

Letter to the Editor

Concerning : "Day Hospital for Incisional Hernia Repair : selection criteria" – Donati M. *et al.*

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Day surgery for incisional hernias under local anaesthesia

H. Kulacoglu, I. Ozyaylali, D. Yazicioglu

Ankara Hernia Center, Ankara, Turkey.

Dear Editor,

As ambulatory surgery has gained great acceptance for many surgical procedures, the papers about day surgery are read with great interest by the surgeons. The paper, recently published in *Acta Chirurgica Belgica*, on day repair of incisional hernias by DONATI *et al.* was really interesting (1). As a newly established specific hernia centre, we would like to share our early experience in this field.

Nine patients underwent incisional hernia repair under local anaesthesia in our institution since September 2006. There were four male and five female patients with a mean age of 62.5 (range : 45-76). Five patients had comorbidity (4 cardio-vascular and 1 asthma). There were three trocar site hernias, two sub-xiphoid post-by-pass hernias, two subcostal incisional hernias and two midline incisional hernias. All the hernias were reducible and two of them recurrent. Like those in our small series, all the hernias in Donati's series were reducible. However we do not consider an irreducible hernia as a contraindication for repair under local anaesthesia. Irreducible hernia sac may contain only omentum and the repair can be done after reducing it. It is possible to discriminate bowel and omentum stuck within the sac and preoperative ultrasound will also very useful to find it out. Ultrasound also can show if there are any other defects besides the palpable ones throughout the previous incision. If there are multiple defects in considerable distance from the palpable one the final decision of repair under local or general anaesthesia should be reconsidered.

Local anaesthesia was performed by the surgeon using 0,5% bupivacaine (50 mg) and 2% lidocaine (120-340 mg). Intravenous sedation was added in all cases with 0.025-0.06 miligram/kg midazolam and 0.09-1.5 microgram/kg fentanyl. Two patients needed 0.03 mg/kg propofol. A single dose prophylaxis was set with 1 gr of intravenous cefazoline.

Defect sizes ranged 2-10 cm with an average of 4.5 cm. Three patients had double defects on the previous incision. All the defects were closed with polypropylene sutures. Mesh type was standard polypropylene in seven cases and light-weight polypropylene in two.

Meshes were placed onlay in eight cases, while one patient was treated with double inlay + onlay meshes.

The mean duration of the operation was 82 minutes (60-120 min). All the patients could receive both liquid and solid foods within an average time of 58 minutes (18-90 min). The mean interval between the end of the operation and discharge was 113 minutes (80-195 min). No re-admission was recorded. Seroma formation was observed in two cases (standard mesh used). This is very similar to DONATI *et al.*'s seroma rate. Indeed, mesh use for incisional hernia has reduced the recurrence rate but increased the seroma formation (2,3). A 30% seroma rate may be expected after prosthetic repair of incisional hernias with standard polypropylene mesh, and light-weight meshes may seem to help in solving this annoying problem (4). We used light-weight meshes in last two cases with no seroma formation.

DONATI *et al.* reported no recurrences after repair under local anaesthesia. We also recorded no early recurrences. However, based upon the Danish Hernia Database, KEHLET and BAY-NIELSEN reported that the use of local anaesthesia was resulted in a higher recurrence rate compared with general or regional anaesthesia after repair of a direct but not an indirect hernia (5). This may be related to lack of technical excellence for local anaesthesia. It obvious that if the patient feels uncomfortable during the operation due to an inefficient local anaesthesia application the surgeon will experience difficulty and can not perform an ideal repair.

In fact, local anaesthesia is not the rule for day case ambulatory surgery (6). It is truly possible for an otherwise healthy patient to have general anaesthesia and be discharged on the same day. On the other hand, some patients can not be return to home after any surgical intervention under local anaesthesia. It was stated that the choice of the anaesthetic technique appears to play a minor role in recovery from anaesthesia or in the occurrence of minor postoperative complications or home discharge, except for the use of total intravenous anaesthesia for the prevention of postoperative nausea and vomiting (7). Besides local anaesthesia, regional anaesthesia methods seem to be good alternatives theoretically. However, there have been only two reports on the use

of spinal anaesthesia in laparoscopic but not open ventral hernia repair, while no published data about the use of epidural anaesthesia. A Spanish series with 23 cases using T2 level spinal block with bupivacaine and fentanyl and sedation with midazolam was resulted in a 17% conversion rate to open surgery (8). No conversion was reported in another series included nine umbilical/para-umbilical, five epigastric, and 11 incisional hernias (9). However, the cases in that series were all American Society of Anesthesiologists (ASA) grade I or II patients, and the need for regional anaesthesia was somewhat controversial.

As DONATI *et al.* nicely mentioned patient selection seems to be the key point for incisional hernia repair with local anaesthesia on day case basis. Describing the defect thoroughly in preoperative period by physical examination and ultrasound is important for a good repair with an adequate mesh overlap.

In conclusion, we agree with DONATI *et al.* on repairing incisional hernias with local anaesthesia as day case especially for patients with a defect smaller than 10 cm and significant comorbidity or reluctant to having general anaesthesia.

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Hakan Kulacoglu, M.D., F.A.C.S., Associate Professor of Surgery
 Ipek Ozyaylali, M.D., General Surgeon
 Dilek Yazicioglu, M.D., Anaesthesiologist
 Ankara Hernia Center
 Cukurambar mh., 38.cd., 33/A
 Ankara, Turkey
 Fax : +90 312 220 00 90
 E-mail : info@ankarafitikmerkezi.com