Journal number: No. 1-2023

ANALYSIS OF CASES OF SPLEN INJURIES SUITABLE FOR NON-OPERATIVE TREATMENT

Authors

THEM. SAMOKHVALOV1,2, V.Yu. MARKEVICH1, V.V. SUVOROV1, N.I. MYASNIKOV1, A.A. PICHUGIN1, M.V. KAZNACHEV1, B.A. Strizhakov1, S.A. TATAUROV1

1 Military Medical Academy named after. CM. Kirov, St. Petersburg, Russia

2 St. Petersburg Research Institute of Emergency Medicine named after. I. I. Dzhanelidze, St. Petersburg, Russia

annotation

Target:to analyze the treatment results of all cases suitable for non-operative treatment of splenic injuries due to closed abdominal trauma.

Hypothesis:removal of the spleen causes an increase in the incidence of infectious complications in the postoperative period.

Materials and methods: The medical histories of victims admitted with spleen damage due to closed abdominal trauma to the VSP clinic in the period from 2007 to 2019 were studied. Some of them were selected using a 2 to 1 pairing method to form a retrospective group in which the traditional approach was used, which involved laparotomy followed by splenectomy. Along with this, a prospective study was conducted, which included 32 cases of the use of non-operative tactics in victims with spleen damage, who were treated on the basis of a diagnostic and treatment algorithm updated since 2015.

Results: Complications were detected in 42 victims (31.3%; CI 95% 0.24-0.40), including 25 victims of an infectious nature (18.7%; CI 95% 0.13-0.27). The course of infectious complications led to the development of sepsis in 6 victims (4.5%; 95% CI 0.02-0.10). Mortality in the study population was 11.9% (16 people). Calculation of the relative risk showed that splenectomy increases the likelihood of developing infectious complications by 2.5 times (RR = 3.5 ± 0.59, 95% CI 0.78-8.01).

Conclusions: Studying the feasibility of non-operative tactics in the domestic literature is a priority task to substantiate a new treatment concept. It was found that the chance of developing infectious complications in those who underwent surgery was 4 times higher (OR = 4.42±0.65, 95% CI 1.25-15.7). However, when adjusted for confounders, it was possible to establish statistically significant differences in the level of infectious complications between groups (9.4% versus 21.9% of victims; p>0.05, with P = 46.8%) and assess the risk of developing complications (RR = 3 .5±0.59, 95% CI 0.78-8.01) failed, which requires continuation of the prospective study to increase the power of the study.

KEYWORDS:surgery of injuries, spleen, splenic injury, closed abdominal trauma, severe combined injury, non-operative tactics, infectious complications.

HOW TO QUOTE: Samokhvalov I.M., Markevich V.Yu., Suvorov V.V., Myasnikov N.I., Pichugin A.A., Kaznacheev M.V., Strizhakov B.A., Tataurov S.A. Analysis of cases of splenic injuries suitable for non-operative treatment. Journal "Emergency Surgery named after. I.I. Dzhanelidze". 2023. No. 1 (10). pp. 5–18

DISEASES OF THE WORMIC APPEAL. EXPERIENCE OF A CITY MULTI-SPECIALIZED HOSPITAL IN THE PRE-COVID PERIOD

Authors

O.V. LISOVSKY1, M.A. PROTCHENKOV1,2, A.A. PETROSYAN2, R.F. ASANBEKOV2, A.S. SHUKAN1, T.A. NIKOLSKAYA1

1 St. Petersburg State Pediatric Medical University, St. Petersburg, Russia

2 City Hospital No. 26, St. Petersburg, Russia

annotation

Introduction: Analysis of cases of medical care for diseases of the appendix allows us to evaluate the effectiveness of the emergency surgical service of the hospital.

Purpose of the study: To analyze the interventions performed for diseases of the appendix, the results of a morphological study of removed vermiform appendices and the timing of hospital treatment of patients.

Materials and methods: Cases of medical care provided to patients with appendix diseases in St. Petersburg City Hospital No. 26 for 2019 are analyzed. Electronic medical records of patients discharged in 2019 who underwent appendectomy were selected from the hospital information system.

Results:614 appendectomies were performed in patients aged from 18 to 93 years, average age - 35.7±14.86 years. The duration of inpatient treatment ranged from 1 to 44 days, with an average of 5.4±3.87 bed days. Morphological examination verified gangrenous appendicitis in 53 (8.6%) cases, phlegmonous appendicitis in 466 (75.9%) cases, and catarrhal appendicitis in 52 (8.5%) cases. The majority (85.8%) of patients underwent laparoscopic appendectomy. Morphological changes in the appendix did not have an independent effect on the duration of hospitalization. In the absence of peritonitis, septic complications and other things being equal, the duration of hospital treatment correlated with the traumatic nature of the operation. Minimally invasive laparoscopic operations were associated with the shortest duration of hospital treatment ($p < 0.05$), on average 4.3 ± 1.80 bed days.

Conclusions:1. The predominance of phlegmonous and catarrhal forms of inflammation of the appendix and the effectiveness of laparoscopic approaches confirm the feasibility of this method as the operation of choice in patients with clinical signs of appendicitis. 2. Conversion of laparoscopic access to laparotomy during surgical intervention increases the duration of hospitalization and reduces the cost-effectiveness of treatment of patients with acute appendicitis.

KEYWORDS: appendicitis, appendectomy, duration of hospitalization.

HOW TO QUOTE: Lisovsky O.V., Protchenkov M.A., Petrosyan A.A., Asanbekov R.F., Shukan A.S., Nikolskaya T.A. Diseases of the appendix. Experience of a city multidisciplinary hospital in the pre-Covid period. Journal of Emergency Surgery named after. I.I. Dzhanelidze. 2023. No. 1. P. 19-23

PAIN RELIEF FOR SHOKOGENIC TRAUMA AND ACUTE BLOOD LOSS

Authors

V.N. LAPSHIN1,2, A.F. KOTLYARSKY1, V.S. AFONCHIKOV1,3, T.V. SOKOLOVA1, N.A. SUKHOTINA1, H. BEJAOUI1, V.Yu. TINCHURIN1, D.V. SHALAMOV1, I.V. STRAKHOV1, I.Yu. PETROV1, N.K. RAZUMOVA1

1 St. Petersburg Research Institute of Emergency Medicine named after. I.I. Dzhanelidze, St. Petersburg, Russia

2 First St. Petersburg State Medical University named after. acad. I.P. Pavlova Ministry of Health of Russia, St. Petersburg, Russia

3 St. Petersburg State University, St. Petersburg, Russia

annotation

SUMMARY: In addition to the main pathological processes (acute blood loss, dysfunction of damaged organs, fat embolism and traumatic toxicosis), which determine the functional response of the body to mechanical damage, pain syndrome is considered as a factor that mobilizes and depletes adaptation reactions, which are realized through the hypothalamic-pituitary-adrenal and sympatho-adrenal systems An effective component of anti-shock measures is surgery, which in most cases is performed under anesthesia for emergency indications in the acute period of a traumatic illness in conditions of circulatory and hemic hypoxia. Adequate pain relief, along with artificial ventilation and thoughtful infusion and drug provision, is an essential part of the pathogenetic therapy of traumatic shock and its consequences. Over a fairly long period of studying traumatic shock and treating victims with mechanical injuries at the State Budgetary Institution of St. Petersburg Research Institute of Emergency Medicine named after. I.I. Dzhanelidze managed to significantly reduce hospital mortality, including through optimizing the approach to providing anti-shock care, a component of which is resuscitation and anesthesia.

KEYWORDS: hospital stage, shockogenic injury, traumatic disease, anesthesia.

HOW TO QUOTE: Lapshin V.N., Kotlyarsky A.F., Afonchikov V.S., Sokolova T.V., Sukhotina N.A., Bezhaoui H., Tinchurin V.Yu., Shalamov D.V., Strakhov I. V., Petrov I.Yu., Razumova N.K. Pain relief for shockogenic trauma and acute blood loss. Journal of Emergency Surgery named after. I.I. Dzhanelidze. 2023. No. 1. P. 24-30.

ANALYSIS OF THE FEATURES OF THE COURSE OF BURN INJURY TAKEN INTO ACCOUNT THE VALUE OF THE INDEX OF SEVERITY OF LESIONS

Authors

E.V. ZINOVIEV1,2, V.A. MANUKOVSKY1 ., O.O. ZAVOROTNIY1,3,D. V. KOSTYAKOV1

1 State budgetary institution “St. Petersburg Research Institute of Emergency Medicine named after. I.I. Dzhanelidze"

2 Federal State Budgetary Educational Institution of Higher Education “St. Petersburg State Pediatric Medical University” of the Ministry of Health of Russia

3 Federal State Budgetary Educational Institution of Higher Education "St. Petersburg State University"

annotation

Relevance: In the Russian Federation, specialists at burn centers use a number of prognostic scales to determine the prognosis of the course and outcomes of burn disease. The most common scales are the Baux rule, the Frank index, and the modified lesion severity index. Despite the prevalence and widespread use of these prediction methods, these scales are of questionable effectiveness, since the survival prognosis is based directly on the indicators of age, depth and area of the burn, excluding the pathophysiological features of the burn disease.

Purpose of the study: To analyze the features of the course of burn injury, taking into account the value of the lesion severity index.

Materials and methods:A retrospective analysis of the dynamics of 48 laboratory parameters and 19 results of instrumental research methods was carried out on the first day of admission to the department of thermal injuries of the State Budgetary Institution of St. Petersburg Research Institute of Emergency Medicine named after. I.I. Dzhanelidze 330 burned people from 18 to 91 years old with an area of superficial burns from 20% b.t. and deep burns from 10% of the body weight, divided into three groups taking into account the value of the lesion severity index and delay in providing medical care.

Results: The data obtained in groups of patients, taking into account the value of the injury severity index and delay in providing medical care, do not allow us to compose a general set of factors that fully reflect the clinical picture of a burn disease, since each degree of severity of burn shock and delay is characterized by a certain set of anamnestic data, laboratory and instrumental parameters diagnostics In this connection, it is advisable to search for a new method of forecasting, taking into account the dynamics of laboratory and instrumental parameters.

KEYWORDS:lesion severity index, prognosis, skin burn, burn disease, death

HOW TO QUOTE: Zinoviev E.V., Manukovsky V.A., Zavorotniy O.O., Kostyakov D.V. Analysis of the characteristics of the course of burn injury, taking into account the value of the lesion severity index. Journal of Emergency Surgery named after. I.I. Dzhanelidze. 2023. No. 1 (10). pp. 32–39.

POSSIBILITIES OF COMPUTER AND MAGNETIC RESONANCE TOMOGRAPHY IN THE DIAGNOSTICS OF NON-SPECIFIC PURENTIC-INFLAMMATORY DISEASES OF THE SPINE IN THE DEPARTMENT OF EMERGENCY MEDICAL CARE

Authors

I.S. Afanasieva, V.E. SAVELLO, T.A. SHUMAKOVA, V.V. SERIKOV, A.S. KAZANKIN, T.I. TAMAEV, Yu.V. BELYAKOV

St. Petersburg Research Institute of Emergency Medicine named after. I.I. Dzhanelidze, St. Petersburg, Russia

annotation

SUMMARY: The article presents the results of radiation and clinical laboratory examination of 150 patients admitted to the emergency department of the St. Petersburg Research Institute of Emergency Medicine named after. I.I. Janelidze in the period from 2014 to 2022. with nonspecific purulent-inflammatory diseases of the spine (NPISD). The issues of diagnostic significance and priority of using radiological diagnostic methods depending on the localization of the pathological process in the spine at the stage of emergency medical care are analyzed.

KEYWORDS:computed tomography, magnetic resonance imaging, spondylodiscitis, nonspecific purulent-inflammatory diseases of the spine.

HOW TO QUOTE: Afanasyeva I.S., Savello V.E., Shumakova T.A., Serikov V.V., Kazankin A.S., Tamaev T.I., Belyakov Yu.V. Possibilities of computed tomography and magnetic resonance imaging in the diagnosis of nonspecific purulent-inflammatory diseases of the spine in the emergency department. Journal of Emergency Surgery named after. I.I. Dzhanelidze. 2023. No. 1. P. 40-47

ENDOSCOPIC SURGICAL TREATMENT OF GUNSHOT BLIND NON-PENETRATING WOUND OF THE LUMBAR SPINE

Authors

V.A. MANUKOVSKY, M.N. KRAVTSOV, M.I. SIDOR, K.V. TYULIKOV, T.I. TAMAEV, V.E. PARFENOV

St. Petersburg Research Institute of Emergency Medicine named after. I.I. Dzhanelidze, St. Petersburg, Russia

annotation

TARGET: To demonstrate the capabilities and effectiveness of endoscopic surgery in the treatment of gunshot wounds of the lumbar spine.

METHODS:A clinical case of a gunshot blind non-penetrating wound of the lumbar spine is described. A minimally invasive endoscopic technique was used to sanitize the gunshot wound and remove the bullet.

RESULTS:A victim with a gunshot wound to the spine underwent removal of a foreign body (bullet) from the iliopsoas muscle using a single-portal fully endoscopic technique through the entrance hole of the gunshot wound. The postoperative period was without complications. The patient was activated on the second day. KEY WORDS: fully endoscopic surgery, gunshot wounds of the spine, lumbar spine, minimally invasive surgery.

HOW TO QUOTE: Manukovsky V.A., Kravtsov M.N., Sidor M.I., Tyulikov K.V., Tamaev T.I., Parfenov V.E. Endoscopic surgical treatment of a gunshot blind non-penetrating wound of the lumbar spine. Journal of Emergency Surgery named after. I.I. Dzhanelidze. 2023. No. 1. P.48-52

KEYWORDS:fully endoscopic surgery, gunshot wounds of the spine, lumbar spine, minimally invasive surgery.

A CASE OF SUCCESSFUL USE OF ENDOSCOPIC VACUUM THERAPY IN THE TREATMENT OF ESOPHAGUS WALL SUTURE FAILURE AFTER SURGICAL TREATMENT OF BOERHAAVE SYNDROME

Authors

A.A. ZAVRAZHNOV1,2,3, I.A. SOLOVIEV1,2,3, A.A. OGLOBLIN 2,3, O.Yu. BOSCO3, D.V. LUCHININA 3, M.V. ANTIPOVA 2,3, D.S. RUSANOV2,3, Sh.D. MAMEDOV.2,3

1 Federal State Budgetary Military Educational Institution of Higher Education Military Medical Academy named after S.M. Kirov.

2 Federal State Budgetary Educational Institution of Higher Education “St. Petersburg State Pediatric Medical University” of the Ministry of Health of the Russian Federation, St. Petersburg, Russia.

3 State budgetary healthcare institution “City Mariinsky Hospital”, St. Petersburg, Russia.

annotation

SUMMARY: The so-called Dieulafoy's ulcer (UD) is actually a malformation located in the submucosa of the stomach and has the appearance of an abnormally developed tortuous artery of unusual caliber, the spontaneous rupture of which is accompanied by life-threatening bleeding. An essentially incorrect name, but well-established in the domestic literature, and insufficient familiarity of doctors with the essence of this pathology can cause inadequate medical tactics, which in fact should be different than for ordinary acute ulcers. A clinical observation of poisoning in a 73-year-old woman, which ended in death, is presented, as well as an analysis of the literature regarding the tactics used in such cases. According to the author, endoscopic hemostasis should be considered only as the initial stage of emergency care for ulcerative urinary tract, since it eliminates the rupture, but not the malformation itself, and endoscopic treatment in combination with atypical gastrectomy, including laparoscopic, or vessel embolization should be considered optimal.

KEYWORDS:esophagus, Boerhaave's syndrome, endoscopic vacuum therapy.

HOW TO QUOTE: Zavrazhnov A.A., Solovyov I.A., Ogloblin A.A., Bosco O.Yu., Luchinina D.V., Antipova M.V., Rusanov D.S., Mamedov Sh.D. A case of successful use of endoscopic vacuum therapy in the treatment of incompetent sutures of the esophageal wall after surgical treatment of Boerhaave's syndrome. Journal of Emergency Surgery named after. I.I. Dzhanelidze. 2023. No. 1 (10). pp. 53-57.

THE FIRST EXPERIENCE OF INVASIVE THERMOREGULATION IN A PATIENT WITH DIENCEPHAL DYSFUNCTION SYNDROME

Authors

E.V. CHARTORIZHSKY, A.V. SHCHEGOLEV, A.A. Emelyanov, R.E. LAKHIN, V.V. SHUSTROV

Military Medical Academy named after. CM. Kirov, St. Petersburg, Russia

annotation

SUMMARY: Body temperature management is an urgent task in resuscitation. Hyperthermia in neurocritical care patients is a factor of secondary brain damage, it increases the length of hospitalization in the intensive care unit, and is a negative prognostic factor in the treatment of patients with neurosurgical pathology. A clinical case of invasive intravascular thermoregulation in a patient with a gunshot blind penetrating wound of the right temporal region is presented. The applied technique with the introduction of a heat exchange catheter into the vascular bed made it possible to effectively control the patient's body temperature, which made it possible to control intracranial hypertension, reduce the oxygen demand of brain tissue and, probably, reduce the area of secondary damage. On the 13th day after connecting the device, it was possible to stop central hyperthermia, and on the 15th day the patient emerged from the coma. Intravascular temperature monitoring allowed the patient's body temperature to be accurately controlled without exceeding target values, which likely allowed the patient to survive the acute period of traumatic brain injury.

KEYWORDS:traumatic brain injury, cooling, neurological outcome, targeted temperature control

HOW TO QUOTE: Chartorizhsky E.V., Shchegolev A.V., Emelyanov A.A., Lakhin R.E., Shustrov V.V. First experience of invasive thermoregulation in a patient with diencephalic dysfunction syndrome. Journal of Emergency Surgery named after. I.I. Dzhanelidze. 2023. No. 2. P.58-65

EXPERIMENTAL STUDY OF THE EFFECTIVENESS OF A LOCAL HEMOSTATIC AGENT BASED ON CHITOSAN AND EXTERNAL ABDOMINAL COMPRESSION FOR TEMPORARILY STOPING INTRA-ABDOMINAL BLEEDING

Authors

THEM. SAMOKHVALOV1,2, K.P. GOLOVKO1,3, M.S. GRISHIN1, A.M. NOSOV1, D.D. LYABAH1, A.Ya. KOVALEVSKY1

1 Military Medical Academy named after S.M. Kirov, St. Petersburg, Russia

2 St. Petersburg Research Institute of Emergency Medicine named after. I.I. Dzhanelidze, St. Petersburg, Russia

3 St. Petersburg State University, St. Petersburg, Russia

annotation

SUMMARY: The results of an experimental study of the effectiveness of a local hemostatic agent (LHA) based on chitosan in combination with the method of external compression of the abdominal area in a model of intense intra-abdominal bleeding in a large biological object (pig, n=12) are presented. The results obtained allow us to identify two promising samples of MGS, the study of which is planned in full preclinical trials.

KEYWORDS: abdominal trauma, intra-abdominal bleeding, hemostasis, chitosan, abdominal compression, pre-hospital stage.

HOW TO QUOTE: Samokhvalov I.M., Golovko K.P., Grishin M.S., Nosov A.M., Lyabakh D.D., Kovalevsky A.Ya. Experimental study of the effectiveness of a local hemostatic agent based on chitosan and external compression of the abdomen to temporarily stop intra-abdominal bleeding. Journal of Emergency Surgery named after. I.I. Dzhanelidze. 2023. No. 1. P. 66-72

CLINICAL EVALUATION OF HYDROGEL WOUND COVERING WITH A COMPLEX OF NATURAL ANTIMICROBIAL PEPTIDES FLIP7 IN THE TREATMENT OF DERMAL BURNS

Authors

E.V. ZINOVIEV, D.V. KOSTYAKOV, A.V. SEMIGLAZOV, P.K. KRYLOV

St. Petersburg Research Institute of Emergency Medicine named after. I.I. Dzhanelidze", St. Petersburg, Russia

annotation

SUMMARY: To date, a large number of methods and techniques for the treatment of borderline burn wounds have been developed, including a wide range of both medications and physiotherapeutic procedures. However, most of them do not have the ability to completely suppress the activity of modern microorganisms growing in burn wounds. Today, a burn wound is a combination of both gram-positive and gram-negative strains that are resistant to most modern antibacterial drugs used in all medical institutions of the country. This problem is justified by the evolutionary mechanisms of adaptation of microorganisms, allowing them to develop various defense systems in the form of the formation of polymicrobial associates and biological films, in which traditional methods of exposure become ineffective. The use of a gel of rarely cross-linked acrylic polymers with a complex of natural antimicrobial peptides FLIP-7 may become one of the promising ways to solve microbial resistance. Its application to the wound surface ensures active elimination of this pathogenic microflora from the area of damage and creates optimal conditions for reparative regeneration. The introduction of hydrogels with FLIP7 into the system of care for victims with borderline skin burns will improve the results of treatment for this category of patients.

KEYWORDS:skin burn, dermal lesions, humid environment, natural antimicrobial peptides, FLIP7

HOW TO QUOTE: Zinoviev E.V., Kostyakov D.V., Semiglazov A.V., Krylov P.K. Clinical evaluation of hydrogel wound covering with a complex of natural antimicrobial peptides FLIP7 in the treatment of dermal burns. Journal of Emergency Surgery named after. I.I. Dzhanelidze. 2023. No. 1 (10). pp. 73-76

EXPERIENCE OF PARTICIPATION OF A NON-GOVERNMENTAL ORGANIZATION IN TRAINING FIRST AID VOLUNTEERS

Authors

E.A. LAVROVA1, O.A. PANTELEEVA 2

1 St. Petersburg Research Institute of Emergency Medicine named after. I.I. Dzhanelidze, St. Petersburg, Russia

2 Medical College No. 1, St. Petersburg, Russia

annotation

SUMMARY: The article discusses the experience of participation of a public organization in training volunteers to provide first aid. The authors highlight the relevance of the implementation of this project, the stages of preparation for its joint implementation and the conditions for those wishing to undergo training. At the end of the article, data is provided on the readiness of those trained for volunteer work in the Northern Military District zones.

KEYWORDS:public organization, first aid, volunteers, training, health care.

HOW TO QUOTE: Lavrova E.A., Panteleeva O.A., Experience of participation of a public organization in training volunteers in first aid. Journal of Emergency Surgery named after. I.I. Dzhanelidze. 2023. No. 1. P.77-80