действия на очаг в пародонте и организм больного в целом, и соблюдение правильной последовательности их применения.

В период ремиссии необходимо проведение повторных курсов лечения и восстановительной терапии с целью профилактики обострений хронического процесса в пародонте.

Предложенная новая индивидуализированная лечебно – профилактическая программа удобна для использования, хорошо переносится пациентами, не имеет побочного действия и противопоказаний к применению, а так же демонстрирует выраженный терапевтический эффект.

НОВЫЙ СПОСОБ ИНТРАОПЕРАЦИОННОЙ ПРОФИЛАКТИКИ ОБРАЗОВАНИЯ СПАЕК ПРИ ОПЕРАЦИЯХ НА ОРГАНАХ ЖЕЛУДОЧНО - КИШЕЧНОГО ТРАКТА

Маркосьян С.А.
Мордовский государственный университет имени Н.П. Огарева, курс детской хирургии, Саранск

В настоящее время в России и за рубежом накоплен достаточный научно-практический опыт клинического использования различных лекарственных препаратов и их комбинаций, физических и биологических методов с целью профилактики возникновения послеоперационных спаек и развития, в дальнейшем, спаечной кишечной непроходимости. Однако, ни один из существующих на сегодняшний день методов, в том числе сосудистое и внутрибрюшное введение антикоагулянтов и других препаратов, не может гарантировать от развития спаечного процесса в брюшной полости, особенно при выполнении больших по объему операций. Внутрибрюшное введение антикоагулянтов резко уменьшает выраженность спаечного процесса, но создает предпосылки для развития внутрибрюшного кровотечения, что, безусловно, не удовлетворяет современным запросам хирургии.

Поэтому поиск оптимального способа решения этой проблемы, сочетающего в себе эффективное влияние на предупреждение процесса спайкообразования и исключения возможности развития внутрибрюшных осложнений, связанных с использованием этого способа при операциях на органах желудочно-кишечного тракта, является одной из самых актуальных проблем в мировой хирургии. Начатые в 70-х годах исследования по проблеме послеоперационной профилактики образования спаек так и не дали желаемого результата.

Предлагаемая интраоперационная профилактика спайкообразования в раннем и позднем послеоперационных периодах после выполнения полостных операций на органах желудочно-кишечного тракта по выбору пути введения гепарина с созданием депо препарата не имеет аналогов в мире. Она заключается в интраоперационном введении в клетчатку сосудисто-нервного пучка оперируемого органа раствора гепарина в возрастной дозировке. Введение гепарина в указанную область при лапаротомических операциях производится пункционным методом путем струйного введения препарата с помощью иглы, подсоединенной к шприцу. После введения соответствующей дозы гепарина место пункции лигируется. Создается замкнутое пространство с депонированием гепарина, к которому непосредственно прилежат артериальные, венозные и лимфатические сосуды. Поскольку операционная травма органа всегда сопряжена с расходом собственного гепарина, особенно в области хирургического вмешательства, то его концентрация в крови уменьшаться. По этой причине, согласно закону разности концентраций, гепарин диффундирует из созданного искусственного замкнутого пространства в кровь. Этим достигается оптимальная концентрация гепарина, как естественного антикоагулянта, в кровеносных сосудах поврежденных тканей и предотвращается образование значительного спаечного процесса в этой области. Кроме того, депонирование гепарина в замкнутом пространстве сводит к минимуму опасность развития внутрибрюшного кровотечения, что так боятся хирурги. При лапароскопических операциях принцип остается неизменным с той лишь разницей, что используется соответствующий лапароскопический инструментарий.

Клиническая апробация вышеуказанного способа профилактики спайкообразования при операциях на органах желудочно-кишечного тракта показала достаточно высокую его эффективность.

TOPICAL INTEREST IN MEDICO- ECOLOGICAL ASSESSMENT OF THE RISK IN PEOPLE 'S SICKNESS RATE FROM DRINKING WATER CONTAMINATION BY HEAVY METALS IN THE ARCTIC ZONE WITHIN URBANIZED BARENTS REGION

Megorsky V.V.
INEP, Kola Science Ceentre, Russian Academy of Sciences

The urbanization and constant scientific-technological progress caused environmental geochemical changes that resulted in population sickness rate within well industrialized regions.

Human Health is the main qualitative index of socio-economic development of a country. In all economically developed countries it is to be considered as the prior criteria of the peoples' living standard.

To execute an ecological and human health protection policy under minimum cost (due to budget deficit), one should specify the main pollutants, and the most vulnerable high risk groups of people that require, as a priority, a protected environment and preventative medical treatment.

The main input of trace elements into the human organism depends on the quality of drinking water. And the water itself is the most powerful accumulator of different technogenic and geochemical dynamical processes.

The living conditions in the industrially developed cities are artificially created environment. Chemical content of the air, water, decibel level, electro-magnetic fields, ultraviolet radiation and other urban factors are

very much different from natural environment conditions the people used to live before.

The chemical elements come into human's body with food, water and air. Nevertheless, the main micro-elements amount comes with drinking water. And the water itself is a powerful accumulator of various technogenically affected geochemical streams. For making assessment of geochemical effect on human's body in urbanized centers, one should well understand a regularity of those streams input into human's organism, then to ascertain the effect of those technogenically affected geochemical streams on the change of microelements status and to trace histological dynamics.

Thus, a biochemical indication model should be created. It is possible to make such model on diagnostics of biological substrates (blood, hair, urine and tissues of different organs) for the people living in the cities under different intensity of technogenical effect.

As for me, I offered to use tissues of target-organs as kidney and liver as diagnostical substrate in my research work..

Biogeochemical and morphological relationships give a possibility to come down to studying the people's health and furthermore to form ecologo-geochemical models of the cities with hygienic definition or location the regions of high risk situation.

Apparently, the conception "background content" for the human biological substrates is very conventional. Probably, we won't see "a natural picture of distribution of chemical elements in human's body" as biologically conditioned. There is a rightful chance to use as a standard for analysis of heavy metals biological accumulation the organs of foetus or new-born child.

The problem of interrelationships between a man and environment under Arctic conditions of the Kola region requires active studying anthropological and geochemical dependency specified by intensive environmental pollution from mining-metallurgical industrials. The major pollutant with toxic effect for surface waters within the Kola Peninsular in the Arctic region is Nickel (Ni). Its input into environment is caused by operation activity in the region of two metallurgical smelters "Pechenganickel" and "Severonickel".

Disbalance of micro-elements in the environment and pollution by heavy metals brings about a large scale damage for the people's health and even their life.

Under conditions of the Kola Peninsular in the Arctic region some slow selfpurification processes are taking place while the intensive affect from big industrial complexes leads to pollutants accumulation and their non-identical coming into the human's body, which causes various changes in organism known as "micro-elementosis". The term "micro-elementosis" covers all illnesses and symptoms, caused by deficiency, excess or disbalance of micro-elements in a human's body. By genesis they are subdivided for exogenous (natural and anthropogenic) and endogenous (congenital and inherited)

At the moment, the problem of technogenical micro-elementosis is of main concern.

The main tool in controlling the water quality is determination of its Maximum Allowable Concentration (MAC)..However, the use of hygienic standards in our country and abroad is being made regardless their climate specification. The experiment showed that low temperatures influence significally an absorbtion, distribution transformation and detoxification of poisons.Speaking about medical-ecological problems of the Arctic Region one shoudn't forget about the region specification, where a man always exerts the cold stress.

For the Kola region the main danger comes from heavy metal assotiation, which is a part of polymetall sulfide copper-nickel ores.

The environment complex multidiscipline influence on the Arctic region in the Kola Peninsular puts forward the problem of studying combined effect from nickel and other metals with various ratio of some components and also particular sensitivity of some residential groups to polymetal aerosol pollution .

For making it clear, which element from geochemical environment for this particular area may be a reason for the human;s body biological response one should investigate the main links of biological chemical chain: rock, soil and water. My research work assumes to study, at least, drinking water and effect from heavy metals, as its component, on the human's body urino-genital system.

The aim of the work is to find out the interrelationship between the technogenical load on water sources, and hence, the drinking water quality, and the rate of morbidity for some definite sorts of pathologies. There were considered and picked out oncological pathologies of the organs, bladder stones, gall bladder illnesses, and destructive pathologies of the liver.

The given pathologies pre-dominate in the region considered and have a tendency to a high rate.

For this research work as diagnostical biosubstrate, it was suggested to use tissue of kidney and liver because they are the target organs for heavy metals.

Apparently, the concept of "background content", as applied to human being biosubstrate is very theoretical. Environmentally the "biologically stipulated" picture of the distribution of the chemical elements in the human body is very unlikely to be observed. Possibly, it would be right to use as a standard for analysis of the accumulation of heavy metals, the foetus & new born with correction for pre-morbidity background, taking into account the transplacenta's buffer ability for heavy metals. As an example, a standard drinking water sample could be taken in a settlement where the above illnesses have the lowest incidence.

For the Kola Region, the most dangerous associations are of heavy metals, which are part of polymetal sulphide copper-nickel ores.

Through the data obtained by the National Health Committee, the mortality in Monchegorsk Region for the last five years has increased by 14%, whilst the infant mortality has only increased by 3%. Here the oncological pathology increased by 16%, nephritis pathology by 21%, and hepatitis by 11%. A particularly unfavourable situation developed regarding the growth of malignant tumours. Significant growth of occupational diseases can also be observed.

During the course of this research, 78 pathologic-anatomical preparations were analysed including case histories, and autopsy records of the people who lived in Monchegorsk for less than 10 years and did not work directly at the factory. In the conduct of this research, some

individuals were picked out who were not correctly diagnosed with any kidney or liver failure whilst they were still alive. We were interested in latent illnesses and it is highly probable that chronic intoxication was the starting point in their etiology and pathogenesis. And indeed, in 10 cases we came across individuals who were not correctly diagnosed, whilst alive, with pathological process in their livers. This accounted for 8% from the total sample of individuals.

Normally the discrepancy in making the diagnosis is not more than 1%, which says something about the latent process within the organism. In one case it is haemosideros, and in 5 cases it is toxic destruction, and in 4 other cases it is different kinds of liver dystrophy. Most of discovered dystrophies were toxic. Within 32 preparations, small stones (similar to sand particles) were found and chemically analysed. The analysis has shown that phosphate content predominates.

The objectives of our work is to understand the relationships between the technogenical load of the water source, drinking water quality and human sickness rate in specified pathologies of the population living in the industrialised Kola North.

To bring about the task above one should observe the inter-relationship between the quality of drinking water, by the concentration of HM (Heavy Metals), and accumulation of heavy metals that are absorbed into the human body tissues. And also to estimate the accumulative impact of HM in the human tissues on the growth of a tissue pathology and sickness rate in the researched and defined human groups.

Taking into account the groups considered above, we singled out an oncological pathology of the given organs, urolithic and gall-bladder illness and a destructive pathology of the liver.

The conclusions of the analysis of the data has revealed a mechanism between the accumulation of HM in tissues and the frequency of occurrence of disease both when the MAC (Maximum Allowed Concentration) in drinking water exceeds the norm, and also at normal values in different etiological forms.

1. Under the conditions of the Far Kola North, active accumulation of HM in human tissue of the persons participating in the detoxification processes, occurs during the consumption of drinking water containing HM in concentrations which do not exceed the maximum concentration limit, but taking place in concentration <50% of MAC, and on the upper threshold of the MAC.

2. An estimation of the quality of drinking water and the display of clinical symptoms has allowed us to trace the direct dependencies between the sickness rate МПС? And high accumulation in tissues of Cd, Cr and Pb as in the Monchegorsk studies, and Cd, and Cr for Apatity City.

3. The growth of clinical pathologies at (heptoses?) has a direct correlation dependence on the accumulation of Pb, Cd, and Ni as in the studied cities of Monchegorsk, Apatity and Olenegorsk.

The conclusions show the necessity of carrying out further in-depth research to update the specifications of the quality of drinking water in the Far Kola North. These actions are necessary as part of the overall programme of preventative medical treatment and improvement of the quality of life of the population of the Far North.

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МОРФОФУНКЦИОНАЛЬНЫЕ ИЗМЕНЕНИЯ ДВИГАТЕЛЬНЫХ НЕЙРОНОВ СЕРОГО ВЕЩЕСТВА СПИННОГО МОЗГА МОРСКИХ СВИНОК ПРИ ДЕЙСТВИИ РЕНТГЕНОВСКИХ ЛУЧЕЙ (ЭКСПЕРИМЕНТАЛЬНОЕ ИССЛЕДОВАНИЕ)

Мельчиков А.С., Мельчикова Н.М., Рыжов А.И.
Сибирский государственный медицинский университет, Томск

Все население Российской Федерации на протяжении жизни подвергается действию рентгеновских лучей во время проведения лечебно-диагностических мероприятий. Вместе с тем, недостаточно исследованы морфофункциональные изменения двигательных нейронов серого вещества спинного мозга на уровне его шейного, грудного, поясничного отделов, что и вызвало необходимость проведения нашего исследования, особенно с учетом возможности экстраполяции полученных экспериментальных данных на человека.

Исследование проведено на 81 половозрелой пестрой морской свинке-самцах, массой 400-450 г., из которых 51 использована в эксперименте, а 30 служили в качестве контроля. Экспериментальные животные подвергались действию однократного общего рентгеновского излучения (доза – 5 Гр, 0,64 Гр/мин., фильтр – 0,5 мм Си, напряжение 180 кВ, сила тока 10 мА, фокусное расстояние – 40 см.). В качестве источника излучения был использован рентгеновский аппарат «РУМ-17». Облучение производилось в одно и то же время суток – с 10 до 11 часов в осеннее-зимний период с учетом суточной и сезонной радиочувствительности (Щербова Е.Н., 1984). Выведение живот-