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THE METHODS TO IMPROVE SECURITY ENDOSCOPIC TRANSPAPILLARY SURGERY IN CHOLEDOCHOLITHIASIS

ABSTRACT

The article highlights the issues of improving the safety of endoscopic transpapillary interventions at choledocholithiasis to reduce the risk of its serious complications - bleeding and perforation of the duodenum wall, expanding indications for emergency and routine endoscopic retrograde cholangio - pancreatography with endoscopic papillosphincterotomy and mechanical stone extraction in patients with a high degree of operational risk (comorbid diseases, elderly and senile age).

Keywords: safety increase, endoscopic papillosphincterotomy, reduction of complications, expansion of indications of emergency endoscopic retrograde cholangio - pancreatography, a high degree of operational risk.

INTRODUCTION

Quality of rendering the emergency medical care in no small measure depends on activity of auxiliary profile surgical endoscopic office. During the round-the-clock watch the endoscopist works as a part of surgical crew. Development by all doctors of endoscopic office of operational types of research for rather short time promotes uninterrupted rendering the emergency medical care by high-tech low-invasive methods. When performing diagnostic endoscopic testing direct transition to medical and expeditious manipulations is possible, that allows executing not only palliative, but also radical treatment of an acute surgical disease at a diagnostic stage of rendering medical help. In the conditions of North sharp surgical diseases have the specifics, the extreme influences of environment caused by a complex. Remoteness of settlements and dependents of transport connections on climatic conditions quite often promote to the late address of patients with an acute surgical diseases behind medical care that can lead to development of complications. This category of patients comes to hospital with an average and a serious general condition, with violations of functions of various systems of an organism (violation of duration and coagulability of blood, etc.). Urgent and safe performance of the emergency endoscopic research, with elimination of the complications menacing to life of the patient elimination of the block bile-excreting ways and restoration of a passage of bile, etc.). Helps to win time for training of the patient for a band surgery. Promotes decrease in a lethality of heavy category of patients. The most terrible complication of cholelithiasis (cholelithiasis) is the mechanical jaundice (obstructive jaundice), cholelithiasis is the most frequent reason of development of and makes, according to various authors of 37-66%. The sparing low - invasive method allowing to eliminate the reason of mechanical jaundice and to restore ways for bile outflow is the complex endoscopic retrograde cholangiopancreatography (ERChPG) with performance of an endoscopic papillosphincterotomy (EPST) and the mechanical extraction of concrements (MEC). The emergency researches are quite often carried out difficult conditions (the general serious condition of the patient, violation of functions of an organism, after hours, without assistants in a short space of time).

MATERIAL AND METHODS

The electrosurgical UES block-10, phibroduodenoscope and tools to them (a catheter, string and needle papillotomy, a basket of Dormia) "Olympus" firms were used. Intracavitary expeditious endoscopy, in particular EPST (a cut of BDS and a longitudinal fold) is carried out of by influence of the current of high frequency (CHF) at various parameters of the mode in power. CHF (current high a frequency up to 1 million cycles per second), passing through fabrics, leads to heating of intracellular liquid to high temperatures and destruction of cages the formed steam. CHF can be cutting, coagulating and mixed depending on the size of electrotodes and current. These parameters the endoscopist (selection of the mode and power of current) establishes. Inclusion of the mode "cutting" or "coagulation"

is carried out by pressing the corresponding foot pedals. At the "mixed" mode pressing a pedal "cutting" joins at the same time both cutting and coagulation. Power of CHF varies from 1 to 5 watts and above. For decrease in risk of developing of bleeding and perforation of a wall of a duodenum we picked up the optimum mode and power of cutting (OMPC) by the current of high frequency (CHF): the mode - "mixed" the power - 3,5 of watts. For increase of tightness of a phibroendoscope between the case and a cap of the bioptic valve the rubber strip is inserted (it is cut out from a disposable glove).

RESULTS AND DISCUSSIONS

We carried out the retrospective analysis from 2010 to 2014, executed 504 ERPChG, including with endoscopic papillosphincterotomy (EPST) and the mechanical extraction of concrements (MEC). Statistical data in separate years have certain errors due to need of repair of the endoscope and acquisition of tools to them therefore for composition average values in 5 years are taken. According to the table n.1 from 2010 and for 2014 one-stage performance of complex ERPChG increased on average from 20% to 35%. Performance of ERPChG (including medical quick ERPChG) according to the emergency indications increased on average from 20% to 50%. The emergency operational ERPChG is executed in 18 cases at indications of duration and coagulability of blood from 6 min. to 8 min. Short-term insignificant capillary bleeding was noted in 11 cases from total of EPST (256) that made 4,2% which was stopped by an irrigation of river of AKK of 5%, research in all cases executed full. The venous bruise was noted in 3 cases (1,2%) which was stopped by electrocoagulation (ranging from 2,24 and to 5,3% of cases). After endoscopic hemostasis of a venous bruise in 2 cases reseated is executed in full, in the 1st case research time is transferred. It wasn't noted retrograde perforation of a wall a duodenum. In 2010 by results of ERPChG concrements in 28 cases (the sizes from 0,3 cm are revealed in the general bilious channel and to 2 cm), from them in 5 cases large concrements by the sizes from 1 cm and to 1,5 cm are taken. In 2 cases because of the bug size concrements aren't taken. From total of ERPChG (77) it is executed an endoscopic retrograde cholangiography (ERChG) in 36 cases (48%). Attempt of ERPChG - 3. Endoscopic retrograde pancreatography (ERPG) - 2. In 2011 by results of ERPChG concrements in 55 cases are revealed in the general bilious channel, from them in 10 cases large concrements from 1 cm and to 1,5 cm are taken. In three cases because of the big size concrements aren't taken. From total of ERPChG (110) it is executed an endoscopic retrograde cholangiography (ERChG) in 27 cases (26%). Attempt of ERPChG - 7. An endoscopic retrograde pancreatography (ERPG) - 8.

In 2012 by results of ERPChG concrements in 40 cases are revealed in the general bilious channel, from them in 6 cases large concrements from 1 cm and to 1,5 cm are taken. In 2 d cases of the big size concrements aren't taken. From total of ERPChG (102) it is executed an endoscopic retrograde cholangiography (ERChG) in 20 cases (20%). Attempt of ERPChG - 2. Endoscopic retrograde pancreatography (ERPG) - 12. In 2013 to year by results of ERPChG concrements in 43 cases are revealed in the general bilious channel, from them in 4 cases large concrements from 1 cm and to 1,5 cm are taken. From total of ERPChG (83) it is executed an endoscopic retrograde cholangiography (ERChG) in 17 cases (21%). Attempt of ERPChG - 3. Endoscopic retrograde pancreatography - 2. In 2014 ERPChG showed that there were concretions in 85 cases, from there in 7 cases there were big concretions from 1 sm to 1,5 sm. In 3 cases concretions were not recovered because of big size.

Comparative table №1

Type of research	Type of address	ERPChG	ERPChG and EPST	ERPChG and EPST и MEC	In total
ERPChG 2010	plans	37 (48%)	12 (16%)	16 (21%)	65 (84%)
	urgent	7 (9%)	1 (1,3%)	4 (5%)	12 (16%)
	in total	44 (57%)	13 (17%)	20 (26%)	77 research
ERPChG 2011	plans	40 (36%)	5 (4,6%)	32 (29%)	77 (70%)
	urgent	26 (24%)	2 (1,9%)	5 (4,5%)	33 (30%)
	in total	66 (60%)	7(6,5%)	37 (33,5%)	110 research
ERPChG 2012	plans	28 (27%)	6 (6%)	6 (6%)	40 (39%)
	urgent	37 (36%)	11 (11%)	14 (14%)	62 (61%)
	in total	65 (63%)	17 (17%)	20 (20%)	102 research
ERPChG 2013	plans	21 (25%)	4 (5%)	10 (12%)	35 (42%)
	urgent	22 (27%)	6 (7%)	20 (24%)	48 (58%)
	in total	43 (52%)	10 (12%)	30(36%)	83 research
ERPChG 2014	plans	20 (15%)	22 (17%)	32 (24%)	74 (56%)
	urgent	22 (17%)	15 (11%)	21 (16%)	58 (44%)
	in total	42 (32%)	37 (28%)	53 (40%)	132 research

According to table n.2 it is visible that the number of patients with cholethiasis, number of women is about 23% more, than at men. Patients aged from 60 and till 80 years make 49%.

Comparative table №2

Years	Floor	20-29	30-39	40-49	50-59 лет	60-69	70-79	80-89	90 <	
2010	Man	-	-	-	4	11	9	3	-	27 (35%)
	Women	-	5	1	10	14	6	14	-	50 (65%)
	In total	-	5	1	14	25	15	17	-	77
2011	Man	1	3	1	12	20	11	-	-	48 (44%)
	Women	2	5	14	12	5	17	7	-	62 (56%)
	In total	3	8	15	24	25	28	7	-	110
2012	Man	-	1	10	9	12	3	8	-	43 (42%)
	Women	6	5	6	12	19	7	4	-	59 (58%)
	In total	6	6	16	21	31	10	12	-	102
2013	Man	1	5	5	5	8	6	1	-	32 (39%)
	Women	4	1	6	8	17	12	3	-	51 (61%)
	In total	5	6	11	13	25	18	4	-	83
2014	Man	-	4	5	8	16	15	5	-	53 (40%)
	Women	4	9	6	16	18	18	8	-	79 (60%)
	In total	4	13	11	24	34	33	13	-	132

CONCLUSIONS

Thus, increase of safety of EPST it was succeeded to achieve improvement of quality of EMP for the account: 1) minimizing of heavy complications; 2) extensions of indications and increase in quantity of the emergency complex ERPChG (ERPChG with the EPST or EPST and MEK) to patients with high degree of operational risk / from 20% to 35%; 3) increases in number of performance of the emergency one-stage complex ERPHG from 20% to 50%; 4) creations of optimum conditions for planned expeditious treatment; 5) decrease in term of recovery of patients; 6) decrease in activity; 7) decrease in beam load of the Doctor and patient; 8) development of a method of complex ERPChG, all doctors of office, for rather short time; 9) increases of efficiency of use of the available endoscopic equipment; 10) tightness increases, terms of service of the bioptic valve of phibroendoscope and respectively to cut financial expenses.

LIST OF REFERENCES

1. Savelyev V.S. Buyanov V.M. Lukomskiy G.I. Rukovodstvo po klinicheskoy endoskopii [Guide to clinical endoscopy]. Moscow: Meditsina, 1985.
2. Orlov S.Yu. Fedorov E.D. Budzinskiy S.A. Matrosov A.L. Pankov A.G. Endoskopicheskoye lecheniye slozhnogo kholedocholitiya [Endoscopic treatment of a difficult choledocholithiasis]. Moscow: MGII, 2006.
3. Galeev M.A. Timerbulatov V.M. Zhelchnokamennaya bolezni i kholestist [Cholelithiasis and cholecystitis surgery]. Moscow: MEDpress-inform, 2001.
4. Gallinger Yu.I. Krendal A.P. Zavenyan Z.S. i dr. Khirurgiya [Surgery]. 1988, 6: 121-125.
5. Lutsevich E.V. Astapenko V.G. Belov I.N. Rukovodstvo po gastrointestinalnoy endoskopii [Guide to gastro-intestinal endoscopic]. Minsk: Vysh. shk.. 1990.

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