UDC 616.366-003.7-06]-089(043.3)

S. G. Chetverikov, A. A. Oleynik

DIFFERENTIATED CHOICE OF THE MINIINVASIVE SURGICAL APPROACH IN SURGICAL TREATMENT OF CHOLELITHIASIS

The Odessa National Medical University, Odessa, Ukraine

УДК 616.366-003.7-06]-089(043.3)
С. Г. Четвериков, А. А. Олейник
ДИФФЕРЕНЦИРОВАННЫЙ ВЫБОР МАЛОИНВАЗИВНОГО ХИРУРГИЧЕСКОГО ДОСТУПА В ХИРУРГИЧЕСКОМ ЛЕЧЕНИИ ЖЕЛЧНОКАМЕННОЙ БОЛЕЗНИ
Одесский национальный медицинский университет, Одесса, Украина
С 2009 г. в клинике Одесского национального медицинского университета прооперировано 47 больных с желчнокаменной болезнью. У 26 больных выполнена минилапароскопическая холецистэктомия, у 21 – однопортовая. Все оперативные вмешательства прошли без интраоперационных осложнений. У 5 пациентов из-за анатомических сложностей мы вынуждены были прибегнуть к установке дополнительного троакара в эпигастральной области. Время, использованное для проведения вмешательств, варьировалось от 30 до 130 мин. Больные находились в стационаре от 1 до 4 сут. При наблюдении за пациентами в течение первых месяцев после операции отдаленных осложнений не наблюдалось, отмечен хороший косметический эффект. Спустя 8 месяцев после операции у 1 пациента после однопортовой лапароскопической холецистэктомии диагностирована троакарная грыжа в месте установки порта.
Ключевые слова: минилапароскопическая и однопортовая холецистэктомия.

UDC 616.366-003.7-06]-089(043.3)
S. G. Chetverikov, A. A. Oleynik
DIFFERENTIATED CHOICE OF THE MINIINVASIVE SURGICAL APPROACH IN SURGICAL TREATMENT OF CHOLELITHIASIS
The Odessa National Medical University, Odessa, Ukraine
In 2009 at the University Clinic of the Odessa National Medical University with minilaparoscopic and single-port technology we have operated 47 patients with cholelithiasis. 26 patients were performed minilaparoscopic cholecystectomy, 21 — laparoscopic cholecystectomy using a single laparoscopic access. All surgical interventions had no intraoperative complications. In 5 patients because of anatomic difficulties in removing the gallbladder, we were used to installing an additional trocar in the epigastric region. Time used for interventions ranged from 30 to 130 minutes. Patients were hospitalized after the surgery from 1 to 4 days. Technically, the performance of single-port laparoscopic cholecystectomy was more difficult than the traditional laparoscopic or minilaparoscopic operations due to lack of conditions for the quality triangulation, visualization of anatomical structures in the area of operation and the small angle between the operating instruments. Particular attention was devoted to adequate closure of the abdominal wall defect after installing the port. Pain after use minilaparoscopic surgery was significantly less than with traditional laparoscopic approach. The intensity of pain after single-port operations, was comparable with that of conventional traditional laparoscopy. At follow-up of patients during the first months after surgery separated complications were not observed, marked by a beautiful cosmetic effect. 8 months after surgery 1 patient was diagnosed trocar-site hernia after a single port laparoscopic cholecystectomy.
Key words: minilaparoscopic and single-port cholecystectomy.

Introduction

The use of traditional laparoscopic surgical intervention with the aid of the standard 10 and 5 mm instruments in a definite quantity of patients is accompanied by development of such complications as postoperative ventral ruptures, pyoseptic complications, formation of significant cosmetic defects on the abdominal skin [1; 2]. The use of laparoscopic instruments of small diameter — 2–5 mm allowed to perform operations at the new qualitative level and with smaller traumatic outcome than by the standard laparoscopic operations; however, the need for extraction of the volumetric macro-preparation from the abdominal cavity levels the advantages of minilaparoscopy. In the last few years Notes-technologies began to be applied in the clinical practice, which consisted in the use of natural openings in the human body for the surgical access. Of the widest use became procedures with the use of a single laparoscopic access (SILS-, LESS- operation with setting of the special ports through the navel) [3; 4]. At present there are no developed possibilities of the substantiated application of minilaparoscopic and endoscopic transluminal surgical interventions in the surgery of the gallstone disease, indications and contraindications to their use are not determined; the detailed estimation of the operational technique is absent.

The advantages of the technology of the single surgical access in the treatment of the gallstone disease remain debatable, the long-term results of using this procedure are not studied, and there are no developed measures for prevention of the formation of trocar hernias.

Aim of the work: to improve the results of surgical treatment of patients with the gallstone disease by optimization of the surgical access for performing laparoscopic cholecystectomy.

Results and Discussion

Since 2009 there have been operated 47 patients with the gallstone disease with the use of minilaparoscopic and single port technologies in the University clinic of the Odessa National Medical University. These were predominantly women (34 patients), without decompensated concomitant pathology and obesity. In 12 patients we used the possibility of providing vaginal access for the manipulations on the organs of the abdominal cavity under the videoendoscopic control and for the extraction of the remote organ from the abdominal cavity. 26 patients were performed minilaparoscopic cholecystectomy, 21 — laparoscopic cholecystectomy with the use of single laparoscopic access. 1 patient was performed the simultaneous removal of the nonparasitic cyst of the liver, 1 patient had bilateral adnexectomy, 8 had the plasty of the umbilical hernia, through which the port for performing the single port operation was set.

We used laparoscopes of 2.6, 4.2 and 5 mm in diameter and standard 3 and 5 mm trocars and the systems of single laparoscopic access for introduction as well as long (600 mm in length) 5 mm, endoscopes with the end and 70° optics for using laparoscopy through the posterior formix of the vagina or through the single port system. There were used 3 mm conventional instruments and original, of our own construction, trocar manipulators for traction of the internal organs of 2.6 and 3 mm in diameter. For performing the single port laparoscopic interventions there were used the device of the access of the firms Karl Storz and PPP as well as the port of our own construction, a set of the curved instruments of the firm Karl Storz.

All surgical interventions did not have any intraoperative complications. We were forced to set additional 5 mm trocar in the epigastric region in 5 patients because of the anatomical complexities in removal of the gall bladder. Instead of clipping of the bile duct and artery, the extracorporeal ligation was used in 5 patients, which allowed to perform this manipulation through one trocar. Colpotomic access after the organ removal was not sutured; only tamponade of the vagina was made. The time of the intervention varied from 30 to 130 minutes. The patients' in-hospital stay after the operation was from 1 to 4 days.

Technically the performance of single port laparoscopic cholecystectomies was more complex than traditional laparoscopic or minilaparoscopic ones because of absence of conditions for the qualitative triangulation, visualization of the anatomical formations in the operation zone and small angle between working tools. The presence of even insignificant infiltration or anatomical peculiarities in the zone of Calot triangle made this access dangerous for surgery and we were forced to set additional epigastric trocar. The situations of acute cholecystitis or insufficient effective hemostasis forced to make the drainage of the subhepatic space, which levelled all advantages of the single port access.

Special attention must be paid to the adequate suturing of the abdominal wall defect after setting the port. We used a continuous two-row polypropylene suture with the thread size of 2–0. The use of the provisory threadholders, which we applied before setting the port, facilitates the application of this suture.

Painful syndrome after the use of minilaparoscopic surgical intervention was substantially less than in using traditional laparoscopic access. Pain intensity after single port operations was compared with that of the usual three-trocar laparoscopy. Taking into account the greater duration of performing single port cholecystectomy, its invasiveness (taking into consideration more prolonged anesthesia) is hardly less than during the traditional access.

There were observed no long-term complications during the first months of the follow-up of the patients after the operation, a beautiful cosmetic effect was noted. In 8 months after the operation 1 patient was diagnosed trocar hernia at the site of the port setting after single port laparoscopic cholecystectomy.

Conclusions

The use of minilaparoscopic and combined single port surgical intervention is a perspective trend in development of modern surgical technologies, which needs further improvement and introduction into the practical activity of the specialized surgical centers. Today in chronic calculous cholecystitis preference should be given to minilaparoscopic techniques. Operations with the use of single laparoscopic access are justified when the associated umbilical hernia or the expansion of the umbilical ring is present, which requires its suturing as well as in large size of the concrements and the gall bladder itself, which do not prevent its extraction through the single port system.

REFERENCES

1. *Захараш М. П.* Хирургия единого лапароскопического доступа — новое направление миниинвазивной хирургии / М. П. Захараш, Ю. М. Захараш, Е. В. Усова // Хірургія України. – 2010. – № 3 (35). – С. 100–109.

2. *Однопортові* лапароскопічні втручання. Перший досвід та перспективи використання / О. Ю. Іоффе, О. П. Стеценко, Т. В. Трасюк [та ін.] // Хірургія України. – 2011. – № 3. – С.16–20.

3. *Single*-port laparoscopic appendectomy conducted intracorporeally with the aid of a transabdominal sling suture / O. Ates, G. Hakguder, M. Olguner, F. M. Akgur // Journal of Pediatric Surgery. – 2007. – N 6, Vol. 42. – P. 1071–1074.

4. *Single* Port Access Laparoscopic Cholecystectomy / P. Bucher, P. Pugin [et al.] // World J Surgery. – 2008. – N 5, Vol. 33. – P.1015–1019.

REFERENCES

1. Zakharash M.P., Zakharash Yu.M., Usova E.B. Surgery by single laparoscopic access — a new tendency of noninvasive surgery. Surgery of Ukraine 2010;3(35):100-109.

2. Ioffe O.Yu., Stetsenko O.P., Trasyuk T.V. et al.Single port laparoscopic interventions. First experience and perspectives of application. Surgery of Ukraine 2011;3:6-20.

3. Ates O., Hakguder G., Olguner M., Akgur F.M. Single-port laparoscopic appendectomy conducted intracorporeally with the aid of a transabdominal sling suture. Journal of Pediatric Surgery 2007;6,42:1071-1074.

4. Bucher P., Pugin P. et al. Single Port Access Laparoscopic Cholecystectomy. World J Surgery 2008;5(33): 1015-1019.

Submitted 20.08.2012

UDC 615.583.3:616.62.-008.22

V. V. Lysenko

COMPARISON OF THE LONG-TERM RESULTS OF MONOPOLAR AND BIPOLAR TRANSURETHRAL RESECTION OF THE PROSTATE

The Odessa National Medical University, Odessa, Ukraine

УДК 615.583.3:616.62.-008.22

В. В. Лысенко

СРАВНЕНИЕ ОТДАЛЕННЫХ РЕЗУЛЬТАТОВ МОНОПОЛЯРНОЙ И БИПОЛЯРНОЙ ТРАНСУРЕТРАЛЬНОЙ РЕЗЕКЦИИ ПРЕДСТАТЕЛЬНОЙ ЖЕЛЕЗЫ

Одесский национальный медицинский университет, Одесса, Украина

В последние годы внедрено большое количество альтернативных малоинвазивных методов лечения доброкачественной гиперплазии предстательной железы (ДГПЖ). Современные многоцентровые исследования демонстрируют сопоставимость ближайших результатов биполярной ТУР, биполярной и плазмокинетической энуклеации простаты, а также гольмиевого и green-лазера в лечении ДГПЖ по сравнению со стандартной методикой монополярной ТУР. Большинство исследований сравнивают периоперационные и ранние послеоперационные результаты биполярной и монополярной ТУР простаты. Автором статьи поставлена задача оценить качество жизни и характер отдаленных послеоперационных осложнений после биполярной ТУР в сроки от 36 до 60 мес. после операции по сравнению с монополярной ТУР предстательной железы. В результате исследования установлено, что при практически равных интраоперационных и ранних послеоперационных показателях биполярная ТУР предстательной железы имеет преимущества перед монополярной ТУР по отдаленным результатам в связи с меньшим количеством риска рецидива ДГПЖ ($p<0,05$) и отсутствием послеоперационных рубцовых изменений в зоне резекции.

Ключевые слова: биполярная ТУР, монополярная ТУР, ДГПЖ, стриктура уретры, отдаленные результаты.

UDC 615.583.3: 616.62.-008.22

V. V. Lysenko

COMPARISON OF THE LONG-TERM RESULTS OF MONOPOLAR AND BIPOLAR TRANSURETHRAL RESECTION OF THE PROSTATE

The Odessa National Medical University, Odessa, Ukraine

The monopolar transurethral resection of the prostate (TUR) has long remained a “gold” standard of treatment of benign prostatic hyperplasia (BPH). However, recently there have been introduced a large number of alternative noninvasive methods of BPH treatment. Modern multicenter studies demonstrate the comparability of the intraoperative data and early postoperative characteristics of the monopolar and bipolar TUR.

The author of the paper compare quality of life and nature of the long-term postoperative complications after the bipolar TUR in the period from 36 to 60 months after the operation in comparison with the monopolar TUR of the prostate. There were evaluated the frequency of BPH relapses and infravesical obstruction development, associated with the postoperative scar changes in the urethra and neck of the bladder, which was confirmed by the data of ascending urethrography and urine flowmetry. The patients with the irritative symptoms, associated with the bladder overactivity, were excluded from the study.

The author demonstrates that 6.7% patients after monopolar TUR underwent repeated TUR due to BPH relapse and 13.3% of patients had the infravesical obstruction, associated with the scar changes in the zone of the surgical intervention in the long-term period after the monopolar TUR. The bipolar TUR of the prostate had advantages over the monopolar TUR in the long-term results, regarding smaller quantity of risk of BPH relapse ($p<0.05$) and absence of the postoperative scar changes in the zone of resection. Besides, the amount of patients contented by results of the operation is reliably more after the bipolar TUR ($p<0.05$).

Key words: bipolar TUR, monopolar TUR, BPH, the stricture of the urethra, the long-term results.