

Our Tactics In The Treatment Of Complicated Forms Of Impassability Of The Terminal Section Of Common Bile Duct And The Vater's Papilla In Cholelithiasis

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Abstract: *The article describes the results of experimental and clinical application of new compression methods of PSP (Papillosfinkteroplasty), in comparison (in experiment) with the traditional methods of PSP performed by manual interrupted suture. Method: At the same time, in an experiment on corpses and animals, it was noted that the CPSP allows, significantly simplifies, accelerates, standardizes and bloodlessly performs the CPS in comparison with the traditional method of performing this operation, and also creates the most favorable conditions for wound healing, and prevents the development of anastomosis stenosis. Compression PSP in a clinical setting was used in 22 patients operated on for impassability of the terminal part of the common bile duct and Vater's papilla caused by a stone or stenosis of the 2nd and 3rd degree, when this pathology could not be corrected by endoscopic papillosphincterotomy with sanitation of the biliary tract. In the postoperative period, there were no complications associated with the CPSP technique and no lethal outcomes.*

Key words: *impassability of the terminal part of the common bile duct, Vater's papilla, endoscopic papillosphincterotomy, compression papillosphincteroplasty.*

1. INTRODUCTION

Currently, complicated forms of cholelithiasis with impassability of the terminal section of common bile duct (TSCBD) and Vater's papilla (VP), most often caused by a stone or stenosis, are commonly treated by laparoscopic cholecystectomy (LHEC), laparoscopic choledocholithotomy (LHLT) or endoscopic papillosphincterotomy (EPST), with sanitation of the biliary tract ^{2, 3, 5, 12, 13}.

A similar tactic and technique for the treatment of impassability of TSCBD and VP caused by calculus and stenosis of the TSCBD and VP were widely used in 1960 - 1990, only with the difference, then the operation cholecystectomy (HEC) and choledocholithotomy and papillosphincteroplasty (PSP) were performed open by, and their positive long-term results were noted in 85 - 90% of cases. And the results of the current LHEC, LHLT and laparoscopic endoscopic papillosphincterotomy (LEPST) in relation to the qualitative positive long-term results, namely those associated with this pathology, can be considered almost the same. But, at the same time, emphasizing the colossal advantage of laparoscopic operations (speed, simplicity, reliability, asepticity, minimally invasiveness, hemostaticity, cosmetic quality, no less radicalism, etc.) over bloody open operations ^{6, 7, 9, 10}.

This means that 10-15% of cases, regardless of the operation technique (open or laparoscopic), patients are re-operated for recurrent or residual choledocholithiasis or stenosis

- restenosis of VP, for which the number of repeated EPSTs sometimes reaches 3 - 4 times or more, in ultimately, surgeons in some cases are forced to resort to PSP or choledochoduodenostomy, and sometimes, in combination.

Considering these facts, especially in complicated forms impassability of TSCBD and VP, LHEC, EPST and LHLT in cholelithiasis, it may not always be radical, safe, even not always possible^{1, 4, 8, 11, 16} due to the difficulty of cannulating sharply stenotic opening of the VP, in the presence of a paraperitoneal diverticulum, after resection of the stomach according to B-2 or its non-radicality with pronounced and extended stenoses of TSCBD and VP leading to a sharp expansion of hepaticocholedochus (up to 30-40 mm), and some more patients, although very rarely, sometimes categorically objects to both diagnostic and repeated therapeutic duodenoscopy, i.e. repeated EPST.

In such cases, although very rarely, surgeons still have to resort to open transduodenal PST and PSP, the imposition of choledochoduodenostomy (CDA) or sometimes even in combination, especially in the countries of the former Soviet Union^{1, 6, 9, 14, 15, 17}.

Radicality and more physiological character in comparison with other types of biliodigestive anastomoses, transduodenal PST and especially PSP, with impassability TSCBD and VP of the 3rd degree was generally recognized for many years.

However, the main obstacle to the widespread use of PSP in primary operations on the biliary tract is the technical difficulty of this operation according to the well-known traditional technique.

Therefore, we have developed and introduced into clinical practice more simplified methods of performing PSP using compression sutures - clips, i.e. the technique of compression papillosphincteroplasty (CPSP) was developed.

2. PURPOSE OF THE RESEARCH

Improving the results of surgical treatment of patients with complicated forms of impassability of the terminal part of the common bile duct and Vater's papilla in cholelithiasis.

3. MATERIALS AND METHODS OF RESEARCH

To study the results of the CPSP, we preliminarily carried out an experimental study on corpses (the techniques of the CPSP were worked out and the tightness of the choledochoduodenal connection after the CPSP was tested) and on 16 mongrel dogs, the morphological changes in the zone - in the area of the CPS were studied.

The experiments on dogs were carried out in compliance with all the rules of humane treatment of animals.

The value of this experiment in animals is that the PSP operation itself, even in patients, requires super thin, super gentle, super high skill - the skill of a surgeon, super high quality instrument, etc. etc., taking into account the even more subtlety of VP in dogs, all of the above requirements are even more needed when performing PSP in dogs. That is, PSP in dogs (as well as in patients) can be considered an indicator of the quality of the surgeon's skill and the technique of the operation.

So, in 8 dogs, the PSP was performed by the usual well-known traditional manual method (with the dissection of the anterior wall of the VP ampoule with a thin scalpel - PST and stitching the cut edge of the VP ampoule with the duodenum wall with manual atraumatic interrupted suture (6-0) - PSP, a, y 8 dogs using a compression clip (i.e. dissection of the anterior wall of the VP ampoule with a thin scalpel up to - 3-5 mm, then a compression clip was applied to the upper angle of the dissection connecting the anterior wall of the VS ampoule with the posterior wall of the duodenum. In this case, a full anastomosis is formed slowly, in the course of the release of the compression clip.

If the execution of the main stage of the well-known manual PST and especially the PSP lasted on average 5 - 10 minutes, and the CPSP all its stages were only a few minutes - no more than 1-3 minutes.

If we compare the external general appearance of the manual - traditional PSP and the CPSP we are introducing, the CPSP looks standard, rectilinear, without deformation, the VP opening is slightly open (as a result of tissue compression), the compression clip is almost immersed in the duodenum mucosa. With cholecystocholangiography, there is a free passage of the X-ray contrast agent through the VP, into the duodenum.

And on the contrary, after manual - traditional PSP, uneven - deformed edges of the dissected VS are noted, with the presence of multiple ligature nodes - antennae (at least 3 - 4 pieces on each side) after PSP. As a result, involuntarily - forced punctures - gripping the edges of the dissected VP for stitching - plastics at different distances, while at least 2 - 3 mm, stepping back from the dissected edge, (so that the tissues - sutures do not cut through) to connect the wall of TSCBD and VP to the duodenum wall after PST, as a result of which the suture line becomes uneven, where the knots and "antennae" of the suture material stick out, with elements of corrugation of the tissue between the seams, the opening of the dissected VP is narrowed, etc.

An even more obvious difference between manual, traditional PSP and CPSP is observed on days 3 - 4, 7, 10, as well as 1, 3, 6 months after the operation.

It is noted that in the case of PSP, the most favorable conditions for wound healing are created, early epithelialization of the suture line occurs, without the formation of a rough scar, there is no stenosis, in contrast to PSP performed by the traditional manual method, where the inflammatory processes last until all ligatures leave the PSP area, which last up to 6 months. and more. As a result, there is a significant narrowing in the area of memory bandwidth.

Less pronounced inflammatory changes in the area of the CPS, in comparison with the traditional manual method, are due to the least traumatization of tissues along the suture line, completely excluding repeated puncture with a needle and seizing with instruments VP elements for suturing (PSP), uniform compression, accelerated migration (after 3-4 weeks), antiseptic clip as well as the absence of multiple ligatures in the PSP zone with inlaid suture material, which are the main factors supporting inflammation with the subsequent development of a rough scar and stenosis of the anastomosis.

The results of our modest experimental study showed a number of advantages of CPSP (simplicity, speed, tightness, general availability, standardization, early epithelialization, etc.) compared to the traditional manual execution of PSP. That gave us the basis to test the CPSP in a clinical setting.

A brief technique for performing the CPSP in the clinic was as follows. First, we remove the gallbladder laparoscopically and inserting - leaving a tube (with an internal diameter of at least 2 - 2.5 mm) through the cystic duct stump in the hepaticoholedochus. Further, under the control of a laparoscope in the projection of the VP, we make a minilaparotomy and mini duodenotomy. Then the VP was taken on a 2 holder and a partial PST was made with a length of up to 5 - 10 mm. This was quite enough for complete sanitation of the main bile ducts, removal of stones, lavage, etc. Then, compression clips 8-15 mm long were applied to the upper angle of the PST, depending on the length of the VP narrowing, but in most cases, compression clip length 10 - 12 mm., one or two. Operations were always completed by drainage of the common bile duct through the cystic duct stump. Using this technique, we operated on 22 patients for impassability TSCBD and VP caused by stone and stenosis of the 2nd (in 4 cases) and especially the 3rd degree (in 18 cases).

The age of patients is from 60 to 78 years, men 3, women 19. The duration of the anamnesis of cholelithiasis is from 4 to 21 years. 18 patients were admitted with a

pronounced clinical picture of obstructive jaundice, the rest had multiple episodes of obstructive jaundice in the anamnesis.

4. RESULTS OF THE RESEARCH

Out of 22 operated patients in the postoperative period, 19 patients did not have any serious specific complications, their postoperative course was uneventful. Only one patient had symptoms of short-term diastasia, in 2 patients long-term (2-3 days) bloating, which returned to normal on 3–4 days after the operation.

The discharge of bile from the choledochostomy tube ranged from 200 to 450 ml of bile per day, which gradually and progressively decreased.

Control fistulotelechoangiography showed free flow of contrast agent into the duodenum. The drainage was removed 7 to 12 days after surgery.

All patients were discharged in satisfactory condition, there were no lethal outcomes.

5. CONCLUSION

Based on the above, we can say that, in case of violations of the patency of the terminal part of the common bile duct and Vater's papilla in cholelithiasis, when this disease cannot be treated by laparoscopic cholecystectomy, endoscopic papillosphincterotomy, laparoscopic cholecystolithotomy, laparoscopic cholecystolithotomy can be applied during laparoscopic cholecystolithotomy with compression of paparoscopic cholecystosfincterotomy with compression of cholocistectomy.

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