

International Academy of Science and Higher Education
London, United Kingdom
Global International Scientific Analytical Project



MEMORIAL
Antonie van
Leeuwenhoek



TRADITIONAL AND EXPERIMENTAL METHODS OF STUDYING AND OVERCOMING THE MEDICAL AND BIOLOGICAL PROBLEMS IN ENSURING THE OPTIMAL VITAL FUNCTIONS OF HUMAN BEINGS AND THE WILDLIFE

Peer-reviewed materials digest (collective monograph) published following the results of the CXLII International Research and Practice Conference and I stage of the Championship in Medicine and Pharmaceutics, Biology, Veterinary Medicine and Agricultural sciences (London, April 13 - April 21, 2017)



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**The event was carried out in the framework of a preliminary program of the project
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by International Academy of Science and Higher Education (London, UK)**

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Research studies published in the edition are to be indexed in the International scientometric database “Socrates-Impulse” (UK) and the Scientific Electronic Library “eLIBRARY.RU” on a platform of the “Russian Science Citation Index” (RSCI, Russia). Further with the development of the GISAP project, its publications will also be submitted for indexation in other international scientometric databases.

“Traditional and experimental methods of studying and overcoming the medical and biological problems in ensuring the optimal vital functions of human beings and the wildlife” Peer-reviewed materials digest (collective monograph) published following the results of the CXLII International Research and Practice Conference and I stage of the Championship in Medicine and Pharmaceutics, Biology, Veterinary Medicine and Agriculture. (London, April 13 – April 21, 2017)/International Academy of Science and Higher Education; Organizing Committee: T. Morgan (Chairman), B. Zhytnigor, S. Godvint, A. Tim, S. Serdechny, L. Streiker, H. Osad, I. Snellman, K. Odros, M. Stojkovic, P. Kishinevsky, H. Blagoev – London: IASHE, 2017. – 70 p.

In the digest original texts of scientific works by the participants of the CXLII International Scientific and Practical Conference and the I stage of Research Analytics Championship in Medicine and Pharmaceutics, Biology, Veterinary Medicine and Agriculture are presented.

Dear friends!

On November evening on the eve of St. Martin's Day 1659 one of the most popular taverns in the central part of Delft, which is located in the South of the Netherlands, halfway between Rotterdam and the Hague, was crowded with citizens joyfully celebrating the upcoming holiday. Pale light of the full moon shone evenly through the weeping windows of the pub and created a bizarre contrast with the trembling light from candles and oil lamps inside the room. Most of the visitors of the tavern were merchants, artisans and fishermen with their wives or girlfriends. Some tables, however, were occupied by petty city officials engaged in easy conversations while drinking juniper vodka and eating cheese and ham.

Suddenly, the tavern door opened wide, letting inside a burst of cold air, which almost blew out the flame of a large wood-burning stove... A strange man of low stature entered the room backwards. He was wearing a long coat and a wide-brimmed felt hat on top of a fashionable wig. With both his hands he was holding a wicker basket covered gently covered with a piece of leather. The loud clap of the closing door made the visitors of the tavern flinch synchronously. Everyone fell silent for a while and looked at the newcomer. However, the new tavern client did not seem worthy of close attention to the present people, and, bit by bit the former atmosphere of serene fun in the pub was restored.

Antoni van Leeuwenhoek was the culprit of this triumphal entry into the tavern. Carrying his burden at the level of his chest, he began to manoeuvre between the tables in search of a free seat. Although he managed to find such a place in the far dark corner of the tavern - behind the stove and next to the fishermen sleeping in a drunken stupor, the naturalist continued his search, trying to find a better place near the sources of light.

Finally, desperate to find a free place in the central part of the hall, Leeuwenhoek approached a massive blacksmith who alone occupied the whole bench at a table near a pillar with an oil lamp. Together with his friends he was singing some kind of a joyful song. Leeuwenhoek said:

- Dear sir, I'm terribly sorry to bother you, but an urgent matter forces me to cause you some inconvenience ...

- What?! - cried the drunken giant in confusion. He clenched his fists and raised his seat. - How dare you interrupt us when we are performing our favourite verses!

- Trust me, if You move a bit and let me sit next to you, I shall show you something you have never seen before and will hardly ever see in future. - Leeuwenhoek put his basket on the floor, took off his hat and looked at the blacksmith. - I assure you, you will not regret and will never forget this!

- Sounds interesting, lad. But you'd better be right, because if I remain disappointed...- The blacksmith slowly moved away from the edge of the bench and invited Leeuwenhoek to occupy the free space. - Sit down and either surprise me, as promised, or get yourself prepared for a painful thrashing.

- Many thanks! - Said the naturalist. He extracted from his basket an oblong metal object with some glass inserts and put the device on the table. - And now someone, please, ask the tavern keeper to serve us a piece of cheese...

Дорогие друзья!

Один из наиболее популярных трактиров в центральной части города Делфт, что расположен в южной части Нидерландов, на полпути между Роттердамом и Гаагой, в ноябрьский вечер накануне Дня Святого Мартина 1659 года был переполнен оживленно отмечающими предстоящий праздник горожанами. Бледный свет полной луны равномерно лился сквозь запотевшие окна заведения и создавал причудливый контраст с дрожащим освещением внутри помещения, исходившим от свечей и масляных ламп. Среди посетителей трактира преобладали торговцы, ремесленники и рыбаки со своими женами или подругами. Но за отдельными столами можно было увидеть и мелких городских чиновников, которые за неторопливой беседой степенно пили можжевеловую водку и закусывали кусками сыра и ветчины.

Неожиданно дверь трактира распахнулась настежь, позволив потоку холодного воздуха ворваться внутрь и едва не задуть пламя большой дровяной печи... В помещение, пятясь спиной вперед, вошел странный невысокий человек в длинном пальто и широкополой фетровой шляпе поверх модного парика, который обеими руками держал перед собой плетеную корзину, содержимое которой было бережно прикрыто куском кожи. От громкого хлопка закрывающейся двери посетители трактира синхронно вздрогнули и на некоторое время замолчали, обернувшись в сторону вошедшего. Однако личность нового клиента трактира не показалась присутствующим достойной пристального внимания, и, постепенно, былая атмосфера безмятежного веселья в заведении восстановилась.

Антони ван Левенгук, а виновником столь триумфального вхождения в трактир был именно он, приподняв свою ношу на уровень груди, принялся торопливо лавировать между столами в поисках свободного места. И, несмотря на то, что такое место ему удалось найти в дальнем темном углу трактира - за печью, по соседству со спящими в пьяном угаре рыбаками, натуралист продолжил свои поиски, отдавая предпочтение столам вблизи источников освещения.

Наконец, отчаявшись найти свободное место в центральной части зала, Левенгук подошел к массивному кузнецу, который в одиночку занимал всю скамью за столом вблизи столба с масляной лампой и вместе с друзьями распевал какую-то задорную песню, и произнес:

- Уважаемый, мне ужасно неудобно Вас беспокоить, но неотложное дело требует, чтобы я причинил Вам некоторые неудобства...

- Что?! - недоуменно воскликнул хмельной гигант и, сжав кулаки, вскочил со своего места. - Да как ты смеешь прерывать нас во время исполнения любимых куплетов!

- Поверьте, если Вы подвинетесь и позволите мне присесть рядом, то я Вам покажу то, что Вы никогда ранее не видели и вряд ли еще когда-нибудь сможете увидеть, - Левенгук поставил свою корзину на пол, снял шляпу и пристально посмотрел на кузнеца. - Уверяю Вас, Вы не пожалеете, а увиденное оставит неизгладимый след в Вашей памяти.

- Ты меня заинтересовал, дружище, но, если я окажусь разочарован, тебе не поздоровится! - кузнец медленно отодвинулся от края скамьи и жестом указал Левенгуку на освободившееся место. - Присаживайся и либо удивляй, как обещал, либо готовься к мучительной трепке.

- Искренне Вам благодарен! - произнес натуралист, извлек из своей корзины продолговатый металлический предмет с какими-то стеклянными вставками и водрузил

- Cheese?! - The blacksmith turned red again. - Do you want to surprise me with cheese?"

- No, my friend, I want to show you tiny creatures, which are a thousand times smaller than the eye of an adult louse. And in addition I can surprise with the fact that these tiny creatures fill, for example, your entire mighty body! - Leeuwenhoek pinched off a small crumb of cheese brought by the tavern keeper, crushed it into powder with his fingers and touched one of fingers with a metal plate, which he then placed under a lens of his device. - Look through this tube and behold the organisms that exist in cheese consumed by us with such pleasure ...

Half an hour later, the table, where Leuwenhoek was sitting, was surrounded by all visitors of the tavern. People pushed each other away, trying to squeeze themselves closer to the magic microscope.

- So do you are saying, dear Antoni, that these moving "sticks" and "hooks" can be found in the drop of my blood that I'd put on the plate? - The dumbfounded blacksmith couldn't take his eyes from Leuwenhoek and barely resisted his excitement. - But how?! How is this possible?! Here on the table there are the same drops of my blood. Red, no "little creatures" inside! Are you a wizard or a swindler?! You have indeed surprised me and deprived me of calmness! Why did you even come here today? To impress the imagination of people here?

- No, my dear Martin, it's very simple: I haven't left the house for several days. I've been polishing the lenses and building a brand new type of a microscope. And when I finished my work, I found out that I had no food to examine different kinds of bacteria through this device... So, I was simply forced to visit this tavern at such a late hour, disturb your peace and conduct a public experiment! - Leuwenhoek looked around and smiled slyly. - But you have no idea, my friends, how many interesting and useful for science things I have discovered in this blood, as well as saliva, semen, surface of the skin, and organisms of animals and insects...

This digest includes reports, presented on the CXLII International Research and Practice Conference "Traditional and experimental methods of studying and overcoming the medical and biological problems in ensuring the optimal vital functions of human beings and the wildlife" and on the 1st stage of research analytics championship of various levels in Medicine and Pharmaceuticals, Biology, Veterinary Medicine and Agricultural sciences.

We are sincerely grateful to authors of works presented in the digest for active participation in international scientific communications, we congratulate winners and awardees of relevant research analytical championships and we look forward to further participation of these scientists in the Global International Scientific Analytical Project of the IASHE and to their new ideas and scientific innovations.

Yours sincerely, -
Head of the IASHE International Projects Department
Thomas Morgan

May 8, 2017
London, UK



прибор на стол. – А теперь кто-нибудь попросите, пожалуйста, трактирщика подать нам кусочек сыра...

- Сыра?! – вновь вскипел кузнец. – Ты решил удивить меня сыром?!

- Нет, мой друг, я решил показать Вам маленьких животных, которые в тысячу раз меньше глаза взрослой вши. А заодно могу удивить тем фактом, что подобные животные наполняют, например, весь Ваш могучий организм! – Левенгук отломил мизерную крошку от куска сыра, принесенного трактирщиком, растер её пальцами и дотронулся до одного из пальцев металлической пластиной, которую затем разместил под линзой своего прибора. – Вот загляните в эту трубку и полюбуитесь, какие организмы существуют в сыре, который мы все с вами с таким удовольствием поедаем...

Через полчаса вокруг стола, за которым сидел Левенгук, столпились все постояльцы трактира и, отталяющая друг друга, пытались прогиснуться к волшебному микроскопу.

- Так Вы, уважаемый Антони, утверждаете, что эти подвижные «палочки» и «крюочки» находятся в той капле моей крови, которую я поместил на пластину? – ошарашенный кузнец не сводил глаз с Левенгука и едва сдерживал свое волнение. – Но как?! Как это возможно?! Ведь вот же на столе такие же капли моей крови - красные, без всяких там «маленьких животных»! Вы – волшебник или мошенник?! Вы действительно удивили меня и лишили спокойствия! И зачем же Вы сюда сегодня пришли? Чтобы поразить воображение присутствующих?

- Нет, уважаемый Мартин, все очень просто: я несколько дней к ряду не выходил из дома, шлифовал линзы и собирал микроскоп новой конструкции. А когда закончил свою работу, то обнаружил, что у меня нет ни крошки еды, чтобы я мог понаблюдать через этот прибор за бактериями разных видов... Таким образом, мне пришлось в столь поздний час посетить этот трактир, нарушить ваш покой и провести публичный эксперимент! – Левенгук оглядел присутствующих и лукаво улыбнулся. – Но вы не представляете, друзья, сколько интересного и полезного для науки я обнаружил в той же крови, а также слюне, семени, на поверхности кожи, в организмах животных и насекомых...

Данный сборник включает доклады, представленные на CXLII Международную научно-практическую конференцию «Традиционные и экспериментальные методы изучения и преодоления медико-биологических проблем обеспечения оптимальной жизнедеятельности человека и живой природы», а также 1 этап научно-аналитических первенств по медицинским и фармацевтическим, биологическим, ветеринарным и сельскохозяйственным наукам.

Искренне благодарим авторов представленных в сборнике произведений за активное участие в международных научных коммуникациях, поздравляем победителей и призеров соответствующих первенств по научной аналитике, а также с нетерпением ожидаем дальнейшего участия этих ученых в «Международном научно-аналитическом проекте МАНВО», их новых идей и научных разработок.

С уважением и наилучшими пожеланиями, -
Руководитель Департамента
международных проектов МАНВО Томас Морган

«8» мая 2017 г.
Лондон, Великобритания



National Research Analytics Championship

Azerbaijan
Kazakhstan
Moldova
Russia
Ukraine



Open European-Asian Research Analytics Championship

Azerbaijan
Kazakhstan
Russia
Ukraine



International Scientific and Practical Conference

Azerbaijan
Bulgaria
Kazakhstan
Moldova
Russia
Ukraine

EXPERTS OF CHAMPIONSHIPS AND CONFERENCE



ALEXANDER CHIGLINTSEV (RUSSIA)

Doctor of Medicine, Full Professor

Place of work: South Ural State Humanitarian Pedagogical University

Discoveries and inventions: 11 certificates of the Russian Federation of computer programs state registration, 6 patents for inventions of new methods of operations and surgical instruments.

Scope of research interests: practical and theoretical urology, psychology, organization of health care and public health, the legal aspects of medical practice, intellectual property in medicine, patent law.



ALEXANDRA TEGZA (KAZAKHSTAN)

Doctor of Veterinary medicine, Full Professor

Place of work: Kostanai State University A. Baitursynov

Discoveries and inventions: Copyright certificate «Method of producing dry museum preparations of tubular organs»

Scope of research interests: Pathology of the reproductive system of cows;
The pathogenesis of foot rot among sheep.



BAKAR SUDHIR (INDIA, USA)

DM, Cardiology Centre (Agra).



DANI SARSEKOVA (KAZAKHSTAN)

Doctor of Agricultural sciences, Associate Professor, Acting Professor

Place of work: S. Seifullin Kazakh Agro Technical University.

Discoveries and inventions: patent pending.

Scope of research interests: forest plantations, irrigation forestry.



GABRIEL GRAZBUNGAN (SWITZERLAND)

DSc, co-owner of an international agricultural corporation.



GALINA KHIMICH (KAZAKHSTAN)

Candidate of Biology, Associate Professor.

Place of work: Innovative University of Eurasia, Pavlodar.

Scope of research interests: Problems of adaptation of organism when influenced by different etiological factors, problems of developmental physiology.



GEORGE CRUIKSHANK (UK)
HScD, cal clinic “تکرب” (Damask, Syria)



HOKUMA KULIEVA (AZERBAIJAN)
Doctor of Biology, Full Professor

Place of work: Baku State University, Institute of Zoology of the Azerbaijan National Academy of Sciences.

Discoveries and Inventions: Patent I 2003 0100, Patent I 2012 0091

Scope of research interests: entomology, ecological physiology.



MAXIM KOSTIN (RUSSIA)
Candidate of Agricultural sciences

Place of work: Russian Academy of Sciences - Institute of Forest Science

Discoveries and inventions: Patent application submitted in 2013, pending.

Scope of research interests: Rational nature management, protective afforestation, restoration of forest plantations.



LASZLO KORPAS (HUNGARY)
East European Cynology Association, PhD



LIUDMILA KOKOLOVA (RUSSIA)
Doctor of Veterinary medicine, Head of the laboratory

Place of work: Yakut Research Institute of Agriculture (Yakutsk).

Discoveries and inventions: FIIP Patent for invention №2532977, 2014
Certificate №2014621492, 2014

Scope of research interests: Veterinary medicine, helminthology, parasitology, microbiology, biotechnology



SAITO KANO (JAPAN)
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SUSANNE KRAUSE (GERMANY)
The Menarini Group Company, DM



THOMAS STEVENS (USA)
The Department of supervision of animal populations in urban areas
(Indiana, Indianapolis, IN), D.Sc.



YELENA SHARACHOVA (RUSSIA)
Doctor of Pharmaceutics, Full Professor

Place of work: Altai State Medical University.

Scope of research interests: human resource management in health care, pharmacoecomics, rational use of medicines.



YURIY LAKHTIN (UKRAINE)
Candidate of Medicine, Associate Professor

Place of work: Kharkiv Medical Academy of Postgraduate Education

Scope of research interests: dentistry, dental diseases, periodontal tissues, oral mucosa, anesthesiology in dentistry, physiotherapy, dentistry, dental filling materials, the organization of health care, drug treatment in dentistry, pharmacotherapy in dentistry, dental ecogenic



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AWARD PROTOCOL № 142 c-2017

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Following the results of the I stage of the Championship in Medicine, Pharmaceuticals, Biology, Veterinary Medicine and Agriculture, held within the framework of the National Research Analytics Championship and the Open European-Asian Research Analytics Championship, the Championship Organizing Committee and IASHE regional expert council decided to single out the following reports as the best research works presented at the championships:

OPEN EUROPEAN-ASIAN RESEARCH ANALYTICS CHAMPIONSHIP

Absolute championship

Agricultural Sciences

Bronze decoration,
Money bonus in the amount of Euro 25 and 50 credits

Maxim Kostin

Biology

Bronze decoration,
Money bonus in the amount of Euro 25 and 50 credits

Oxana Khlukshevskaya,
Galina Khimich

Pharmaceutics

Bronze decoration,
Money bonus in the amount of Euro 25 and 50 credits

Nataliia Bondarenko,
Mykola Blazheyevskiy

Veterinary

Bronze decoration,
Money bonus in the amount of Euro 25 and 50 credits

Alexandra Tegza

NATIONAL RESEARCH ANALYTICS CHAMPIONSHIP

Absolute championship

Medicine

Ukraine

Silver decoration,
Money bonus in the amount of Euro 30 and 60 credits

Liubov Hryhorenko

Bronze decoration,
Money bonus in the amount of Euro 25 and 50 credits

Olena Vasilenko,
Olena Viedienieieva,
Valentin Drozda

Pharmaceutics

Ukraine

Bronze decoration,
Money bonus in the amount of Euro 25 and 50 credits

Nataliia Bondarenko,
Mykola Blazheyevskiy

All the participants of championships except those who were awarded with diplomas receive certificates of participants of the championship.



On behalf of the Organizing Committee and the Commission of Experts
I stage of the Championship in Medicine, Pharmaceutics, Biology,
Veterinary Medicine and Agriculture
of the National research analytics championship
and the Open European-Asian research analytics championship

Head of IASHE International Projects Department
Thomas Morgan

Morgan

MINIMALLY INVASIVE SURGERIES IN TREATMENT OF PATIENTS WITH CLOSED CONCOMITANT ABDOMINAL TRAUMA

A. Plotnikov, Surgeon
Yu. Hrubnyk, Dr. of Medicine, Head of Surgery Department
Odessa National Medical University, Ukraine

Conference participants

В статті проаналізовані результати діагностики і лікування 822 постраждалих при закритій соєтанній абдоминальній травмі. У 428 пацієнтів в лікувально-діагностичному алгоритмі застосовувалася лапароскопія. В 150 (35%) випадках не було виявлено суттєвих пошкоджень, і операція завершилася дренажуванням брюшинної порожнини. В 162 (37,9%) випадках проведено лапароскопічні операції і в 116 (27,1%) випадках проведена конверсія (лапаротомія). Післяопераційна летальність складала 5 (3%) випадків.

Ключові слова: лапароскопія, операція, абдоминальна травма, політравма.

У статті проаналізовано результати діагностики і лікування 822 постраждалих при політравмі з переважним пошкодженням органів черевної порожнини і грудної клітини. У 428 пацієнтів в лікувально-діагностичному алгоритмі застосовувалася лапароскопія. У 150 (35%) випадках не було виявлено суттєвих пошкоджень, і операція завершилася дренажуванням черевної порожнини. У 162 (37,9%) випадках зроблені лапароскопічні операції і в 116 (27,1%) випадках проведена конверсія (лапаротомія). Післяопераційна летальність складала 5 (3%) випадків.

Ключові слова: лапароскопія, операція, абдоминальна травма, політравма.

The article analyzes the results of diagnosing and treatment of 822 patients with polytrauma with the prevailing abdominal and thorax injuries. In 428 cases laparoscopy has been used for the purposes of diagnosing and treatment. In 150 (35%) cases, no significant injuries have been discovered, and the surgery ended with the abdominal drainage. In 162 (37.9%) cases, laparoscopic surgery and in 116 (27.1%) cases, the conversion (laparotomy) have been done. Post-surgical mortality was 5 (3%) cases.

Keywords: laparoscopy, surgery, injury, polytrauma.

Introduction

Delivery of medical aid to the injured patients with the closed concomitant abdominal trauma retains a high level of diagnostic errors, post-surgical complications, disability and mortality, which indicates the need of further improvement of diagnostic algorithms and surgical aid in this category of patients [Abacumov and co-authors, 2005; Yartsev and co-authors, 2008]. Minimally invasive operations have won wide application in the foreign and national surgery during the last years. They have been used even more frequently for the patients with emergency surgical diseases thanks to the practical implementation of modern technologies. Enhanced life quality of patients, reduced time of their stay in the hospital, as well as reduced time of their temporary disability and amount of complications make the important advantages of these surgeries.

The aim The aim of our investigation was to enhance health care efficiency for patients in case of closed concomitant abdominal trauma.

Methods and materials

We used to observe 822 injured patients with concomitant trauma with the prevailing abdominal injuries. 204 of them underwent immediate laparotomy. In 428 cases we performed laparoscopy. During laparoscopy, no abdominal injuries were discovered in 150 cases, and the surgery was diagnostic. 162 patients underwent laparoscopy, and in 116 cases, due to technical troubles and contraindications for laparoscopy, conversion was made and laparotomy was performed. It appears to be impossible to compare 428 patients after laparoscopy and 204 patients after laparotomy because of different gravity of the general state of patients and different gravity of injuries. Therefore, we took the main group of 428 patients after laparoscopy (group 1) and a reference group of 100 patients (group 2) who underwent treatment before laparoscopy surgeries started to be performed in order to evaluate efficiency of laparoscopy for concomitant traumas with the prevailing abdominal injuries. Retrospective analysis of the reference group of patients was performed so that this group does not differ significantly from the main of group of patients by such criteria as: average age, average score under SAPS 2, level of abdominal injuries under OIS. Pre-surgical period played an important role in the predicted treatment of patients with polytrauma, and its mean time from the moment of trauma to admission to hospital was also used in comparison of the groups.

For the purpose of more effective evaluation of the influence of a certain surgical method during the post-surgical period for patients with closed concomitant abdominal trauma, each group was divided into additional subgroups. There were subgroup 1a of patients after diagnostic laparoscopy (150 persons, 35%) and subgroup 2a (25 persons, 25%) consisting of the patients from the reference group who underwent diagnostic laparotomy.

The next subgroup 1b separated from the main group of patients consisted of the patients after laparoscopy (162 persons, 37.9%). The subgroup 2b consisting of 50 (50%) patients who underwent similar surgeries using a laparotomy method was separated from the reference group of patients.

The subgroup 1c consisted of 116 patients from the main group (27.1%) who underwent conversion in the course of laparoscopy, and 25 patients with the abdominal injuries of degree 3-4 under the AIS scale (25%) were separated from the reference group for the purpose of comparison.

It should be noted that the reference group of patients was arranged retrospectively so as to get the least difference from the main group by age, time from trauma to admission to hospital, level of severity of the physiological state, and severity of abdominal injuries, which gave us a more objective evaluation in our further study.

A certain diagnosing algorithm was used, including laboratory tests, U/S of abdominal cavity organs, multiple-view X-ray imaging, observation catheter setting, CT, MRI, and laparoscopy.

Bleeding of parenchymal organs was stopped using our patented method of U-shaped hemostatic suturing on the mesh implant Rebound HDR with the Nitinol frame. The mesh was introduced to the abdominal cavity through the laparoscopic port, after which it uncumbled in the abdominal cavity immediately thanks to the Nitinol frame. Then the mesh was put on the diaphragmatic surface of liver, and a similar mesh – on the visceral surface of liver. U-shaped sutures were put on liver through the meshes. As the mesh was in constant tension due to the Nitinol frame, the suture pressure was spread uniformly over the mesh surface, which prevented liver

tissue from being cut with sutures. It ensured safe hemostasis. For better hemostasis we used fibrin glue TachoComb in combination with the framed mesh, which was applied to the section line and was put under the mesh to the section line. In the latter case the mesh performed a plugging and fixation function.

For the purpose of diagnosing thorax injuries we used X-ray thorax imaging, computer tomography, and magnetic resonance imaging. In some cases pleural puncture was done.

Upon detecting a considerable blood volume in the pleural cavity, thoracoscopy was done. During the thoracoscopy we discovered the source of bleeding after the aspiration of blood and blood clots, followed by coagulation of bleeding vessels.

Thoracoscopy was done in 48 cases as follows: the patient lies in the lateral position on the healthy side on a roll placed between the 4th and 5th rib, which ensures maximum spreading of ribs from the intervention side and provides good visualization of pleural cavity, all sections of diaphragm and mediastinum. Based on the data [Om and co-authors, 2005], it has 100% sensitivity, 97% specificity, and 98% accuracy. To introduce thoracoscope we used a point in the fifth or sixth intercostal space at the midaxillary line. After introducing thoracoscope we also did two or three additional thorax sections, when necessary, and set ports for introduction of manipulators and instruments.

Results:

We analyzed the results of diagnosing and treatment of 822 patients with closed concomitant abdominal trauma. No major injuries were discovered in 190 patients during the examination, which allowed to treat them without surgery. In 204 cases major abdominal and thorax injuries were discovered during the examination, which served an indication for emergency laparotomy. In 428 cases laparoscopic diagnosing was done to ascertain the diagnosis. In 150 out of 428 video laparoscopies no major abdominal injuries were discovered, and the intervention ended with the abdominal drainage. In 162 cases laparoscopic surgeries were done. During laparoscopic surgeries we widely used electrocoagulation in different modifications for the purpose of bleeding control. Besides, to stop bleeding and achieve safe hemostasis we developed and implemented in practice a method of fixation of polypropylene and other kinds of meshes on an elastic Nitinol frame to the rupture line of parenchymal organs (patent dated December 26, 2011, No. 66396).

In some cases TachoComb was put under the mesh to the rupture line for the purpose of safe hemostasis.

In 41 cases, in the case of live injury degree III according to OIS (Organ Injury Scaling) with the subcapsular hematoma of over 25-50% of liver surface with the continued bleeding, the method of Nitinol frame-based mesh implant application was used. Hemostasis applied according to our methodology (application of a polypropylene mesh on an elastic Nitinol frame) turned out to be very effective in the cases of subcapsular hematomas with the continued bleeding and in the case of intrahepatic hematomas. No recurring bleeding was observed in any of 34 cases. Abdominal cavity was subject to mandatory drain in the dextral hypochondrium with PVC drainage.

For the purpose of mitigating the risk of irreversible shock occurrence and replenishing circulating blood volume for patients with the apparent medium and heavy blood loss, we have widely used autohemotransfusions using Cell Saver 5 for 43 patients.

Cell Saver 5 allowed extending the list of indications for laparoscopy and laparoscopic surgeries even in case of hemoperitoneum of up to 1,500 ml, and limiting the scope of contraindications for laparoscopic interventions considerably, paying more attention to the state of hemodynamics and cardiovascular disorder. Based on our data we believe that the contraindications to laparoscopy in the case of abdominal injuries include terminal state of patients, multiple injuries of hollow organs, general purulent peritonitis, massive intra-abdominal bleeding (over 1500 ml of blood), diaphragm injury, and certain combinations of injuries characterized by the crush injury of internal abdominal organs. Therefore, the use of laparoscopic technologies for abdominal injuries is appropriate. Wide diagnostic and treatment opportunities of the method determine not only its expediency, but also the need of a reasonable active surgical tactic. According to our data, laparoscopic surgeries allow to exclude unnecessary laparotomies, to perform a complete surgery in over a half of patients (62%) who need endovideolaparoscopic interventions.

It appears to be impossible to compare 162 patients after laparoscopy and 320 patients after laparotomy because of different gravity of the general state of patients and different gravity of injuries. For the purpose of evaluating laparoscopy efficiency for closed concomitant abdominal trauma we took a reference group of 100 patients who underwent treatment before laparoscopy started to be performed and had the injury level not exceeding level 1-3 under the OIS scale, which corresponding to the level of abdominal and thorax injuries of the patients who underwent laparoscopy. For the purpose of data accuracy, we divided the investigated groups of patients into subgroups.

In the first subgroup (1a) we studied the influence of diagnostic video laparoscopy and explorative laparotomy (2a) on the post-surgical period, taking into account the treatment results in the subgroups under investigation.

Intraoperative data of the subgroups 1a and 2a showed the absence of or minor abdominal injuries which did not require surgical treatment, and little hemorrhagic exudate (up to 120 ml) resulting from retroperitoneal hematoma, mesentery and mesocolon, with minor ruptures. In all cases there was no exact surety about the absence of abdominal trauma after using non-invasive diagnostic techniques, which served an indication for diagnostic laparoscopy in group 1a of patients, and laparotomy – in group 2a of patients. Duration of the surgery was considered an important factor affecting the post-surgical condition. Thus, the time of diagnostic laparoscopy in subgroup 1a was 25 ± 5.21 min ($M \pm m$), while diagnostic laparotomy in group 2a took 62 ± 7.89 min. Student's t-test significance $p < 0.05$, the differences are statistically accurate.

The most prominent differences between laparoscopy and explorative laparotomy showed themselves during the post-surgical period. Recovery of peristalsis was one of the factors. Patients (72%) in the subgroup 1a had their peristalsis recovered on the first day of the post-surgical period, while in subgroup 2a only 5 patients (20%) had their peristalsis recovered on the first day ($p < 0.05$).

Introduction of narcotic analgesics was avoided in 80 cases (53.33%) in the subgroup 1a, while in the subgroup 2a narcotic analgesics were introduced to all patients on the first day. It should be noted in the subgroup 1a 32 patients (21.33%) did not need any anesthesia.

The following post-surgical complications were studied and analyzed as most frequent ones: post-surgical wound infection, pneumonia, eventration. These data are shown in Table 1. Therefore, diagnostic laparoscopy in case of concomitant abdominal injury shows incontestable advantages of this method compared to the traditional diagnostic laparotomy, thus considerably affecting the post-surgical course.

For the purpose of evaluating laparoscopy efficiency we compared two other subgroups, that is subgroup 1b of patients after laparoscopy and 2b group with the similar pathology, who underwent laparotomy.

The biggest differences between the video-laparoscopic and traditional laparotomic intervention are observed during the post-surgical period. Treatment duration in the intensive care unit after the video-laparoscopic surgery was 0.84 ± 0.4 days; for patients who underwent laparotomic surgery it made 1.20 ± 0.4 days ($p > 0.05$), and for patients who underwent curative laparotomy it made 2.60 ± 0.7 days. We should also consider the extended period of stay in the intensive care unit to 3.08 ± 0.7 days in case conversion is needed.

Comparison of post-surgical complications in the reference groups of patients is shown in Table 3. Having united these data, we got an accurate ($p < 0.05$) difference proving the advantage of laparoscopy over laparotomy. The comparison results for subgroups are given in Table 3.

The subgroup 3 included patients of the main group who underwent conversion during laparoscopy and patients who underwent surgery directly in the course of laparotomy. In this category of patients we analyzed the influence of conversion on the post-surgical course of patients with the closed concomitant abdominal trauma. It should be noted that conversion is primarily affected by a more severe degree of injury (degree 3 or higher under the OIS scale) of one anatomic organ, and not by lighter injuries (degree 1-2 under the OIS scale) of several abdominal organs. We singled out post-surgical complications in the main and reference subgroups, the types and quantity of which are shown in Table 4.

Having analyzed post-surgical complications in subgroups 1c and 2c, we did not observe the accuracy of differences among the investigated groups by determining Student t-test ($p > 0.05$).

The duration of stay in the emergency department was 4 ± 0.95 days for patients of the subgroup 1c, and 4 ± 1.1 days for patients of the subgroup 2c. The accuracy of differences in the investigated groups was not discovered as well ($p > 0.05$).

Recovery of peristalsis of patients in the subgroup 1c was observed on the 3 ± 1.2 day, in the subgroup 2c - on the 3 ± 1.1 day ($p > 0.05$).

Narcotic analgesics were introduced to patients of the subgroup 1c for 3 ± 0.78 days, and to patients of the subgroup 2c - for 3 ± 0.95 days ($p > 0.05$).

Results and discussion.

1. It has been ascertained reliably ($p < 0.05$) that the average bed-day after laparoscopic interventions is less than that after laparotomic surgeries, and makes 5.64 ± 0.4 vs. 8.25 ± 0.39 . The average bed-day in the intensive care unit during the post-surgical period after laparoscopic surgeries also decreased to 0.84 ± 0.4 days. Laparoscopic surgeries entail less post-surgical complications (9%) than laparotomic surgeries (32%). The mortality rate after laparoscopic surgeries decreased to 3%, while mortality in case of laparotomic intervention made 9%.

2. Our methods of laparoscopic bleeding control in case of injury of parenchymal organs using a polypropylene mesh allow to extend the list of indications for laparoscopic surgeries and increase their efficiency considerably.

3. Having performed comparative analysis of the post-surgical course we may arrive to a conclusion that laparoscopy with further conversion, which prolongs the time of surgery, does not affect the results of treatment of patients with the closed abdominal concomitant injury.

In our opinion, the cause of the absence of difference in the results of treatment of the patients who underwent laparotomy and patients who underwent conversion after laparoscopy, which extended the time of surgery was application of the cell salvage device CELL SAVER 5, which stipulated application of medical manipulation in the first minutes of laparoscopy amid the prominent hemoperitoneum and lasting bleeding from parenchymal organs, which stabilized to a considerable extent the hemodynamics of patients with the concomitant closed abdominal trauma, thus preventing development of a severe form of hemorrhagic shock. In contrast, compensation of blood loss was much slower and less effective during the laparotomy before the cell salvage device started to be used.

Tab. 1.

Post-surgical complications in subgroups 1a and 2a.

Types of complications	Group 1a (diagnostic laparoscopy) n=190	Group 2a (diagnostic laparotomy) n=25	p*
Post-operative wound infection	0	2 (8%)	$p < 0.05$
Gastrointestinal tract	2	1(4%)	$p < 0.05$
Pneumonia	8(4.2)	2 (8%)	$p < 0.05$

Tab. 2.

Post-surgical complications in subgroups 1b and 2b.

Types of complications	Laparoscopy patients (1b) n=162	Laparotomy patients (2b) n=50
Bile leak	3	2
Pneumonia	5	6
Eventration	-	2
Post-operative wound infection	-	5
Trocar wound infection	4	
Cystitis	3	1
Total	15	16

Tab. 3.

Efficiency of laparoscopic surgeries compared to traditional surgeries

Group of patients	Number of patients	Average number of bed-days	Post-surgical complications	Mortality rate
Patients who underwent laparoscopic surgeries	162	5.64 ± 0.4	15(9%)	5(3%)
Patients who underwent laparotomy	50	8.25 ± 0.39	16(32%)	4(8%)

Tab. 4.

Post-surgical complications in subgroups 1c and 2c

Post-surgical complication	Subgroup 1c n=116	Subgroup 2c n=25	p*
Post-operative wound infection	16(13.79%)	4(12%)	$p > 0.05$

Surgery

Pneumonia	6(5.17%)	2(8%)	p>0.05
Eventration	1(0.86%)	0	p>0.05
Gastrointestinal tract	7(6.03%)	1(4%)	p>0.05
Biliary fistula	2(1.72%)	0	p>0.05
Total	32 (27.58%)	7(24%)	p>0.05

References:

1. Abakumov M.M. Diagnostics abdominal injuries in combined trauma., In: Abakumov M.M., Lebedev N.V., Malyarchuk V.I. Abdominal injuries in combined trauma. – Moscow., OAO Medicina Publisher's 2005. pp. 1–176. Video laparoscopy in diagnosing and treatment of patients with closed abdominal injury., A.A. Gulyayev, G.V. Pakhomova, P.A. Yartsev, V.T. Samsonov, M.V. Radygina., Collection of abstracts «9th Moscow International Congress of Endoscopic Surgery». – Moscow., April 6-8, 2005. pp. 104-106.
2. Kapshitar A.V. Specifics of diagnostic laparoscopic interferences for patients with the closed trauma of small bowel., A.V. Kapshitar., Clinical Surgery. – 2012., No. 10., pp. 57-59.
3. Mishchenko V.V. Thoracoabdominal trauma in the practice of urgent surgeon - optimization of the aid delivery algorithm., V.V. Mishchenko, V.V. Grubnik, V.V. Goryachy., Bulletin of Vinnitsa National Medical University. - 2014. - Vol. 18, No. 1. - P. 87-90.
4. Methods for improving treatment results for the patients with multisystem and concomitant injuries., V.N. Chernov, A.A. Pushkov, I.I. Taranov, V.T. Yuskov., Medical aid delivery in case of concomitant injury: Collection of research works. Vol. 108. - Moscow., 2007., pp. 67-71.
5. Ya. L. Zarutsky. Evaluation of Severity of Injury in Surgical Treatment of Spleen Injuries of Patients with Closed Concomitant Abdominal Trauma., Ya.L. Zarutsky, V.M. Kovalenko, S.A. Aslanyan, O.I. Zhovtonozhko., Surgery of Ukraine. - 2014., No. 2., pp. 20-28.
6. Assessment of nonoperative management of blunt spleen and liver trauma., P.S. Om [et al.], Am. Surg. – 2005., Vol. 71., pp. 379-386.

СИСТЕМА ДОКТОРА А.И. ПОТОПАЛЬСКОГО КОМПЛЕКСНОГО ДУХОВНОГО И МОЛЕКУЛЯРНО-ГЕНЕТИЧЕСКОГО ОЗДОРОВЛЕНИЯ, КАК ВАРИАНТ ПРЕОДОЛЕНИЯ МЕДИКО-БИОЛОГИЧЕСКИХ ПРОБЛЕМ ОБЕСПЕЧЕНИЯ ОПТИМАЛЬНОЙ ЖИЗНЕДЕЯТЕЛЬНОСТИ ЧЕЛОВЕКА И ЖИВОЙ ПРИРОДЫ

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Авторами даны для широкой аудитории варианты решения проблемы обеспечения оптимальной жизнедеятельности человека и окружающей среды через призму комплексного духовного и молекулярно-генетического оздоровления, которые ими были успешно применены на практике, дали позитивные результаты, и совмещают традиционные и экспериментальные методы

Ключевые слова: оптимальная жизнедеятельность человека, молекулярно-генетическое оздоровление, полезные насекомые, ДНК, противоопухолевые препараты

The authors provided to a large audience the solutions to the problem of ensuring the optimal human life activity and the environmental protection through the prism of complex spiritual and molecular genetic recovery, which they have been successfully applied in practice, have yielded positive results, and combine traditional and experimental methods

Keywords: optimal human life activity, molecular-genetic recovery, beneficial insects, DNA, antitumor drugs

В XXI веке информационных технологий можно получить чрезвычайно много ответов из различных информационных источников на вопрос оздоровления и обеспечения оптимальной жизнедеятельности человека и окружающей среды. Одновременно в лавине информации сложно отделить «зерна от плевел». В таких случаях ищут непрерываемые источники знаний, подтвержденные наукой, испытанные веками. По нашим убеждениям (авторы статьи являются представителями организаций, ратующих за сохранение жизни на Земле в единении человека со своим Творцом и Природой), совместное использование духовного, в качестве фундамента, и через призму духовного инновационного – есть путь решения всех глобальных проблем выживания человека и Природы.

Профессором Анатолием Ивановичем Потопальским совместно с коллегами разработана комплексная методика молекулярного оздоровления людей и окружающей среды, разделенная на духовное и физическое оздоровление. Она вошла в «новое научное направление целенаправленного улучшения структуры природных биологически активных веществ с получением препаратов, которые на молекулярном и генетическом уровнях оздоравливают человека и окружающую среду. В институте молекулярной биологии и генетики НАН Украины (ИМБИГ НАНУ) и институте оздоровления и возрождения народов Украины (ИОВНУ) получены оригинальные препараты с противоопухолевым, противовирусным (в т.ч. и против СПИДа), иммуномодулирующим и противорадиационным действием, разработаны способы использования их влияния на биологические процессы в медицине, ветеринарии, сельском хозяйстве. Наиболее известные из них - амитозин и изатизон, которые защищены авторскими свидетельствами и многими зарубежными патентами.»[1] Методика оздоровления прошла многолетние лабораторные и клинические испытания, базируется на фундаменте, прежде всего, духовности. Почему духовное оздоровление ставится во главе этой методики? Обратимся к Священному Писанию. С 1 главы книги Бытия читаем, что