Therapy of Umbilical Hernia during Laparoscopic Cholecystectomy

Ivan Zoričić, Darko Vukušić, Žarko Rašić, Dragan Schwarz and Marko Sever

University of Zagreb, University Hospital »Sveti Duh«, Surgery Clinic, Zagreb, Croatia

A B S T R A C T

The aim of this study is to show our experience with umbilical hernia herniorrhaphy and laparoscopic cholecystectomy, both in the same act. During last 10 years we operated 89 patients with cholecystitis and pre-existing umbilical hernia. In 61 of them we performed standard laparoscopic cholecystectomy and additional sutures of abdominal wall, and in 28 patients we performed in the same act laparoscopic cholecystectomy and herniorrhaphy of umbilical hernia. We observed incidence of postoperative herniation, and compared patients recovery after herniorrhaphy combined with laparoscopic cholecystectomy in the same act, and patients after standard laparoscopic cholecystectomy and additional sutures of abdominal wall. Patients, who had in the same time umbilical hernia herniorrhaphy and laparoscopic cholecystectomy, shown better postoperative recovery and lower incidence of postoperative umbilical hernias then patients with standard laparoscopic cholecystectomy and additional abdominal wall sutures.

***Key words**: umbilical hernia, herniorrhaphy, laparoscopic cholecystectomy, simultaneous, therapy*

Introduction

Laparoscopic cholecystectomy is golden standard in treatment of cholecystitis[1–7]. One of the problems in laparoscopic treatment of patents with cholecystitis is preexisting umbilical hernia, which may present technical problems during the procedure of laparoscopic cholecystectomy.

In this study we performed herniorrhaphy during the procedure of laparoscopic cholecystectomy (hernial defect was used as camera port) and retrospectively compared it with standard laparoscopic cholecystectomy and additional abdominal wall sutures[8–17].

Patients and Methods

Patients who were treated in 10 year period in our hospital with cholecystitis and umbilical hernia were retrospectively analyzed. Cholecystitis was diagnosed (clinical signs, hepatic level enzymes, inflammation and blood parameters) in 9799 patents, 89 of them had in the same time umbilical hernia. We separated patents into two groups by different kinds of therapy. First group had herniorrhaphy of umbilical hernia and laparoscopic cholecystectomy in the same act (28 patients). At the beginning of laparoscopic cholecystectomy unilateral incision at left side of umbilical ring was done. Hernial sac was opened and reduced. Hernial defect was used as camera port for laparoscopic cholecystectomy (blind trocar placement avoided). After gallbladder extraction, standard herniorrhaphy was finished (Figures 2–5).

The second group patients (61) had standard laparoscopic cholecystectomy (with supraumbilical incision)

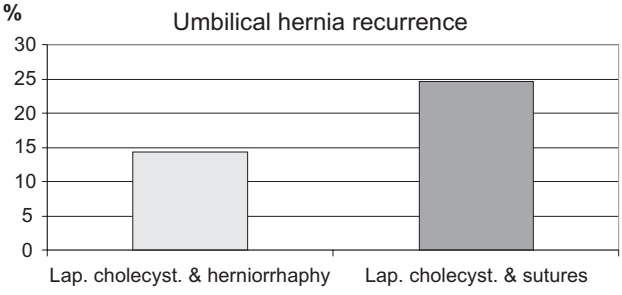

Fig. 1. Umbilical hernia recurrence after simultaneous umbilical herniorrhaph cumbined with laparoscopic cholecystectomy and standard laparoscopic cholecystectomy with only additional abdominal wall sutures.

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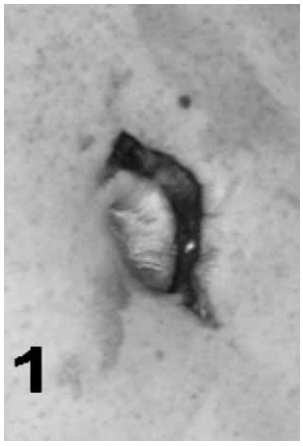

Fig. 2. Unilateral incision at left side of umbilical ring

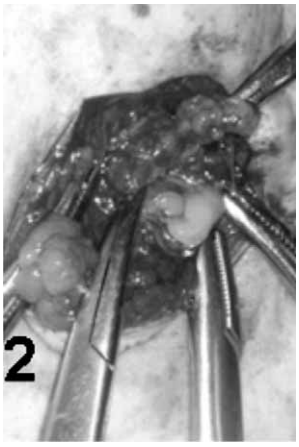

Fig. 3. Opened hernial sac.

Fig. 4. Hernial defect is used as camera port for laparoscopic cholecystectomy.

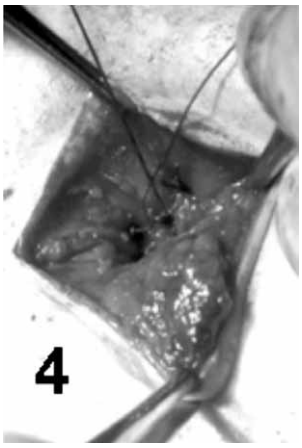

Fig. 5. Finishing of umbilical herniorrhaphy after cholecystectomy.

and additional abdominal wall sutures on hernial defect (without standard herniorrhaphy).

Patients were observed (general condition, time of hospitalization and umbilical hernia recurrence) during the hospitalization and during regular control exams for 2 years.

Results

A study was done of 89 patients with umbilical hernia and cholecystitis (28 undergoing laparoscopic cholecystectomy with simultaneous herniorrhaphy (first group), and 61 patients undergoing standard laparoscopic cholecystectomy with additional abdominal wall sutures (second group).

Patients in first group had the same time of hospitalization (2±1.5 days (first group) vs. 2±1.3 days (second group), the same therapy costs, without increased mortality or morbidity rates. In first patients group significantly lower umbilical hernia recurrence incidence was found, compared to second patients group (14.28% – first patient group vs 24.59% – second patient group) (Figure 1).

Discussion and Conclusion

During time period of 10 years, in patients with pre-existing umbilical hernia, 89 laparoscopic cholecystectomy were performed. Patients with laparoscopic cholecystectomy combined with umbilical hernia herniorraphy had same time of hospitalization, same time for return to work, but less postoperative umbilical hernia compared to patients with standard laparoscopic cholecystectomy and only additional abdominal wall sutures (without standard herniorrhaphy).

When cholecystitis is combined with umbilical hernia usually is treated with standard laparoscopic cholecystectomy. Video port is usually installed paraumbilicaly or parahernialy or trough umbilicus[8–12,14–17]. Umbilical hernia is treated in second act or additional abdominal wall sutures are performed, but usually not standard herniorrhaphy.

When we compare tested simultaneous laparoscopic cholecystectomy and herniorrhaphy with standard laparoscopic cholecystectomy and different procedure to pre-existing umbilical hernia we can notice lower incidence of postoperative hernias, the same or lower therapy costs (no need for additional operative procedure). Advantages of tested technique are also that we avoid blind trocar placement and that our incision, if necessary, can be simply prolonged in median laparotomy, which is known to be best classic approach to abdominal cavity exploration. Time of hospitalization and time necessary for return to work were the same as in patients which had laparoscopic cholecystectomy without umbilical hernia.

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M. Sever

University Hospital »Sveti Duh«, Sveti Duh 64, 10000 Zagreb, Croatia
e-mail: dr.sever.marko@gmail.com

LIJEČENJE UMBILIKALNE KILE TIJEKOM LAPAROSKOPSKE KOLECISTEKTOMIJE

S A Ž E T A K

Jedan od problema laparoskopske kolecistektomije je postojeća pupčana kila. Cilj ovog rada je pokazati naša iskustva u liječenju pupčane kile tokom laparoskopske kolecistektomije. Tijekom deset godina u našoj ustanovi operirali smo 89 pacijenta s kolecistitisom koji su isto vrijeme imali i pupčanu kilu. Kod 61 pacijenta učinili smo standardnu laparoskopsku kolecistektomiju te nakon toga šavi trbušne stjenke; u 28 pacijenata učinili smo u plastiku pupčane kile i laparoskopsku kolecistektomiju u istom aktu. Promatrali smo incidenciju postoperativne umbilikalne hernijacije te postoperativni oporavak bolesnika. Pacijenti koji su imali u istom aktu plastiku pupčane kile i laparoskopsku kolecistektomiju imali su nižu incidenciju recidiva pupčane kile nego pacijenti kojima je učinjena standardna laparoskopska kolecistektomija te samo šavi trbušnog zida. Obje grupe su imale podjednako vrijeme hospitalizacije.