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COMPARATIVE ANALYSIS OF ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY TREATMENT METHODS FOR HEPATIC ECHINOCOCCOSIS INVASION IN BILIARY TRACT WITHOUT JAUNDICE

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Abstract:

Objectives: *To investigate the clinical effect of radical resection of ERCP(Endoscopic retrograde cholangiopancreatography) in patients with hepatic Echinococcosis and biliary tract without jaundice, the research was carried out in Qinghai province at Qinghai university Affiliated hospital. The objectives of study were to assess Comparative analysis of ERCP treatment methods for hepatic Echinococcosis invasion and biliary tract without jaundice*

Methodology: *Analysis of 29 cases of hepatic bubble hydatid invasion and biliary tract without jaundice treated by our department from January 2015 to March 2018, according to the different treatment methods, 9 cases (experimental group) and radical resection of patients with ERCP+ENBD were divided into 20 cases with radical resection of two-stage lesions (Control group), the operation time of each group, the amount of blood loss during operation, the biliary leakage of postoperative complications, the average length of hospital stay, the average hospitalization cost, the median time of carrying peritoneal drainage tube after operation, preoperative, 3 days after operation, 7 days ALT, AST, ALP, and other liver work indexes were analyzed.*

Results: *There was no significant difference between the two groups in the average length of hospital stay, average hospitalization cost, general data (sex, age, location of lesion, size of lesion, etc.), liver function index before and after operation (AST, albumin, PT, INR, 3 days after Operation ALP, AST, albumin, PT and INR, etc.). 0.05). However, there was a statistically significant difference between postoperative biliary complications (biliary leakage) and the median time of postoperative drainage tube ($P<0.05$).*

Conclusion: *For hepatic bubble hydatid invasion and biliary tract without jaundice, the first stage of ERCP+ENBD, two-stage lesion radical resection can significantly reduce the occurrence of postoperative biliary complications (biliary leakage), and ERCP+ENBD has the advantages of minimally invasive, simple, safe surgical technique in liver resection patients*

Key Words: *ERCP ENBD Jaundice Hydatid disease hepatic Echinococcosis with biliary tract invasion.*

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INTRODUCTION:

CysticEchininococcosis (CE) and alveolar Echininococcosis(AE)is a zoonotic disease which belong to same parasitic family.Cystic Echinococosis caused by EchinococossisGranulosis and alveolar Echinococossis caused byEchinococosisMulticularis. Regarding clinical manifestation both diseases havedifferent prognosis.Echinococcosis is a rare and life-threatening zoonotic disease caused by multiple atrial Echinococcosis infection in the human body[1], after eating food that has been infected with Echinococcosis by humans, growth and development in the gastrointestinal tract, through intestinal blood circulation and lymphatic circulation, through the portal vein invasion of the liver, the formation of hepatic hydatid disease.

The Echinococcosis grows in the liver, continues to invade the liver essence, forms the mass lesion, the surrounding normal liver tissue because of theEchinococcosis lesion compression, the erosion forms the inflammatory hyperplasia, the bubble Echinococcosis further invades the surrounding blood vessels, the bile duct, induces the infection, jaundice and so on symptom, and can pass through the lymphatic duct and the blood vessel to the retroperitoneal Brain lymph and so on have the characteristics of similar malignant tumor constantly to the surrounding tissue infiltration growth [2].

And there are no obvious specific symptoms in the early stage of liver bubble Echinococcosis, and when there are obvious symptoms of jaundice, malnutrition, peritoneal effusion, massive lower extremity edema, other sign and symptoms, we are aware of the visit of large hospitals. When the above symptoms occur, most of the patients in the middle and late stage, and has a wide range of intrahepatic blood vessels and bile duct invasion, compression or invasion of the bile duct often lead to obstructive jaundice, involving the bile duct system obstructive jaundice is one of the more common symptoms, once delayed treatment, the patient will develop liver failure [3].

Radical resection is the first choice for patients with hepatic hydatid disease at present ERCP (endoscopic retrograde cholangiopancreatography) is a techniques that enables to examine the pancreatic and bile ducts. This surgical technique include bendable, lighted tube (endoscope) about the thickness of index finger is placed through mouth and into stomach and part of the small intestine. In the first part of duodenum a small opening known as ampulla and a small plastic tube which is known as cannula is passed through the endoscope into this opening.

Contrast material is injected and under the X-rays machine observation study are taken and the ducts of the pancreas and liver we can explore in different biliary tract diseases. However, most patients have a poor physical foundation and are unable to tolerate other treatments, and the need to relieve jaundice promptly is an important measure for such patients. ERCP+ENBD can effectively alleviate the above symptoms, however, for the hepatic Echinococcosis invasion and biliary tract jaundice can be a stage of ERCP+ENBD detection of bile duct invasion. To detect the invasion of the bile duct, two-stage radical resection can effectively avoid bile duct injury. This paper discusses the clinical effect of radical resection of ERCP+ENBD in patients with hepaticEchinococcosis and biliary tract without jaundice, which is reported below.

MATERIALS AND METHODS:

Subjects of study

To investigate the clinical effect of preoperative ERCP+ENBD treatment in patients without jaundice AE, 29 patients diagnosed with hepaticEchinococcosis were selected from March 2014 to May 2018 in the hospital affiliated with Qinghai University, randomly divided into 2 groups: the ERCP treatment Group (9 persons) was accepted The ERCP treatment Group (20 persons) was the control group. Incorporation criteria: (1) in line with the "Liver two Echinococcosis diagnosis and treatment expert consensus (2015 edition)" Diagnosed as hepatic hydatid disease, and no obstructive jaundice patients; (2) With recent surgical indications of hepatic Echinococcosis; (3) Complete clinical data of the case; (4) No previous history of abdominal surgery; exclusion criteria: (1) combined with Echinococcus, hepatobiliary malignant tumor, hepatic abscess, hepatic cyst, biliary calculi, acute pancreatitis, abnormal coagulation function, cirrhosis, hepatitis, Patients with blood diseases and other diseases that affect the study. (2) The combination of heart, brain, lung and other important organ lesions affected the study of patients.

Iodine experimental allergy patients.

General Information: The group collected a total of 29 patients, 10 cases and 19 female cases in the hospital affiliated to Qinghai University between May 2018 and March 2014, diagnosed with hepatic Echinococcosis. Age 8-61.

Among them, there were 14 cases of upper abdominal pain discomfort, 6 cases of the abdominal obstruction, and 9 cases of intrahepatic lesions were found in medical examination.

Imaging Examination

All patients were examined with CT or MRI imaging before an operation. The diameter of the hydatid was above 3cm, and all were less than 20cm, of which 9 cases were smaller than 10cm, 20 cases were larger than 10cm.

All Hydatid lesions were located in the left or right half of the liver, and all involved liver and left a vascular or biliary tract, invasion and 1 case of diaphragm invasion, 1 case involving the peripheral organs (adrenal glands), intrahepatic multiple 5 cases.

Other related checks

All patients had a preoperative liver function in Class A-B, the Hydatid experiment was positive, and the pathological results were confirmed to be hepatic Echinococcosis after the operation.

General Procedure

Preoperative preparation and operation of 2-1ERCP Routine examination of three major routines, coagulation function, biochemical function of the examination, parallel related imaging examination, such as chest, electrocardiogram, nuclear magnetism, etc., to carry out a comprehensive preoperative evaluation. Regular fasting 6h, no drinking 4h, before the operation 30min to the diazepam, Anisodamine, Piperidine hydrochloride intramuscular injection, the use of intravenous compound anesthesia.

Operate in strict accordance with the operating specifications [4] prepared by Changhai Hospital.

Pre-operative preparation and surgical methods

Preoperative examination in routine, coagulation function, and biochemical examination, related imaging examination, assessment of the risk of surgery. Pre-operative 12h fasting, no drinking, and to prepare the digestive tract. The operation was completed by the experienced chief physician of our department, and the surgical incision was selected according to the location and size of the lesion by B-scan ultrasonography or CT examination, which was often used for the purpose of exposing the best surgical field of view with the lower oblique incision or the upper abdomen "human" glyph (Kocher's incision) incision in the right rib margin. Complete removal of intrahepatic lesions while ensuring complete structural integrity and functional compensation of the remaining liver, and maximum relief of tissue damage and bleeding. Hepatic blood flow blocking technique was used to control the amount of bleeding during the operation. For the larger case of the lesion, the tumor can be reduced to obtain more operation space, liver tissue using an ultrasonic suction knife for separation, at the same time with an electric knife to the liver wound for the exact hemostasis, the exposed bile duct, blood vessels for detachment, ligation. Half liver or enlarged semi-hepatic resection, complete resection of the lesion and surrounding affected tissue, invasion of blood vessels to repair blood vessels or artificial blood vessel substitution, involving the biliary tract, biliary reconstruction or biliary bowel anastomosis. Finally, there was no biliary leakage and hemorrhage in the liver wound examination, and the exact seam was carried out.

The peritoneal drainage tube was retained in the operative area or under the diaphragm, and the T tube was retained as appropriate.

Surgical methods in 29 patients with advanced hepatic bubble echinococcosis

Experimental group	**Number of cases**
Right three-leaf + left liver and intestine anastomosis	**1**
Most resection of the right lobe of the liver	**3**
Resection of hepatic bubble hydatid lesion	**4**
Right half hepatectomy + left hepatic canal jejunum liver and intestine anastomosis	**1**
Control group	**Number of cases**
Partial resection of the right lobe of the liver	**4**
Right semi-hepatectomy + cholecystectomy + diaphragmatic repair + peritoneal flushing and drainage	**1**
Left Semi-hepatectomy	**3**
Treatment of +S5 ablation in the left half hepatectomy	**1**
Liver left tri-leaf resection + liver right anterior, right posterior hepatic duct molding + biliary anastomosis	**1**
Left extrahepatic lobe resection + hepatic right lobe lesion resection	**1**
Middle Liver resection	**1**
Hepatic echinococcosis lesion resection + cholecystectomy	**3**
Right semi-hepatectomy + cholecystectomy + cystic drainage of left hepatic hydatid lesions + intestinal adhesion loosening。	**1**
Right semi-hepatectomy + caudate resection + hepatic left-lobe lesion resection + right adrenal resection + inferior vena cava repair	
Repair of +t Tube Drainage	**1**
Right Half hepatectomy	**2**
Right three-leaf resection of the liver + resection of hepatic S3 segment lesions	**1**

Groups of Postoperative Treatment and Observation Indicators

The patient's vital signs were closely monitored after the operation, and anti-inflammatory, fluid replacement, liver protection, hemostasis, nutrition, and other treatments were routinely given. The patients were properly protected from the abdominal drainage tube and ENBD tube to prevent accidental prolapse, and the daily drainage volume was recorded. Changes, and observed whether patients had bile leakage, the formation of biliary tract infection, record the operation time, intraoperative blood loss, postoperative complications (biliary leakage, pleural effusion, wound infection, cholangitis), average The

number of hospital stays, the average hospitalization cost, the median time of postoperative abdominal drainage tube, preoperative, postoperative 3 days, 7 days ALT, AST, ALP and other liver function indicators.

Statistical Analysis

Statistical analysis was performed using spss25.0. The measurement data was expressed as (x±s), the count data were expressed as an absolute number, and the multi-group data test of measurement data was analyzed by repeated measures analysis of variance. The statistical test of the two groups was performed by paired t-test. The chi-square test was used to compare the count data. If the chi-square test condition was not met, the Fisher exact probability test was used, and $P<0.05$ was considered statistically significant. The time spent on surgery, the amount of bleeding, the average length of hospital stay, the time of tube administration were analyzed by t-test, and the postoperative complications were examined by $\chi 2$ test.

RESULTS:

General Information

A total of 29 subjects were enrolled in this study. Among them, 9 patients in the ERCP group (experimental group) were successfully intubated and indwelled with ENBD. No ERCP group (control group) was received before surgery. There were 10 male patients and 19 female patients. The patients were aged 8-61 years old, with an average age of 32.45±13.01 years old, all of whom were Tibetans. The preoperative liver function was graded at 23 A and 6 B; 14 patients were admitted. At the time, the abdominal distension was a discomfort to varying degrees, and the remaining patients had no special discomfort. The size of the lesion: the experimental group has a long diameter of 12.13±3.64 mm and a short diameter of 8.71±2.96 mm. The long diameter of the control group was 11.87±4.43mm, and the short diameter was 8.08±5.53mm. In the experimental group, 9 cases were successfully intubated and left ENBD. One case of hyperammonemia occurred after ERCP and healed after treatment with acid suppression and inhibition of enzymes. In the control group, 7 patients had bile leakage after the operation, 4 patients had pleural effusion, and 2 patients had wound infection. The above complications did not occur in the experimental group.

Table 2 Comparison of Clinical Data Between Treatment Group and Control Group and Comparison of the General Situation Between the Treatment Group and the Control Group

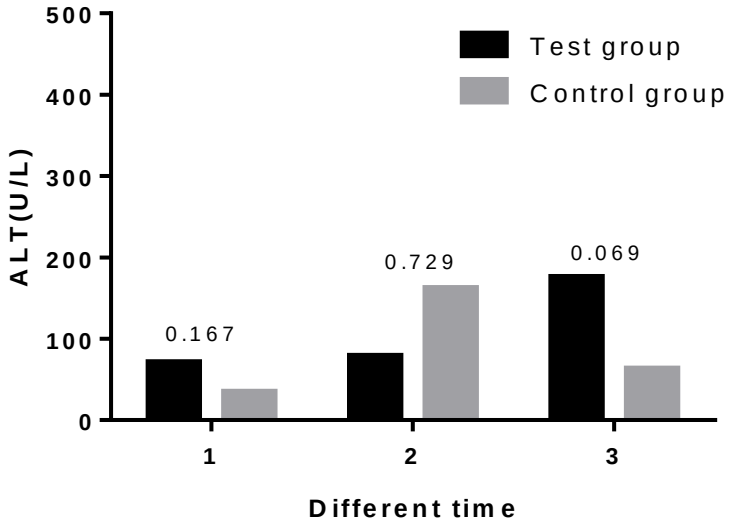
Variables	**total**	**treatment group**	**control**	**group P**
total	29	9	20	-
age	29	33.22±10.2	32.1±14.33	0.834
gender				0.64
Male	10	3	7	
Femlae	19	6	13	
Nationality				
Tibetan	29	9	20	
other	0	0	0	
Lesion size				
Long Trail	29	12.13±3.64	11.87±4.43	0.839
Short path	29	8.71±2.96	8.08±5.53	0.646
Lesion location				0.025
Left half liver	8	1	7	
Right half liver	16	8	8	
Left and right liver	5	0	5	
Liver function grading				0.49
Class A	24	8	16	
Class B	5	1	4	

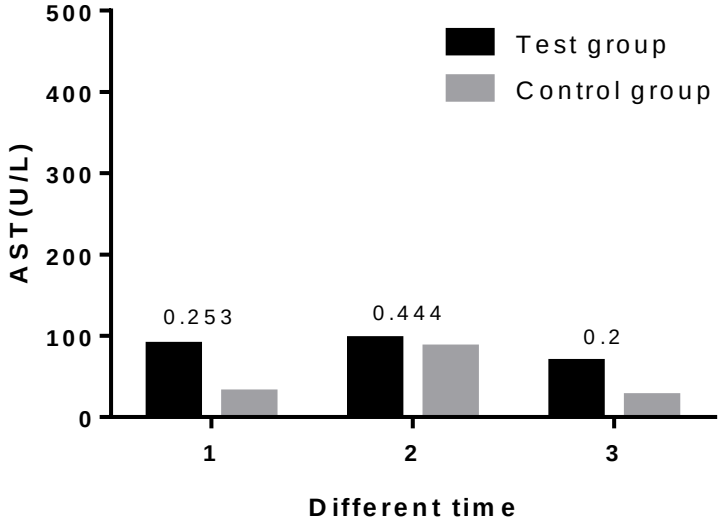
There were two statistically significant differences between the two groups in age and lesion size (P>0.05).

Table 3 Comparison of clinical effects between 5-2 treatment group and control group and Comparison of test indicators between treatment group and control group

	Number of patients	test group	Control group	P value
Number of patients	29	9	20	
Preoperative ALT	36（19.5-81）	71（28-133）	35(18.25-52)	0.167
ALT 3 days after surgery	160（62-284.5）	79（41.5-408）	162.5(78.75-254)	0.729
ALT 7 days after surgery	89（44-161.5）	176（69.5-235.5）	63.5(43.5-114.88)	0.069
Preoperative AST	32（24-79）	89（22-162.5）	30.5(24.25-51.96)	0.253
AST 3 days after surgery	90（32-192）	96（28.5-512.5）	85.5(33.5-96.93)	0.444
AST 7 days after surgery	28（25.9-63）	68（28.5-731.9）	25.9(25.9-38.25)	0.2
Preoperative ALP	276（165.65-654.7）	489（232.3-731.9）	257.5(135-568.45)	0.14
3 days after surgery ALP	174（119.5-346.6）	314.4（157.15-514.95）	162.5(95.75-237.73)	0.085
7 days after surgery ALP	194（109.8-337.45）	206（136.75-302.9）	187.5(107.15-386.25)	0.594
Preoperative albumin	35（32.6-38）	35.4（32.15-40.05）	34.85(32.4-36.8)	0.472
Albumin 3 days after surgery	29.7（27.6-33.05）	29.7（27.9-34.05）	30.1(27.45-32.5)	0.403
Albumin 7 days after surgery	30.9（28.55-33.4）	28.3（26.65-33.75）	31.4(29.43-33.55)	0.234
Preoperative PT	12.6（11.6-13.8）	12.8（11.6-13.65）	12.15(11.48-14.35)	0.89
3 days after surgery	12.5（12.05-14.25）	12.4（11.85-14.9）	12.55(12.1-14.13)	0.54

7 days after surgery	12.2（8.86-13.85）	13（11.55-15.9）	11.4(7.72-13.55)	0.44
Preoperative INR	1.05（0.97-1.14）	1.07(0.97-1.13)	1.02(0.95-1.20)	0.982
3 days after surgery INR	1.04（1.02-1.2）	1.03(0.99-1.24)	1.05(1.03-1.19)	0.729
7 days after surgery INR	1.02（0.78-1.16）	1.08(0.92-1.31)	0.95(0.7-1.13)	0.055

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AST(U/L)
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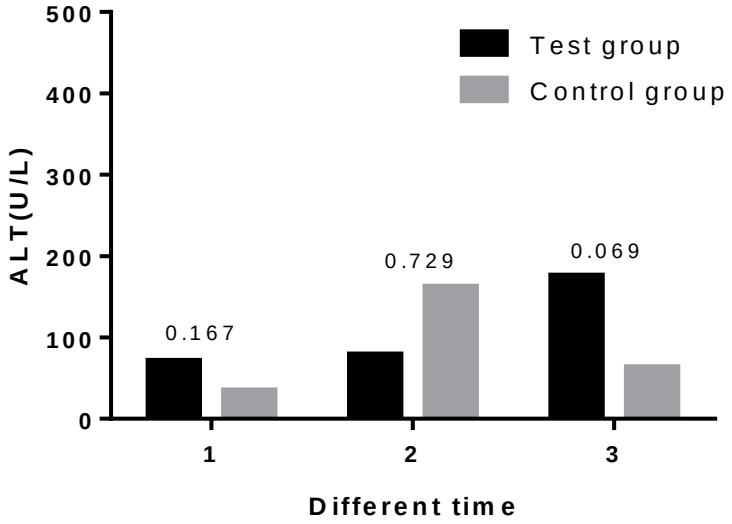
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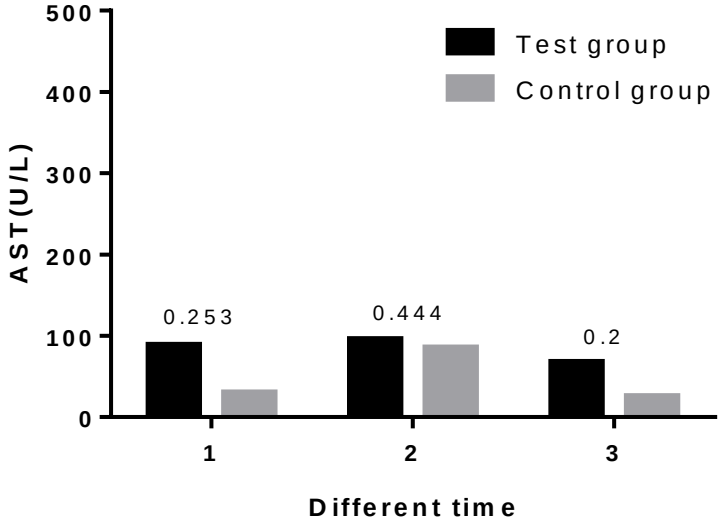
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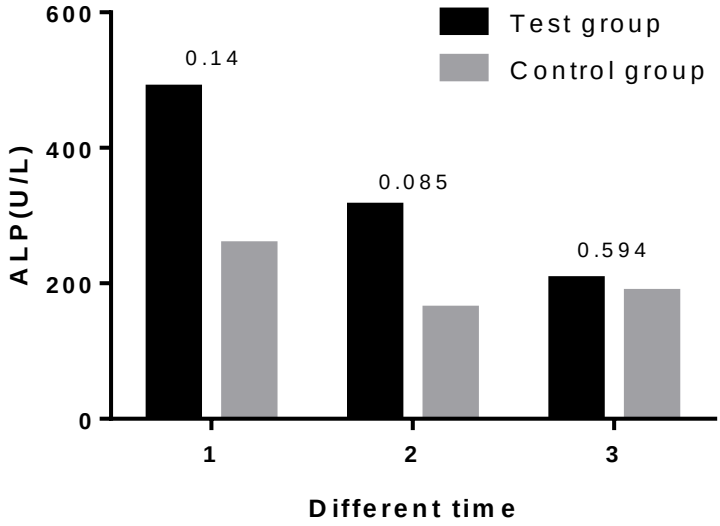
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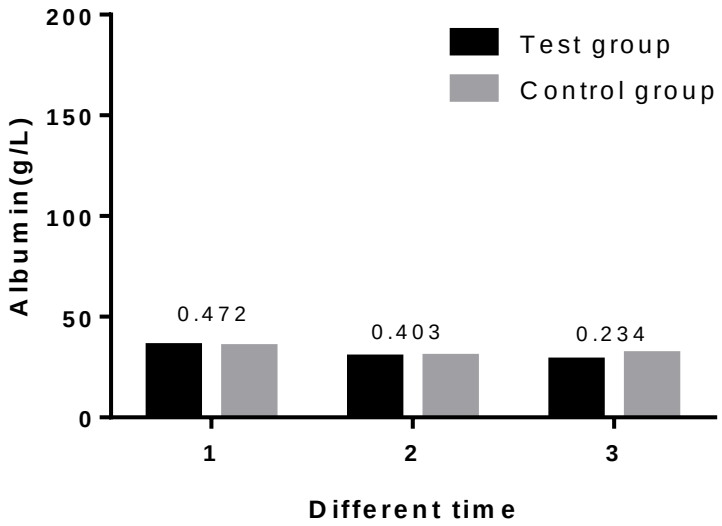


Transverse axis 1, 2 and 3 represent preoperative, 3 and 7 days postoperatively, respectively. The number above the bar graph represents the P value.
As can be seen from the P value in the figure, there is no difference.

Table 4 Comparison of clinical effects between treatment group and control group

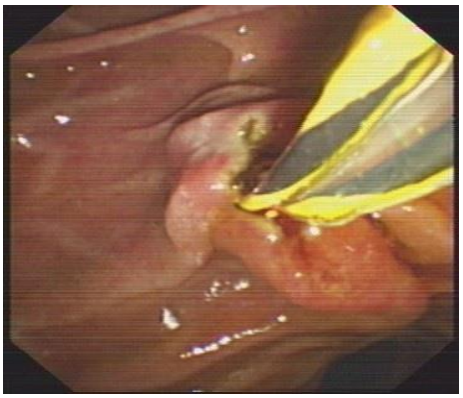
compare projects	test group	Control group	P Value
Cases	9	20	
surgery time-consuming	235（210-291）	257.5（182.5-311.75）	0.871
hospital stay	32.67±8.66	29.4±8.56	0.352
Amount of bleeding	1600（1000-1900）	1000（425-1500）	0.077
Hospital costs	65494.9（37727.44±78613.08）	44975.61（39903.67±63399.29）	0.417
Tube time	21±7.762	13.55±8.224	0.032

Table 5 Comparison of postoperative complications between experimental group and control group

Group	Number of cases	Bile leakage	pleural effusion	Incision infection	cholangitis
Test group	9	0	0	0	2
Control group	20	20	74	2	0
P Value		0.042	0.148	0.326	0.217

Fisher's exact probability test was performed in the two groups. The difference of P>0.05 was not statistically significant and may be related to the small sample size

A



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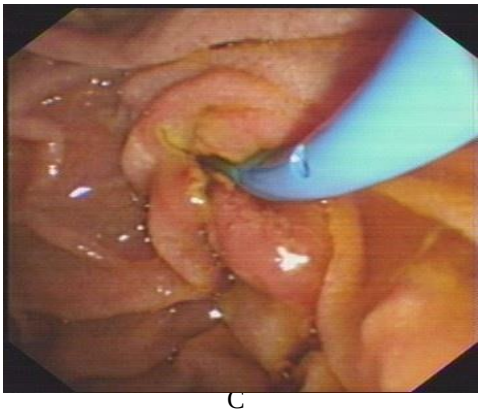

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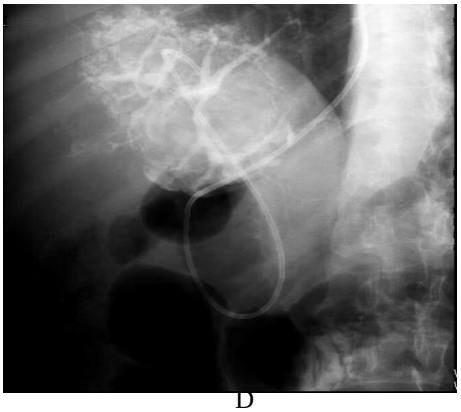

D

A: preoperative CT, black arrow for hydatid lesion, Blue arrow for the expansion of the bile duct;B: endoscopic intubation in success;C: the guide wire guided placement ENBD tube;D: ERCP imaging in right hepatic duct development is not clear.

Fig1 Preoperative ERCP imaging features, endoscopic procedures, and intraoperative angiography

DISCUSSION:

Hydatid disease is a zoonotic disease [5], with the most serious hazard and the highest mortality rate of Echinococcosis, and the Echinococcosis accounts for about 1.4% of the total number of human Echinococcosis, hepatic Echinococcosis The prognosis is extremely poor, with approximately 90% of patients dying within 10 years [6].

Surgical treatment is often the first choice, and radical surgery is the only effective treatment for blistering. However, the rate of radical resection is low. Some foreign scholars have reported that the resection rate of radical surgery is 50% [7], while China is relatively low. The treatment of hepatic alveolar Echinococcosis in multiple treatment centers in China [8-10] showed that radical surgery has improved postoperative quality of life and reduced postoperative recurrence rate than quasi-radical or palliative surgery. The obvious advantages and radical surgery can completely remove the hepatic alveolar Echinococcosis lesions and the proliferative active zone around the lesions, the probability of postoperative recurrence is significantly reduced, but due to hepatic Alveolar Echinococcosis has invasive growth characteristics, The lesions of some patients with hepatic Alveolar Echinococcosis involve the invasion of the biliary tract and important blood vessels, which makes the risk of complications such as bile leakage and hemorrhage after radical resection in some patients with hepatic Alveolar Echinococcosis significantly increased due to lesion invasion and anatomical structure. Difficulties in the identification, postoperative residual bile leakage caused by bile duct injury during radical resection of

the lesion are the most common complication after radical surgery. In this group, it reached 35% (7/20), and the center The Quality Control Centerin Qinghai Province for Insect Disease Surgery has treated a large number of patients with hepatic Alveolar Echinococcosis and invaded the biliary tract. According to the results of the study in this group, no patients in the radical surgery group had a postoperative recurrence, and the treatment effect was clear.

Combined with the clinical experience of the Center for many years, the imaging relationship (hepatic hydatid dynamic CT enhancement and upper abdominal MRI plain scan + enhanced + MRCP + DWI) was used to check the adjacent relationship between the lesion and the intrahepatic vital vascular and bile duct system. Analytical judgment, in addition to the observation of the location, extent, and boundary of the lesion, MRCP can clearly observe the intrahepatic blood vessels, bile ducts and invasion [11], clear the presence or absence of extrahepatic metastasis, and measure the residual liver volume by digital three-dimensional reconstruction technique; Comprehensive evaluation of liver function was performed by comprehensive liver function grading, biochemical indicators of blood and liver function, and results of indocyanine green excretion test [12-13].

For patients with good reserve function and sufficient residual liver volume, seek radical resection; but for patients with important vascular involvement, autologous blood vessel or artificial blood vessel replacement after resection of the blood vessels; repair of diaphragmatic muscles for violation of diaphragmatic muscle; Invasion of adjacent tissues and organs, the corresponding regional lymph node dissection and the removal of affected tissue and organ can achieve the purpose of radical resection [14].

Besides, with the rapid development of ERCP technology in diagnosis and treatment, the application of ERCP has been widely carried out in various aspects of hepatobiliary and pancreatic diseases and has made good application progress, so that many diseases can be diagnosed and treated under endoscopy. Studies have shown that ERCP is the most effective method for the treatment of obstructive jaundice in patients with other causes such as stones, tumors, and inflammation [15-24], but reports of ERCP application in vesicles are still rare.

For the hepatic Alveolar Echinococcosis and biliary tract without jaundice may be due to bile inflow into the lesion, in order to further explore the incidence of postoperative bile leakage, this group of prospective studies of hepatic Alveolar Echinococcosis invading the biliary tract without jaundice In the first phase, ERCP+ENBD was used to detect the invasion of the bile duct. In the second phase, the radical resection and radical resection were compared. The general data and the liver function indexes such as ALT, AST, and ALP before and 3 days and 7 days after surgery were used. There was no statistical significance ($P>0.05$), but for the prevention of postoperative bile leakage, the difference between the experimental group and the control group was statistically significant ($P<0.05$), that is, the incidence of postoperative bile leakage was significantly lower than the curative effect. The group was removed, and no postoperative bile leakage occurred in the experimental group. Erzurumlu K [25] and others reported that 8 cases of ERCP have achieved good results in the treatment of biliary complications caused by hepatic Echinococcosis. Sharma BC [26] et al. performed ERCP placement on the biliary tract in 28 cases of postoperative complications of hydatid. The stent opens the physiological channel of the liver and intestine circulation, avoids the loss of bile salts and body fluids, relieves the biliary stenosis, reduces the pressure of the biliary tract, and cures the postoperative bile leakage in patients [27]. This group of studies through ERCP nipple incision and placement of ENBD, this operation is simple, small trauma, can effectively drain bile [28], reduce electrolyte imbalance caused by bile loss, digestion and absorption function and lack of fat-soluble vitamins, improve appetite, mental and physical strength, and easy to observe bile drainage in time to find the occlusion of the lumen, thereby improving the nutritional status of patients and promoting patient healing.

Clinically, bile leakage is mainly divided into the following four categories: (1) cyst leakage in the cystic duct. (2) Leakage of the gallbladder bed or prehepatic duct. (3) Major bile ducts leak. (4) major bile duct transverse injury or damage [29], for intraoperative bile duct injury caused by bile duct leakage, intraoperative electrocoagulation injury, clinical experience is for small leaks, bile into the abdominal cavity, peritonitis can be limited conservative treatment such as adequate drainage of the abdominal cavity and strengthening of infection control can generally heal itself after 1~2 weeks. However, for a large leak, bile flows into the abdominal cavity, resulting in large damage, requiring interventional or surgical treatment.

Moreover, the main harm of bile leakage is that bile can cause peritonitis, abdominal infection, water-acid acid-base balance disorder, and septic shock, and the

mortality rate is high. Liu Dehui et al [30] reported that the mortality caused by bile leakage can be as high as 4 %. For patients with bile leakage, early diagnosis and timely drainage are the keys to treatment [31]. With the rapid development of endoscopic techniques at home and abroad, minimally invasive treatment has become the treatment of choice and prevention of bile leakage. On the one hand, ERCP examination is beneficial to find the location of bile leakage and the degree of bile duct injury, which can provide new ideas for the next surgical treatment. ENBD is beneficial to reduce the pressure in the bile duct, reduce the flow of bile from the leakage, and reduce the local tissue chemical stimulation. Control infection, timely and effective bile duct decompression drainage is conducive to early healing of bile leakage and reduces the incidence of complications [32]. To this end, the experimental investigation was conducted to prevent the occurrence of postoperative bile leakage, and it was confirmed that the occurrence of bile leakage after radical resection of hepatic alveolar infestation and biliary tract without jaundice was significantly higher than that of the experimental group. In the experimental group, the first phase of ERCP+ENBD explored the bile duct invasion, which provided a new idea for the next surgical treatment. In the operation, the injection of methylene blue injection through ENBD was used to understand the intraoperative bile duct and the ligation of the bile duct. Causes bile leakage that is not easily noticeable to the naked eye and reduces postoperative bile leakage. This group of experiments also confirmed this point, providing new ideas and new methods for preventing postoperative bile leakage in hepatobiliary and other operations.

However, there was no statistically significant difference in the length of hospital stay, hospital stay, operation time, and intraoperative blood loss between the experimental group and the control group. However, the average length of hospital stay and hospitalization expenses in the experimental group was significantly higher than that in the control group. Maybe related to ERCP surgical supplies and secondary surgery intervals. Moreover, this study found that the incidence of the control group in the two groups of patients was significantly higher than the experimental group, but the statistical significance was not significant ($P>0.05$), may be related to the number of cases, if further exploration of its significance, need to increase the sample capacity. There was a statistically significant difference in the time of extubation of the abdominal drainage tube ($P<0.05$). The control group was considered to be effective, but large-scale cases were also collected for comparison.

CONCLUSION:

The conclusion of this study is that, for patients with hepatic Alveolar Echinococcosis and biliary tract without jaundice, the first phase of ERCP+ENBD, the second phase of radical resection, a new method, although not in hospitalization costs, surgery time, hospitalization days, etc. Bringing benefits, but ERCP+ENBD has the advantages of minimally invasive, simple, and safe, which can promote the improvement of the postoperative quality of life, and provide a new idea and new method for reducing postoperative bile leakage in hepatobiliary surgery. It is worth further clinical practice. Research and promotion.

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