

A VIEW CONCERNING THE PROBLEM OF TREATMENT AMONG PATIENTS WITH MECHANICAL JAUNDICE OF NONNEOPLASTIC GENESIS

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Retrospective analysis of 218 case histories of patients with mechanical jaundice of nonneoplastic genesis in the period from 2005 to 2009 was done. These patients were on the in-patient treatment (Krasnoyarsk station railway hospital (the first surgical department) and city clinical hospital (the first surgical department)). The comparative evaluations of economic effectiveness in according with duration of hospitalization and costs were revealed. The comparative analysis of data (two hospitals and literature sources) is available in the article.

Keywords: mechanical jaundice, cholangiolithiasis, endoscopic retrograde cholangiopancreatography, endoscopic papillosphincterotomy, retrospective analysis, economic effectiveness

One of the most difficult problems in the emergency management is the treatment of the patients with the abnormalities of bile outflow of the different etiology [1,3]. The main manifestation of these diseases is mechanical jaundice, which exist as a reason of the obstruction of bile ducts. The most often reasons of mechanical jaundice is cholangiolithias, tumorous destruction of the organs of the pancreatobile's zone, cicatrical strictures of hepatocholehod [2].

The last decade is characterised by the significant hightening of the quantity of the patients with the gallstone disease. Naturally, the quantity of the patients with the mechanical jaundice as a reason of the gallstone disease is heightening [4].

Nowadays the actual researches are those, which are about perfection of the system of management the quality of the medical help, including the surgical help, what is conditioned by the existing negative tendencies, as followed: the law quality of the medical help in general, existing of the defects in accordance of the treatment-diagnostic process, the law level of introduction of the resourse-saving technologies. This problem is the most actual today, with the deficite of finansing and limited resources of the system of health care [6,9].

The treatment of the mechanical jaundice is the actual problem of the abdominal surgery. Though there is a great progress in the solving of this task the optimal surgery

tactics of the treatment of the diseases of the bile outflows, with the mechanical jaundice, is not defined so far and is being actively discussed in the sientific periodicals [5,7,8].

On the level of the rendering of the emergency help the main task of treatment is decompression of the bile's tract and it doesn't depend on the reasons of obstruction. During many decades the main way of decompression, have been the emergent surgical intervention. But operations, made on the level of jaundice and liver deficiency, especially treating the old patients, having the significant accompanying pathology are attended by the big quantity of complications and high lethality [10]. It is without doubt that today it is necessary to use sparing, less-invasive interventions for the solving the jaundice. Today for this reason are used the following methods: papillosphincterotomy, nasobile's drenage, mechanical lithotripsy, ballon hydrodilataion, stenting of hepatocholehod. These interventions, liquidating the jaundice and cholangitis, not only let to prpare the patient to the planned intervention, but in many cases can be the alternative to the operative intervention [1,7].

That is why the aim of our research is to do the analysis of the structure of morbidity of the mechanical jaundice of the nonneoplastic genesis for the 2005-2009 years by the data of the first surgery of the Road clinical hospital of the station Krasnoyarsk and the first surgery of the City clinical hospital.

Materials and Methods

Retrospective analysis of 218 medical histories of the patients with the mechanical jaundice of the nonneoplastic genesis for the period since 2005 to 2009, who are on the inpatient treatment in the surgery of the road (1 group) and City (2 group) clinical hospitals. From the research there were excluded the patients with the volume formation of the liver gate, the head of the pancreas, parasitological diseases of the liver. It was diagnosed on the base of complaints, anamnesis, clinic-laboratory data, results of the examination and ultrasound research. All the patients got the traditional therapy (spasmolytics, antibiotics, gemostatics, bloodchanging of the desintoxicational way).

Getting in the researches material was worked by the methods of statistic analysis, used in the biology and medicine and written in the instructions of Slavina (1989) and Lakin (1990). For all the data the average arith-

metical significance was defined (\bar{X}), and the mistake of the average arithmetical significance (x). The estimation of the significance of the differences in the average significance was made with the use of the parametrical methods of the statistic analysis – t-criteria of Student. The critical level of Significance $p < 0,05$.

Results and Discussion

The general quantity of the patients with the mechanical jaundice, entered the Road clinical hospital for the period since 2005 to 2009 is 71 patients. The most quantity of the patients was in 2008 year and amounted to 26,8% from the general quantity, the least – in 2009 – 8,5%. To the City hospital entered 147 patients for this period. The biggest quantity of them was in 2006 and amounted 22,5 % from the general quantity of the entered patients, the least – in 2009 – 17,7%, which is statistically significant ($p > 0,01$), (Table 1).

Table 1

The results of 2 hospitals										
The year	All the patients				The average bed-day		The lethality			
	I		II		I	II	I		II	
	n	%	n	%			n	%	n	%
2005	16	22,5	31	21,1*	27,9±0,8	29,1±1,1	1	6,6	2	22,2
2006	15	21,1	33	22,5*	28,1±1,0	25,5±0,4	6	40,0	2	22,2*
2007	15	21,1	28	19,1*	28±0,8	28,3±0,9	2	13,2	3	33,4
2008	19	26,8	29	19,7*	20,6±0,5	24,1±0,5	5	33,3	2	22,2*
2009	6	8,5	26	17,7*	24,5±0,7	28,5±0,8	0	0	0	0

* – $P > 0,01$ the difference of result is true.

In the Road clinical hospital the dispersion of the patients by the sex sign showed that there were 69% of women and 31% of men. In the City clinical hospital there were 66% women and 34% men. So by this characteristic it does not differ significantly.

The age of the most of the patients with the mechanical jaundice varied from 18 to 80 years old. According to the data of the Road hospital in the researching period the most patients were 66 years old and older, less patients were from 17 to 36 years old. In the

City hospital the data is the same. On this sign the two hospitals do not differ much.

Success in the treatment and the most favourable forecast depends much on the in time help to the patient. That is why we paid attention to the factor of the entering of the patient to the hospital from the beginning of the disease. According to the data of the road hospital the maximum quantity of the patients 83,1% entered in patient department more than 24 hours after the beginning of the disease, earlier – 38,8 % and on the period of 6 hours – 12,9%. As for the season of mor-

bidity there were following differences. In the process of our research the high level of morbidity was defined in winter to the both hospitals. Especially in 2005 and 2008 years, in the Road hospital they were 43,8% and 48% accordingly and 41,9 % and 44,8% in the City hospital. They did not differ much on this sign.

In the last years in the treatment of holedolithias with the opened methods endoscopic interventions are successfully used, for example, endoscopic retrograde cholangiopancreatographics and endoscopic papillosphinterotomy, which are made under the ultrasound and X-ray-TV control. It is necessary to note, that for many patients these methods are only possible ways of treatment. Besides, this intervention lets solve the questions of the differentia diagnostics of the jaundice and define the possibility to do radical operations.

Since 2005 to 2009 year in the first surgery department of the Road hospital there

were operated 70 patients with the mechanical jaundice, from who 43 patients were operated by the opened method (laparotomy, holedolithomy, drainage of holedoh) and 27 operations were made by the endoscopic interventions. For the researched period of time in the City hospital all the patients with this diagnosis were operated, 112 from whom were operated by the opened method, and 35 – by the endoscopic interventions. There are no differences by this sign.

Economic estimation of the effectiveness of the treatment can be expressed in money equivalence, and in the others, and acceptable units, such as frequency of after operation difficulties, duration of the hospitalization, period of disability and others. Their estimation is necessary component in comparison of two different ways of operative interventions in treatment of one disease.

Medico-economical standards in those two hospitals were presented in the table 2.

Table 2

The disease	Bed-day	
	I	II
The lithyasis with endoscopic interventions	18	9
The lithyasis with laparotomy, holedolithomy	25	18
Holedolithyasis	38	37

The average bed-day of being of the patient in the inpatient department in the Road hospital – $20,6 \pm 0,6$ – $28,1 \pm 0,5$, in the City hospital – $20,3 \pm 0,7$ – $32,7 \pm 0,9$.

The duration of being of the patient in the hospital after the operations with different methods differed significantly. The average after operation bed-day after the biliodigestive anastamos and drainage of the holedoh in the Road hospital was $35,14 \pm 1,5$, in the City hospital – $35,79 \pm 1,7$. After endoscopic interventions – in the Road hospital – $7,08 \pm 0,5$ days, in the City hospital – $8,01 \pm 0,7$, there are no statistically significant differences.

For the estimation of the economical effectiveness of the different ways of the operative benefits there were cost the straight medical expences: the cost of the operation, the cost of the after operation period. In the cost of the operation are included: the cost of the anesthesia, the expences on the amortization of the equipment, personnel's wage, cost of the materials.

The cost of the endoscopic interventions in the Road hospital is 1637 roubles and 1903 roubles, if both are done – 3540 roubles.

Being in the hospital costs without the medical insurance – 1426, with it – 746 rou-

bles, if you want to be one in the room – 1798 roubles.

So, the general expenses for the patients with the mechanical jaundice is 26110 roubles, if they are treated by the traditional methods, and if by the endoscopic methods – 8762 roubles.

In the City hospital it will cost 16403 roubles with the traditional methods, and if the endoscopic interventions are done, it will cost 8350 roubles.

The open operations are more expensive and are characterized by the less effectiveness. The endoscopic methods are more effective, but they can be used not in all cases.

In the Road hospital there were no cases of the after operation lethality. The minimum after operation lethality was in 2005 – 1 patient, the maximum – in 2006 – 6 patients. In the 46,7 % of lethality the reasons were the liver deficiency. In the 33,3 % the reason was the two sided pneumonia.

In the City hospital in 2009 there were no lethality by this pathology. In 2005, 2006 and 2008 died 2 patients every year. In 2007 3 patients died. By this sign the hospitals don't differ much. The reasons of the lethality are the same, as in the Road hospital.

Conclusions

So, according to the data of the surgery departments of the Road and City hospitals since 2005 to 2009 the quantity of the patients with the mechanical jaundice increased. The two-third of the patients were women, the most of them were 60 years old and older. Endoscopic methods of interven-

tion are more effective, but the use of them is limited by the cases.

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