

Video camera is perfect support for surgeons

Unsurprisingly, our busy lifestyles — including processed and fast foods and high levels of stress — can lead to digestive disorders: the most common of health problems. Gastritis and ulcers are almost seen as commonplace, with many students suffering from them, although they rarely alter any aspect of their lifestyle.



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Laparoscopic operations on stomach conducted at Minsk Regional Clinical Hospital

By Maria Golubtsova

Doctors assert that such problems won't solve themselves however, requiring medicine or, even, surgery. Minsk's Regional Clinical Hospital has joined forces with the Belarusian State Medical University's Department for Normal Anatomy and the Belarusian Medical Academy of Post-Graduate Studies' Surgery Department to develop a new treatment for seemingly hopeless patients. Two operations have already been conducted successfully, as State Award laureate Prof. Igor Grishin explains. The doctor of medical sciences is a talented surgeon and believes the approach is truly unique.

Radical approach

Mr. Grishin specialises in operations on the stomach and intestine; he is a 'father' of endoscopic surgery ('the large surgery of small spaces'). Its main principle is to cause as little trauma and disturbance as possible, using a tiny incision and inserting a micro-camera. It's convenient, since

patients recover more quickly, with minimal scarring; the whole medical system benefits, as post-operative care is minimised. People can return home and to work soon afterwards. It saves hospital time and money.

"Until 1986, we preferred to resection the stomach where stenosis and constipation was severe," recollects Mr. Grishin. "Simply, part of the stomach was removed if some of its function failed. Sadly, this had long-term consequences for patients, who would lose some mobility. In cases of ulcers or problems with the dodecadactylon, these organs were removed and repeat surgery was often necessary. With professors Y. Martynov, N. Batvenkov, G. Rychagov, A. Vorobey, V. Lobankov and many others, we began developing unique methods, inventing an operation which would treat stomach-related problems without requiring removal. We began gaining experience with the method but needed a universal procedure to put aside all thoughts of stomach removal. By 1999, we were ready in theory and practice."

Later, endoscopic equipment was developed and Mr. Grishin joined his pupils and surgeons D. Chepik, V. Bochko and S. Lagodich in conducting operations using a modern, attenuated method; it required just four small incisions, allowing a mini camera and instruments to enter. According to Mr. Grishin, our doctors are pioneers in this field globally. He explains, "Other surgeons might think that organs can be preserved in 55-60 percent of ulcer stenosis patients. However, we are ready to conduct organ-preserving operations on all who need them. Previously, 70 percent of patients required a second surgery; now, just 3-5 percent endure repeat operations. It's a great achievement — down from 200 patients a year to no more than around 15-20."

Diagnosis not final

It's wonderful for patients to be able to keep their stomach, since it generates 30 hormones affecting the entire body. Mr. Grishin had one patient who weighed just 41kg at the age of 29 and was no longer able

to eat normally. Now, she is fully recovered, without having had her stomach removed; she doesn't even have a scar. Such an outcome would have seemed miraculous in the past. A morning operation sees patients released by the evening, being able to walk; they return to work in just a couple of days.

The experience of the Minsk Regional Clinical Hospital can certainly be shared more widely, since the necessary equipment is available. Staff need only to be trained. Many people suffer from similar ailments but often fail to receive appropriate help, being operated on incorrectly. One of the first to receive the new method of surgery arrived from Bobruisk; she'd been diagnosed with another problem but, after a medical examination, her stomach was seen to be the cause of her discomfort.

Stomach ulcers and dodecadactylon problems are currently being successfully treated with drugs, although surgical intervention is sometimes needed. Operations are still 'open' but 'keyhole' surgery could also soon be introduced.

Technological solutions to improve search

By Yevgeny Anikeev

Belarus and Russia to create contemporary complexes for seismic surveillance

Scientists from our two countries are to use the *SKIF-Nedra* programme to create modern software and hardware solutions for seismic surveying, explains Alexander Moskovsky, the Director General of Russian RSK Technologies. He notes that major oil companies require such analysis, with several dozen such working in Russia alone.

SKIF-Nedra envisages the development of domestic software and hardware solutions for the future, helping survey for extractable resources. At present, Russian companies are using non-specialised computers and imported software for this purpose, while paying considerably more. "The programme should favourably influence the development of high-tech companies which create high added value," asserts Mr. Moskovsky.

Bait thrown from plane

Wild animals in Belarus vaccinated with help of aviation

"The vaccine for wild animals is in the form of a briquette — grey or dark brown in colour. It weighs up to 30g and is made from forage edible for carnivores," explains the Emergency Ministry. Previously, bait with vaccine was thrown manually but, this year, following the experience of European countries, it was decided to use Bellesavia An-2 planes to deliver the vaccine."

The briquettes are being thrown from planes over the Minsk, Grodno and Vitebsk regions along the border with Lithuania, with planes travelling from the aerodrome in Khozhevo village (in the Minsk Region's Molodechno District). In all, 23 blocks are delivered per square kilometre, with the planes flying 150-200m above the ground, at a speed of 150-180kph. "This is more efficient for immunising wild animals, since it ensures uniform and complete coverage of the whole territory," explains the Emergency Ministry.

World of tanks has real life training application

By Olga Kopylova

Minsk hosts national final of international World Cyber Games-2012

The best players have been chosen across three disciplines, with the popular Belarusian game *World of Tanks* among them for the first time. The winners of the qualifying round are to go through to

represent Belarus in the finals — hosted by China from November 29th to December 2nd. The top gamers are also invited to spend a day at the 72nd Guards United Training Centre in Pechi, where they can learn to drive a real tank.

Andrey Shubaderov, the Head of Vayar Military Information Agency, tells us that the Ministry of Defence plans

to introduce computer technology to help servicemen improve their professional skills. Games such as the popular *World of Tanks* and other simulators (including those for warships and aircraft) can help train personnel. Software is now being developed, with an automatic cut off after a set period, to ensure that users take a break.



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