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Content

ORIGINAL ARTICLES

THE RECONSTRUCTION OF SCULL BONE DEFECTS USING THE DOMESTIC PROGRAM “AUTOPLAN”

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ABSTRACT

The **PURPOSE** of this work is to present the experience of using the domestic program “AUTOPLAN” for modeling a polymer implant for closing a defect after decompressive craniotomy.

METHODS. The study included 16 patients with skull defects of various locations and sizes, operated using domestic program “AUTOPLAN” and additive technologies. Cranioplasty was performed using polymethylmethacrylate implants made from custom 3D printed molds. Among the 16 patients: 14 with large defects of the skull bones and 2 with defects of the frontal bone and the superior wall of the orbit.

RESULTS. In 14 cases for reconstruction defects after decompressive trepanation implants were made from polymethyl methacrylate using molds printed on a 3D printer. For simultaneous reconstruction frontal bone and superior wall of orbit the titanium mesh was modeled using a custom 3D printed mold. There were no complications after cranioplasty. The use of additive cranioplasty technologies allowed us to achieve optimal cosmetic results, confirmed by a survey of the patient and his relatives, and data from a postoperative CT scan.

CONCLUSION. Using the reconstructive module of Autoplan, it is possible to reconstruct skull bone defects of various shapes, sizes and complexity. On average, it takes 2–3 days from modeling the molds to obtain a polymer implant. It makes the ability to widely introduce additive technologies, as long training in modeling of implants is not required.

KEYWORDS: additive manufacturing; cranioplasty, skull bone defects, 3D cranioplasty.

TO CITE THIS ARTICLE. Babichev KN, Serebrennikov NA, Kravtsov MN, Manukovsky VA, Chaplygin SS, Dvoyashkina NA, Deryugina VA, Puhlikov MV. The reconstruction of scull bone defects using the domestic program “Autoplan”. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):8-15.

TREATMENT TACTICS OF ACETABULAR FRACTURES IN POLYTRAUMA

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ABSTRACT

RATIONALE. Acetabular fractures are the most common in polytrauma. The severity of the condition, the presence of other injuries whose treatment is prioritized, and complications that have arisen lead to a delay in surgical repair of the acetabulum, reducing the likelihood of a positive outcome.

OBJECTIVE of the study is to find out the frequency and nature of acetabular fractures in patients with polytrauma and to determine the optimal treatment tactics.

MATERIAL AND METHODS. Over 10 years (2013–2022), 475 patients with acetabular fractures were treated; 105 (22.1 %) were isolated and 370 (77.9 %) were treated for polytrauma. Surgical treatment was performed in 262 (55.2 %). It was noted that in patients with polytrauma surgical repair of the acetabulum is delayed by 10 days compared to its isolated fracture, which leads to an increase in the number of complications. A special tactic of surgical treatment was proposed. To evaluate its effectiveness, three groups of patients were formed: with isolated acetabular fractures, acetabular fractures with polytrauma before the introduction of new tactics, and after their introduction.

RESULTS AND DISCUSSION. Innovative approaches included identification of the key (defining) acetabular lesion, use of gentle repositioning techniques, and minimally invasive osteosynthesis. The use of the proposed tactics allowed to statistically significantly reduce the number of intraoperative ($td = 6.21$; $p < 0.001$) and early postoperative complications ($td = 3.82$; $p < 0.001$), reduce the number of late postoperative complications, and increase the number of positive results of acetabular fracture treatment in patients with polytrauma.

CONCLUSION. The use of the proposed tactics of osteosynthesis allowed to statistically significantly reduce the number of intraoperative, early postoperative complications, reduce the number of late postoperative complications, and increase the number of positive long-term results of treatment of acetabular fractures in polytrauma.

KEYWORDS: acetabulum, osteosynthesis, polytrauma, pelvis.

TO CITE THIS ARTICLE. Bondarenko AV, Talashkevich MN, Plotnikov IA, Kruglykhin IV, Zavsegolov NI, Kolupaev AE. Tactics of treatment of acetabular fractures in polytrauma. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):16-29.

TREATMENT OF A VICTIM WITH BLUNT ABDOMINAL TRAUMA WITH MULTIPLE DAMAGE TO THE DUODENUM AND PANCREAS: CLINICAL CASE

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ABSTRACT

RATIONALE. Injuries to the pancreatoduodenal zone in blunt abdominal trauma are incredibly rare and are among the most difficult to treat, often leading to severe complications. Duodenal injury occurs in 0.2–0.6 % of cases among all patients with injuries and from 1 to 5 % with closed abdominal injuries. Damage to large vessels with injury to the pancreatoduodenal zone occurs in 23–40 % of cases. Pancreatic injury occurs in less than 1 % of all injuries and in 3.7–11 % of blunt abdominal trauma. According to various authors, the mortality rate ranges from 6 to 50 %. Mortality in the acute period of traumatic illness is caused by bleeding or serious damage to neighboring organs. Mortality in the long-term period, as a rule, is the result of infection or multiple organ failure. The most common postoperative complications are duodenal fistula (2–16 %), intraabdominal abscess (15 %), intestinal obstruction (5–8 %) and pancreatitis (0.5 %). The most common cause of duodenal fistula is inadequate surgical intervention.

CASE DESCRIPTION. We have presented a description of the treatment of the victim after falling on the bucket of the escalator with the diagnosis: "Closed craniocerebral injury. Mild brain injury. Subarachnoid hemorrhage. Closed abdominal injury. Complete circular separation of the duodenum at the level of the ampoule and the lower horizontal part (grade V AAST-OIS) with damage to the head and detachment of the hook-shaped process of the pancreas (grade IV AAST-OIS). Damage to the tributaries of the superior mesenteric vein with continued intra-abdominal bleeding. Large hemoperitoneum (1500 ml). Damage to the right kidney (grade III AAST-OIS). Contusion of the right adrenal gland (grade I AAST-OIS). Closed stable spinal injury without impaired spinal cord conduction. Fracture of the transverse sections of the Th12-L4 vertebrae on the right. Acute blood loss of moderate severity. Traumatic shock of the II degree." Considering the injuries received, the victim underwent gastropancreatoduodenal resection. On the 14th day after the operation, the patient was discharged in a satisfactory condition without complications. Postoperative complications include duodenal fistula (2–16 %), intraabdominal abscess (15 %), intestinal obstruction (5–8 %) and pancreatitis (0.5 %). The most common cause of duodenal fistula development is inadequate surgical intervention.

CONCLUSION. Due to the rare occurrence of damage to the duodenum combined with the pancreas, there is no single treatment algorithm available for this type of combined trauma. The volume of surgical intervention in patients with pancreatoduodenal zone damage depends on the patient's condition and the nature of organ damage.

KEYWORDS: multiple duodenal injury, pancreatic injury, combined injury, closed abdominal injury.

TO CITE THIS ARTICLE. Gavrishuk YV, Kulagin VI, Manukovsky VA, Tulupov AN, Pravosud MN, Yesenokov AA, Mamedov NA. Treatment of a victim with blunt abdominal trauma with multiple damage to the duodenum and pancreas: clinical case. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):30-36.

INTRAOSSEOUS VASCULAR METHODS OF PAIN AND EMERGENCIES

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RESUME

STUDY OBJECTIVE: to evaluate the efficacy of intraosseous vascular access in the intensive care of shockogenic trauma and emergencies.

MATERIALS: analysis of 100 cases of intraosseous vascular access (ICSD in emergency medical care by physicians and paramedics of Belgorod Region Emergency Medical Care Station.

METHODS: literary-analytical, survey, system analysis, modeling, statistical.

RESULTS AND THEIR ANALYSIS. Based on the use of intraosseous vascular access and devices for its performance by the personnel of the Belgorod Region Emergency Medical Care Station during 2022–2024 it is shown that this technology is highly effective in pre-hospital care of patients with shockogenic trauma and other emergency conditions. In the group of patients with critical disorders of vital functions intraosseous vascular access allows to achieve a positive result in treatment in 78.7 % of cases. The new medical device of domestic production "Intraosseous cannulation device UVK M" by functional and operational characteristics is not inferior to imported analogs and meets modern trends in the development of Russian healthcare. For the successful mastering of the manual skill of intraosseous vascular access, the domestic simulator CT UVK M was used.

KEYWORDS: intraosseous vascular access, emergency medical care, shockogenic trauma, intraosseous cannulation device.

TO CITE THIS ARTICLE. Zhirov AV, Minnullin IP, Radushkevich VL, Perevozchikov EN, Minnullin IR. Intraosseous vascular methods of pain and emergencies. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):37–41.

Differential approach to surgical treatment of patients with pancreaticoduodenal tumors complicated by obstructive jaundice

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ABTSRACT

RATIONALE. One of the first manifestations of pancreaticoduodenal diseases is mechanical jaundice, which occurs in 61.8–83.4 % of cases. The choice of treatment tactics for patients with pancreaticoduodenal tumors complicated by mechanical jaundice requires an individual, differentiated approach, including, in particular, assessment of liver function status

OBJECTIVE: to study the role of indocyanine green elimination test in the choice of surgical treatment tactics for patients with pancreatoduodenal tumors complicated by mechanical jaundice

MATERIALS AND METHODS. The study included 60 patients with pancreatoduodenal tumors complicated by mechanical jaundice of average severity according to the classification of Galperin E. I. 2012. The patients were divided into two groups. Group 1 — 30 patients who underwent pancreaticoduodenal resection (PDR) against the background of mechanical jaundice without biliary drainage. Group 2 — 30 patients pancreaticoduodenal resection was performed after preliminary biliary tract drainage. The preoperative functional status of the patient was assessed by the technique of indocyanine green elimination determination. The treatment results were evaluated according to the Clavien-Dindo classification of 2004.

RESULTS. The baseline status of the patients was evaluated and no statistically significant differences were found. Indocionine green elimination rates also had significant differences: In group 1 POC % vol = 12.1 [10.7; 13.5], OC15 % vol = 19.8 [16.1; 23.4], in group 2 POC % vol = 8 [6.9; 9], OC15 % vol = 34.4 [31.6; 37.1], $p < 0.001$. According to the results of comparative analysis of the frequencies of adverse events in the groups, it was found that the two-stage surgical treatment was statistically significantly more frequent in complications of IIIb (20 %), IV a degree (13.3 %), IVb degree,(3.3 %), V degree (3.3 %) according to Clavien-Dindo, $p < 0.001$. In the group with one-stage PDR there were no mentioned complications. The incidence of I–IIIa degree complications did not differ in both groups.

CONCLUSION. The introduction of the indocyanine green elimination test in the complex evaluation of functional reserves of patients with pancreaticoduodenal tumors complicated by mechanical jaundice of medium severity allows to single out a group of patients with overcompensated liver dysfunctions. Pancreaticoduodenal resection without preliminary biliary drainage is safe for this group of patients.

KEYWORDS: obstructive jaundice, pancreaticoduodenal resection, indocyanine green, pancreaticoduodenal tumors.

TO CITE THIS ARTICLE. Kabanov MYu, Sementsov KV, Myanzelin MN, Boyarinov D Yu, Fomenko EE, Yakovleva DM, Isaeva PV. Differential approach to surgical treatment of patients with pancreaticoduodenal tumors complicated by obstructive jaundice. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):42-50.

INFLUENCE OF LAPAROSCOPIC MYOMECTOMY ON REPRODUCTIVE OUTCOME IN PATIENTS WITH UTERINE FIBROID AND INFERTILITY

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ABSTRACT
RATIONALE. Uterine fibroids are one of the most common tumors in women worldwide. We examined reproductive outcomes in patients undergoing laparoscopic myomectomy for various types of fibroid nodules.
OBJECTIVE: to evaluate reproductive outcomes in patients with infertility and uterine fibroids after laparoscopic myomectomy.
MATERIAL AND METHODS. The study included 38 women aged 18 to 45 years with uterine fibroids and infertility. All patients underwent elective laparoscopic myomectomy. Pregnancy was confirmed by visualizing the fertilized egg in the uterine cavity. Data on the type and number of laparoscopic myomectomies and the characteristics of myoma nodes, such as their number, size and location, were collected from medical records.
RESULTS. The study found that of 38 patients with uterine fibroids and infertility, 24 women (63 %) became pregnant within 2 years after laparoscopic myomectomy. Of these, 13 (54.1 %) were delivered by cesarean section, and 11 (45.9 %) were delivered naturally. Of the 5 women with subserous fibroid nodes (FIGO type 7), 5 (100 %) became pregnant. Of the 19 patients with intramural subserous nodes (FIGO types 5 and 6), 11 (58 %) became pregnant. Of the 24 women with intramural nodes (FIGO type 4), 8 (33 %) became pregnant. In 5 (100 %) women who became pregnant after removal of the subserous node (FIGO type 7), vaginal delivery was performed. In 7 (63.6 %) patients who became pregnant after removal of an intramural-subserous node (FIGO types 5 and 6), delivery was performed by cesarean section, in 4 (36.4 %) by natural delivery. In 6 (75 %) women who became pregnant after removal of an intramural node (FIGO type 4), delivery was performed by cesarean section, in 2 (35 %) by natural delivery. Of 14 women suffering from infertility and having only 1 fibroid node, 11 became pregnant (78.5 %), of 19 patients with 2 fibroids, 11 (58 %) became pregnant, of 5 women who had 3 or more fibroid nodes became pregnant 2 (40 %).
CONCLUSIONS. Depending on the size, number and location, uterine fibroids can cause infertility. Our study demonstrates that laparoscopic myomectomy improves reproductive outcomes in women with subserosal, intramural-subserosal, and intramural myomatous nodules. After removal of nodes larger than 5 cm, the pregnancy rate was significantly higher than after removal of nodes smaller than 5 cm. In addition, the pregnancy rate in this observation period was higher in patients after removal of a single uterine fibroid, compared with women with 2 and more myomatous nodes. After removal of the subserous nodes, delivery was carried out naturally; after removal of the intramural and subserosal-intramural nodes, in most cases the tactics of delivery by cesarean section were chosen. In the groups of women who became pregnant after removal of a node from 3 to 5 cm and more than 5 cm, the rate of delivery by cesarean section and vaginally was approximately equal. After myomectomy of a node less than 3 cm, delivery was carried out naturally. In the groups of women who became pregnant after removal of 1 and 2 nodes, the rate of surgical and natural delivery was approximately the same, and in the group of patients with 3 or more nodes, a cesarean section was performed in all cases.
KEYWORDS: uterine fibroids, myomectomy, infertility.
TO CITE THIS ARTICLE. Krylov KY, Rukhliada NN, Biryukova EI, Miroshnikova YK. Influence of laparoscopic myomectomy on reproductive outcome in patients with uterine fibroid and infertility. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):51-58.

DIAGNOSIS OF FAT GLOBULEMIA IN PATIENTS WITH MECHANICAL INJURY

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RESUME

Fat embolism syndrome is a relatively rare complication that can occur in an injured patient, both during transportation and during surgical interventions. Some of its forms are characterized by a severe course that significantly aggravates the prognosis, not only in patients of older age groups, but also in patients of working age.

There are no pathognomonic signs of the syndrome, but its etiology is known. The purpose of this publication was to show the diagnostic capabilities of the predictor of this syndrome – fat globules, the detection of which in the patient's blood plasma will allow timely initiation of preventive and therapeutic measures.

KEYWORDS: mechanical injury, post-traumatic fat globulemia, diagnosis, fat embolism syndrome.

TO CITE THIS ARTICLE. Razumova NK, Lapshin VN, Selezneva NV, Shvedkov AV. Diagnosis of fat globulemia in patients with mechanical injury. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):59-63.

RADIOLOGICAL CHARACTERISTICS OF THE INITIAL STAGES OF OSTEOARTHRITIS IN THE EXPERIMENT

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ABSTRACT

INTRODUCTION. Idiopathic osteoarthritis is a common disease that affects millions of people worldwide. It is important to diagnose osteoarthritis (OA) early and start treatment as soon as possible to prevent further damage of the joints. This is a challenge for arthrologists, as it is difficult to detect the early stages of OA. However, researchers can use experimental models to study the disease and develop new methods for early diagnosis and treatment.

OBJECTIVE. A comparative assessment of radiological changes in the knee joints of rats after injection of monoiodoacetate (MIA) and the synovial fluid from a patient with stage II OA, classified by the Kellgren-Lawrence (KL), was conducted. We suggest that the radiological and pathological changes that occur during the induction of OA through the administration of MIA and patient's synovial fluid may share similar characteristics, but may differ in the rate and pattern of development of intra-articular changes.

Material and methods. The experiment was carried out on 20 Wistar rats weighing 180–250 g. 4 groups of 5 animals (groups K, S, M, MS) were formed. In the control group (group K), a sterile 0.9 % sodium chloride solution in a volume of 10 µl was injected into both knee joints. In Group S, 10 µl of synovial fluid from a patient with stage II OA of the knee joint was injected into the right knee joint. A sterile 0.9 % sodium chloride solution in a volume of 10 µl was injected into the left knee joint of rats. Animals from group M were injected into the right knee joint with 10 µl of MIA solution at a dose of 2 mg per 10 µl, and 0.9 % sodium chloride solution in a volume of 10 µl into the left knee joint. Animals from the MS group were injected with 10 µl of MIA solution into the right knee joint, and synovial fluid into the left one. X-ray examination was performed on days 10, 25, 46, respectively, on the days of euthanasia.

RESULTS. In groups M and MS, degenerative-dystrophic changes in the knee joints were revealed: swelling and inflammation, narrowing of the articular gap, the appearance of osteophytes, and the osteoporosis, which reached a maximum by 46 days. In group K, according to X-ray data, the articular tissue remained intact. The greatest changes were found in the joints of rats injected with MIA, with a noticeable progression of inflammatory and destructive processes on the 25th and 46th days. Changes in the joints where the patient's synovial fluid was injected were insignificant.

CONCLUSION. Comparing the X-ray data obtained during the experiment, it was found that the maximum changes over time were observed in the knee joints of rats that received intra-articular injections of MIA. No radiological changes were detected at the early stages of the experiment in the joints of either the control group or those where synovial fluid was injected. However, by the end of four weeks, changes in the joints after the introduction of synovial fluid differed from those in the joints injected with MIA. These changes also lagged behind in terms of both time and severity when compared to those seen in the MIA-injected joints. It is likely that the development of osteoarthritis in the synovial fluid model requires longer experimental periods. Additional studies using immunohistochemical and pathomorphological techniques are needed to further understand the nature of inflammation and compare

KEYWORDS: osteoarthritis in an experiment, X-ray examination, sodium monoiodacetate.

TO CITE THIS ARTICLE. Urazovskaya I.L., Khaydarov V.M., Mansurov D.Sh., Tkachenko A.N., Vorokov A.A., Magdalinov V.V., Savitskiy V.D., Baranovskiy A.A. Radiological characteristics of the initial stages of osteoarthritis in the experiment. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):64-71.

EFFECTIVENESS OF CELL TECHNOLOGY APPLICATION IN TREATMENT OF BURNS IN EXPERIMENT

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ABSTRACT

RATIONALE. There are many urgent problems in modern combustiology, like searching for optimal methods of skin integrity restoration in the shortest possible time, solving the problem of skin donor resources deficit in patients with extensive deep burns. Conducting research in this direction opens up new prospects for solving this problem. This study is the first step in the creation of a new homegrown biomedical cellular product.

OBJECTIVE: to study the course of the wound process during injection application of allogeneic dermal fibroblasts, active and conservative surgical tactics of burn wound management in experiment.

MATERIAL AND METHODS. The study involved 20 white mongrel male rats, which were divided into 2 groups. All animals underwent burn trauma modeling under isoflurane anesthesia. Group 1 animals received active surgical treatment tactics using an injection of allogeneic dermal fibroblasts suspension into the wound defect. In Group 2, traditional surgical treatment tactics were applied using an injection of allogeneic dermal fibroblasts suspension into the wound defect. Material collection for studying the course of the wound healing process was performed on days 12, 20, and 30 after the start of the experiment under general anesthesia.

RESULTS. A significant difference in the course of the wound healing process was identified depending on the surgical treatment tactics. Active surgical tactics and the introduction of allofibroblasts at earlier stages promoted earlier wound surface epithelialization with the onset of neoepithelialization foci by day 30 after trauma. When using traditional surgical tactics, despite the application of allofibroblasts, worse results were noted — colonization of the wound surface by microorganism colonies, sluggish course of inflammatory and reparative processes.

CONCLUSION. Accelerated reparative processes are observed in dermal allofibroblasts application against the background of active surgical management. When applying traditional surgical treatment tactics, despite the introduction of dermal allofibroblasts, an increase in the duration of inflammatory and reparative processes is noted, with only the beginning of granulation tissue formation by day 30. More active epithelium formation is detected in peripheral areas of the wounds due to the growth of epithelium from the preserved skin and hair epithelium.

KEYWORDS: experiment, burns, healing process, cell technologies, allofibroblasts.

TO CITE THIS ARTICLE. Khadzhibaev AM, Tulyaganov DB, Fayazov AD, Vervekina TA, Tsiferova NA, Kamilov UR, Charyshnikova OS. Effectiveness of cell technology application in treatment of burns in experiment. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(1):72-79.

REVIEWS AND CLINICAL CASES

A CASE OF DIAGNOSIS OF PERFORATION OF THE SMALL INTESTINE WALL WITH A "LOST" STENT AFTER GASTROPANCREATODUODENAL RESECTION

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resume

Diagnosis of postoperative complications of pancreatoduodenal resection is a complex clinical task. Radiation imaging techniques play a leading role in determining their cause.

THE PURPOSE OF THE WORK: to present a case of a rare complication of gastropancreatoduodenal resection — perforation of the small intestine wall with a "lost" stent. The article considers the clinical observation of displacement of the internal stent from the pancreatojunoanastomosis zone, which led to perforation of the small intestine. The features of radiation imaging are discussed, in particular, the use of computed tomography as the leading method of diagnosing postoperative complications.

KEYWORDS: duodenal cancer, computed tomography, pancreatoduodenal resection, stent, intestinal perforation.

HOW TO QUOTE. Vasiliev A.V., Kankasova A.D., Kalimullina D.S., Nesterov D.V., Trofimov S.L., Boychuk N.V., Karachun A.M., Kozlov O.A., Grushko A.A., Bagnenko S.S., Burovik I.A. The case of diagnosis of perforation of the small intestine wall with a "lost" stent after gastropancreatoduodenal resection // The journal of Emergency Surgery named after I.I. Janelidze. 2024. No. 2. pp. 80-87.

ARTIFICIAL INTELLIGENCE IN TRAUMATOLOGY AND ORTHOPEDICS: PROSPECTS AND DANGERS (LITERATURE REVIEW)

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ABSTRACT

OBJECTIVE. Based on the study of specialized literature, to determine the current trends in the development of artificial intelligence technologies in traumatology and orthopedics

MATERIALS AND METHODS. A systematic search was carried out in the Russian Science Citation Index, PubMed, Scopus, Web of Science databases, published mainly over the past ten years on the issues of artificial intelligence in medicine, not by keywords and combinations: artificial intelligence OR machine learning OR neural networks OR deep learning AND traumatology and orthopedics

RESULTS. AI can offer solutions to the growing demands for redundant and repetitive tasks that are at a lower end of the intellectual spectrum, which contribute to physician burnout and medical errors. Detailed study of calculation algorithms for each specific task is required, and statistical analysis methods do not contradict, but often complement AI technologies. However, it is worth paying attention to the problems associated with ethical implementation, regulatory regulation, and the decision-making process.

CONCLUSIONS. AI is a potentially significant technology in traumatology and orthopedics. To date, there are many unsolved problems and a fairly small number of studies in the field of traumatology and orthopedics.

KEYWORDS: machine learning, traumatology and orthopedics, computer technology, artificial intelligence, neural networks.

TO CITE THIS ARTICLE. Povaliy AA, Belenky IG. Artificial intelligence in traumatology and orthopedics: prospects and dangers (literature review). *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):88-95.

MULTILAYER PLASTIC SURGERY OF THE ANTERIOR CRANIAL FOSSA FOR NASAL LIQUORRHEA IN CONDITIONS OF PURULENT INFLAMMATION AFTER A GUNSHOT PENETRATING ANTERIOR PARABASAL WOUND (CASE REPORT AND LITERATURE REVIEW)

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ABSTRACT
Currently, there are a sufficient number of recommendations and guidelines for the treatment of gunshot wounds to the skull and brain in peacetime and wartime conditions, however, penetrating wounds to the base of the skull remain one of the most difficult tasks in neurosurgery, the solution of which requires an individual approach with elements of reconstructive surgery already at the front stages of care. After gunshot and mine-explosive wounds, as well as peacetime injuries, bone and soft tissue defects often form, making it difficult to choose plastic material and reconstruction tactics. The article presents a clinical case of successful treatment of liquorrhea, which developed after a penetrating wound with damage to the anterior cranial fossa on the background of purulent inflammation, in which we performed multilayer plastic surgery using a wide fascia of the femur, a free flap of the bone of the cranial vault and a free flap of subcutaneous adipose tissue.
KEYWORDS: penetrating brain injury, skull base, anterior cranial fossa, skull base defect, defect reconstruction, treatment algorithm, free flap.
TO CITE THIS ARTICLE. Shkolnikov V.V, Volkov A.S., Svistov D.V., Adleyba B.G. Multilayer plastic surgery of the anterior cranial fossa for nasal liquorrhea in conditions of purulent inflammation after a gunshot penetrating anterior parabasal wound (case report and literature review). *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):96-102.

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

ROAD TRAFFIC INJURIES IN THE STRUCTURE OF CALLS FOR MOVING AMBULANCE CLIPS

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ABSTRACT
Road traffic injuries are a serious medical and social problem. The **OBJECTIVE** was to study the volume of emergency medical care provided to victims of road accidents.
The **MATERIALS** for the study were official statistical data (Rosstat) for 2014–2022. Statistical and analytical **METHODS** were used.
CONCLUSIONS. Every year in the Russian Federation there are about 200 thousand visits by emergency medical services teams to road accidents, more than 250 thousand victims need medical care. About 10 thousand victims of road accidents had an unfavorable (fatal) outcome. For the period 2014–2022. there is a positive trend associated with a decrease in the number of road accidents (by 23.4 %), the number of victims in road accidents (by 28.9 %), and the number of deaths in road accidents (by 35.9 %).
KEYWORDS: road traffic injuries, emergency medical care.
TO CITE THIS ARTICLE. Barsukova IM, Vishnyakov NI, Makhnovsky AI, Polyukova MV. Road traffic injuries in the structure of calls for moving ambulance clips. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):103-107.

EFFECTIVENESS OF PROVIDING AMBULANCE MEDICAL CARE IN ROAD ACCIDENTS

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ABSTRACT

Promptness in providing medical care in case of an accident is a key task for saving the patient's life. The **OBJECTIVE** of the study was to study the efficiency of the work of emergency medical services teams when responding to road accidents.

The **MATERIALS** for the study were official statistical data (Rosstat) for 2010–2022. Statistical and analytical methods were used.

CONCLUSIONS. The efficiency of teams arriving at the scene of an accident is significantly higher than reaching the place of a call for another reason, which is quite natural and is associated with the significant medical and social significance of road traffic injuries and the priority dispatch of the EMS team in this regard. Significant positive dynamics were noted associated with an increase in the efficiency of reaching the scene of an accident for the period 2010–2022: in a 20-minute interval corresponding to an emergency form of medical care — from 88.9 % to 95.0 %.

KEYWORDS: road accident, road traffic injuries, emergency medical care, efficiency of emergency medical care.

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THE INFLUENCE OF PSYCHOLOGICAL PORTRAITS OF MEDICAL PERSONNEL ON THE SUCCESSFUL IMPLEMENTATION OF INTERPERSONAL INTERACTION WITH PATIENTS

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ABSTRACT
The results of the study in the survey of professional and personal characteristics of physicians and nurses who carry out interpersonal interaction with patients are presented. 30 people participated in the study. Of them, 15 people with higher medical education (trauma physicians), the average age was 38.4 and the average length of service was 9.7. Also 15 people with secondary medical education (nurses), average age 29 years, average length of service - 7.2 years. Psychodiagnostic procedures were selected in accordance with the objectives. The following techniques were used in the study:

1. Technique for diagnosing the distribution, stability and switching of attention;
2. Eysenck’s method;
3. Buss-Durkey Inventory;
4. Cettell’s Sixteen Personality Factor Questionnaire (16PF);
5. Methodology for diagnosing empathy.

Analysis of our own experimental research - processing was carried out with the help of Statistica 5.0 program.
Correlation analysis was carried out for the whole sample and for subgroups of subjects.
As a result of the study, the following conclusions were formulated:

1. Physicians are more oriented to a set of skills, techniques and methods of effective oral and written communication, adequate communicative behavior, the ability to communicate effectively and without conflict within the framework of professional activity.
2. The longer nurses work in the trauma department, the more precise, practical, enduring they become. Very often they do not pay attention to their own physical ailment.
3. The degree of manifestation of extravertedness is higher in nurses, thus they are more friendly, open, attentive, cheerful, energetic. Such a nurse is more trusted by patients, which increases the level of satisfaction with the care provided.
4. Nurses have readiness to show negative reactions when patients address them, but they do not show it, and in the period of irritation, despite fatigue, they are friendly, participative, ready to help.
5. Medical nurses are reliably different from physicians in the expression of conflict in communication with patients. They are more patient and persuasive in relation to patients, cause their trust, formed under the influence of authority and charm, which positively affects the patients' compliance with the hospital regime and helps in performing therapeutic procedures and taking medications.

KEYWORDS: professional and personal characteristics, interpersonal interaction with patients, stability and attention switching, personal properties, emotional stability, sociability, impulsivity and restraint, empathy.
TO CITE THIS ARTICLE. Firsova LG. The influence of psychological portraits of medical personnel on the successful implementation of interpersonal interaction with patients. *The Journal of Emergency Surgery named after I.I. Dzhanelidze*. 2024;(2):113-125.