endoscopic assistance and methods of fixation of bone fragments.

MATERIAL AND METHODS. The study included the results of examination and treatment of 224 patients with complete articular fractures of the DR. The control group included 160 patients: subgroup No. 1 included 109 (68.1 %) patients in whom open reposition and internal fixation were performed, and subgroup No. 2 - 51 (31.9 %) patients in whom closed reposition and external fixation were used. The main group included 64 patients, divided into two subgroups: "A" — 33 (51.6 %) patients who underwent open reduction and internal fixation, and "B" - 31 (48.4 %) patients who underwent closed reposition and external fixation. In both subgroups, an arthroscopically-associated technique and a developed algorithm for selecting methods for fixing bone fragments were used.

RESULTS. Analysis of the effectiveness of the proposed algorithm and the arthroscopic-associated technique was carried out by comparing the anatomical and functional results of treatment of the affected study groups, using radiological assessment, questionnaires and scales (PRWE and DASH, MAYO), assessing the range of motion in the wrist joint, hand grip strength and the presence of non-infectious complications. In order to study the factors associated with achieving an optimal functional result (on the MAYO scale ≥ 80 points), a multivariate analysis of qualitative and quantitative indicators was performed.

CONCLUSION. A developed and clinically tested algorithm for selecting methods for fixing bone fragments, as well as the use of arthroscopic-associated techniques have shown their effectiveness, allowing in the medium term (10.5 months) to increase the chances of achieving excellent and good anatomical and functional results by 4.8 times ($p < 0.0001$).

KEYWORDS: fracture of the distal radius, intraarticular fracture of the distal radius, surgical treatment of fractures of the distal radius, complications of surgical treatment of fractures of the distal radius, arthroscopy of the wrist joint.

TO CITE THIS ARTICLE. Khominets VV, Tkachenko MV, Ivanov VS, Mayndurova KM, Ivanova EP. Improving surgical tactics for treating patients with intra-articular fractures of the distal radius. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):95-110.

DIAGNOSIS AND TREATMENT OF INHALATION INJURY IN ADULTS (LITERATURE REVIEW)

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ABSTRACT

RATIONALE. The analysis of Russian and foreign literature sources showed the relevance of the problem of diagnosis and treatment of inhalation injury both in isolated and multifactorial lesions. The work reflects the main issues of etiology and epidemiology, and summarizes the experience of diagnosis and treatment of inhalation injury in adults.

THE OBJECTIVE of the work was to study the current state of the issue of diagnosis and treatment of inhalation injury in adults. To achieve this goal, an analysis of more than 30 literature sources by Russian and foreign authors from 2000 to the present was carried out. The literature data used is presented in the eLibrary and PubMed databases.

RESULTS. The analysis showed that when diagnosing an inhalation injury, it is necessary to rely on the clinical picture and endoscopic signs of an inhalation injury. Currently, there are no clear criteria that can predict the development of respiratory failure in a patient, so preventive tracheal intubation is the main preventive measure for this complication. At the same time, a long stay on a ventilator is fraught with the development of various complications, from infectious (ventilator-associated pneumonia) to the formation of tracheo-esophageal fistulas, so weaning the patient from the ventilator should begin as early as possible. Not only respiratory therapy is important, but also other aspects of the complex treatment of patients with inhalation injury, which include the main areas of intensive care for any critical condition.

CONCLUSION. The development of rating and prognostic scales would make it possible to standardize treatment algorithms and prevent unwanted complications.

KEYWORDS: inhalation injury, fibrobronchoscopy, artificial ventilation.

TO CITE THIS ARTICLE: Orlova OV, Afonchikov VS. Diagnosis and treatment of inhalation injury in adults (literature review). *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):111-118.

ACUTE SEVERE POISONING WITH THE OPIOID NARCOTIC SUBSTANCE METHADONE, COMPLICATED BY THE DEVELOPMENT OF PROLONGED COMPRESSION SYNDROME (CLINICAL CASE)

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ABSTRACT

RELEVANCE. Acute methadone poisoning is accompanied by the development of severe complications, which causes high mortality in this group of diseases. In addition to hypoxic lesions, with methadone poisoning, there is a high probability of developing a syndrome of prolonged compression or systemic rhabdomyolysis, which are often complicated by acute kidney damage. The search for intensive care methods aimed at preventing the development of acute kidney injury is an urgent area in clinical practice.

THE AIM of the study was to evaluate the use in intensive care of acute severe methadone poisoning complicated by prolonged compression syndrome, methods aimed at the fastest possible correction of hypovolemia, hyperkalemia and decompensated metabolic acidosis.

MATERIAL AND METHODS. The material of the work was a clinical case of acute methadone poisoning complicated by the development of prolonged compression syndrome. The features of the clinical picture in dynamics, changes in clinical and biochemical parameters, blood gas composition and acid-base state, ECG and X-ray picture were studied.

RESULTS. It was found that acute methadone poisoning complicated by the development of prolonged compression syndrome is characterized by the presence of a clinical picture of acute methadone poisoning ("opioid syndrome"), as well as pronounced violations of the acid-base state and biochemical parameters, which was a diagnostic criterion for a high probability of developing acute stage 3 kidney disease. In addition to maintaining life support systems (respiration, blood circulation), the complex of intensive care measures included methods of rapid and effective correction of metabolic disorders (hypovolemia, decompensated metabolic acidosis, including lactate acidosis, hyperkalemia). This approach has significantly reduced the severity of the clinical course and prevented the development of acute stage 3 kidney disease.

CONCLUSION: in acute severe methadone poisoning complicated by the development of long-term compression syndrome, in the complex of measures of syndromic general intensive care therapy, it is recommended to use the earliest possible alkalizing therapy by using sodium bicarbonate, combating lactate acidosis by using Reamberin.

KEYWORDS: acute poisoning, methadone, prolonged compression syndrome, Reamberin.

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NURSING AND PUBLIC HEALTH, ORGANIZATION AND SOCIOLOGY OF HEALTHCARE, MEDICAL AND SOCIAL EXPERTISE

EXPERIENCE IN IMPLEMENTING CHECKLISTS IN THE SURGICAL DEPARTMENT

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ABSTRACT

RATIONALE. The problem of surgical patient safety is becoming increasingly relevant due to the growing number of surgical interventions and the introduction of new surgical techniques and protocols, such as Fast-track.

OBJECTIVE. Develop a set of evidence-based measures to improve patient safety during preoperative preparation.

MATERIAL AND METHODS. At the first stage in the control group (n = 40), before the protocol was put into practice Fast-track, as well as in the main group (n = 40), after implementation of the protocol, the content of preoperative preparation was analyzed. Then, with the participation of a group of experts, was conducted FMEA-analysis. Two groups of patients were formed using the random number method. Preparation for surgical intervention in patients of the main group (n = 90) it was carried out using the developed original checklist, and patients of the control group (n = 90) — in accordance with previously adopted principles. Based on the results of testing, the checklist was adjusted and its effectiveness was re-evaluated comparatively.

RESULTS. Implementation of the protocol resulted in a twofold increase in the number of errors during preoperative preparation. FMEA-analysis identified 36 potential errors, ranging from the most serious to minor, depending on the severity of the possible negative consequences. The introduction of a checklist in the work of the department allowed to reduce the number of errors by almost 3 times. After additional adjustments to the checklist, the number of errors significantly decreased from 12.2 % to 4.3 %.

CONCLUSION. The use of checklists during preoperative preparation significantly reduces the number of errors associated with the human factor, which potentially reduces the risk of complications.

KEYWORDS: checklist, patient safety, preoperative preparation.

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CRASH CART

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ABSTRACT

INTRODUCTION. The relevance of the project lies in the fact that in medical and preventive institutions (MPIs) of Russia there is no single place where all the necessary emergency kits for emergency treatment of urgent conditions (EKETUC) would be in one place. Accordingly, medical workers, first of all middle medical personnel, spend most of their time on collecting stacks from different places, preparing the system and taking the rack for infusion solutions, as well as transporting the patient to a hard surface during cardiopulmonary resuscitation (CPR).

PROJECT OBJECTIVE. To develop, test and implement the crash cart in the Russian MPIs to provide emergency medical aid in acute conditions, stabilize the patient in the specialized department in the shortest possible time, further transport the patient to the anesthesiology and resuscitation department and reduce the risk of irreversible consequences.

MATERIAL AND METHODS: observation, analysis of literature, internet sources, questionnaires, training in the use of the rescue cart and semi-spinal shield included in the cart.

RESULT. According to the data obtained as a result of the study conducted in the format of questionnaires before and after the situational tasks, it is safe to say that the positive effectiveness of the rescue cart has been revealed. Having studied the questionnaires and watched the work of nursing staff we can say that this model helps to quickly and clearly navigate in an extreme situation, to carry out the correct algorithm with the least number of errors and the least risk to the patient, i.e. to carry out an effective search and disassembly of drugs, and their convenient collection and use in contrast to those EKETUC, which currently exist in the work of departments of MPIs.

CONCLUSIONS. Our project research in the format of literature review, two-stage questionnaire survey and situational tasks shows a striking lack of such an indispensable, multifunctional, simple and easy-to-use item as a rescue cart in MPIs. We are confident that our proposal to introduce and equip a rescue cart will help to increase the response rate of employees and the efficiency of emergency medical care in emergency conditions.

KEYWORDS: medical emergency, rescue cart, code cart.

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ALCOHOL FACTOR IN THE FLOW OF PATIENTS WITH A SURGICAL PROFILE OF A MULTIDISCIPLINARY HOSPITAL

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resume

The harmful use of alcohol is the cause of more than 200 diseases and injuries.

THE aim of the study was to assess the proportion of people with surgical pathology admitted to a multidisciplinary hospital with signs of alcohol intoxication (poisoning).

MATERIALS AND METHODS: data from a multidisciplinary emergency hospital (GBU "St. Petersburg Institute of Emergency Medicine named after I.I. Janelidze") were used for 2018-2022, statistical and analytical methods were applied.

conclusion. Patients with surgical (and traumatological) pathology of various etiologies make up the vast majority of the flow (65.3%) among people with signs of alcohol intoxication (poisoning), which is partly explained by the predominance of male patients, as well as the characteristics of the hospital — its profile (mainly surgical), bed stock and operating mode (in the mode of an emergency hospital). The presence of an acute poisoning center in the hospital structure also makes it a priority for the delivery of patients with signs of alcohol intoxication (poisoning) by emergency medical teams of the city.

KEYWORDS: alcohol, alcohol poisoning, multidisciplinary hospital.

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ACUTE SURGICAL PATHOLOGY IN THE STRUCTURE OF CALLS OF VISITING EMERGENCY MEDICAL TEAMS

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resume

Acute surgical pathology is one of the significant parts in the structure of the work of field ambulance teams, which often requires medical care in emergency and urgent forms.

THE purpose of the study: to assess the share of surgical pathology in the structure of calls to field ambulance teams, the importance of choosing the type (profile) of the team for providing medical care to this category of patients.

MATERIALS AND METHODS: data from a typical emergency department of the district subordination of St. Petersburg for 2019-2023 were used, statistical and analytical methods were applied.

conclusion. Differences in the activities of medical and paramedic teams are minimal, and there are practically no differences in the provision of care to patients with acute surgical pathology. The limited medical and diagnostic resources (instrumental, laboratory) in the conditions of emergency medical care gives special importance to clinical diagnosis and the choice of the correct tactics of the ambulance team, ensuring continuity at the stages of medical care. The share of visits by emergency medical teams to surgical patients has a negative value: over the period 2019-2023, it decreased by 18.9% (from 10.4% to 8.4%) in the total call structure.

KEYWORDS: emergency medical care, surgical pathology, emergency medical teams.

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