Abdominal adhesion and laparoscopy in liver diseases

Vittorio TERRUZZI, Gian Luigi INTROZZI, Giorgio MINOLI, Gianni IMPERIALI, Giorgio TADEO, Aldo ROSSINI
Divisione di Medicina, Ospedale Valduce, Como (Italy)

Laparoscopies et adhérences abdominales en pathologie hépatique

SUMMARY

Abdominal adhesions constitute a problem frequently met while performing a laparoscopic examination in hepatic diseases. We have carried out a retrospective study to evaluate the possibility to observe the liver when abdominal adhesions are present, and a prospective study on the influence of adhesions as a source of pain suffered during laparoscopy. The first study showed the major obstacles we came across while observing the right lobe of the liver, especially after previous bile ducts surgery. However, adhesions need not be considered a hindrance to the examination in most cases.

The second study revealed that there is no statistically significant difference in the raising and intensity of pain between patients with adhesions and those without.

RÉSUMÉ

Les adhérences abdominales sont fréquemment rencontrées au cours des laparoscopies effectuées pour mise au point d'affections hépatiques. L'étude comporte une partie rétrospective destinée à évaluer les possibilités d'observation laparoscopique du foie malgré la présence d'adhérences, et une partie prospective ayant pour but d'évaluer le rôle des adhérences sur l'apparition de douleurs en cours de laparoscopie.

L'étude rétrospective montre un maximum de difficultés dans l'observation hépatique du lobe droit, surtout après chirurgie biliaire, sans que les adhérences constituent une contre-indication à la laparoscopie. L'étude prospective ne montre pas de différences statistiquement significatives en ce qui concerne l'origine et l'intensité des douleurs de patients porteurs ou non d'adhérences abdominales.

INTRODUCTION

In the last few years laparoscopy has become increasingly popular all over the world not only for gynecological reasons but also and especially in the field of hepatic diseases [1, 3, 5, 7, 8, 13, 16, 18]. Recent advances in instrumentation have also improved diagnostic precision [8, 18]. Contraindications associated with the procedure are few and quite frequent [4, 8, 12, 18] : among these abdominal adhesions are often reported, but there are different opinions in the literature. Some authors consider them relative contraindications [6, 8, 13,
17], others consider them unimportant [9, 12, 18] either because they have not hindered the establishment of the pneumoperitoneum and the laparoscopic view [10, 14, 15], or because of the possibility to cut the adhesions during the examination [2, 11]. The aim of the present study is: a) to evaluate the possibility of observing the liver and of effecting a biopsy under visual control when abdominal adhesions are present, b) to evaluate the influence of adhesions as a source of pain suffered during laparoscopy performed under local anaesthesia.

METHODS

a) Study on the possibility of observing the liver

All laparoscopic examination carried out in our endoscopic center, from January 1978 to August 1980 have been taken into consideration retrospectively. Among these, 87 were performed in patients with evident abdominal adhesions.

The other 364 laparoscopies performed in the same period have been considered as a control group. We noted sex, age, endoscopic diagnosis, final diagnosis, completeness of the examination, number and type of eventual abdominal surgery and complications. We also studied the possibility of observing both lobes of the liver and of performing biopsies under visual control.

b) Study on pain

Fourtyfive patients who consecutively underwent a laparoscopic examination for hepatic diseases have been studied prospectively.

The investigation was carried out by the same group, using the same method in the same environment and using the same drug premedication. The psychological preparation was always undertaken by the same laparoscopist (G.M.) in the room were laparoscopy was to take place and consisting of detailed information on the operations to be performed and their purposes. The flow of gas was the same for each patients (500 ml/min with an average pressure in the insufflation apparatus of 15 mmHg).

We recorded sex, age, duration of the examination (from the insertion of the Verres needle to the suture), amount of the gas used for the initial pneumoperitoneum, total amount of gas used, number of patients with ascites and number of biopsies performed.

On the basis of the presence of abdominal adhesions, the patients were divided into two groups: Group A (20 patients with adhesions) and Group B (25 patients without adhesions). All patients were asked at the end of the examination to evaluate the amount of pain globally suffered during laparoscopy according to a conventional scale varying from zero to four (0 = no pain; 1 = slight pain; 2 = strong pain; 3 = very strong pain; 4 = need of analgesic treatment).

Neither the patient nor the person charged to record the pain score knew about the endoscopic report.

The statistical homogeneity of the groups was determined by means of the paired Student t-test and chi-square test. The statistical valuation of pain score was made using the Mann-Whitney non-parametric U-test.

Criteria for admission, exclusion and technique of examination

Only patients who need laparoscopy for hepatic reasons were admitted to the studies. All patients gave written consent before the examination. Patients with too severe abdominal disease and in bad general conditions and those with the following contraindications were excluded: coagulations defects, serious cardiorespiratory problems, voluminous hiatus hernia, mechanical or paralytic ileus, generalized peritonitis.

After treatment with 10 mg intramuscular Metadone, a local anaesthetic was given with 2 % Xylocaine 15 ml for anaesthetising the abdominal wall and peritoneum.

The pneumoperitoneum was performed by introducing nitrous oxide through an automatic insufflation apparatus. The examination was therefore undertaken following the now classic method [4, 8, 18] with the same instruments.