

# Endolaparoscopic treatment of cholecysto-choledochal lithiasis.

## Personal experience



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### Endolaparoscopic treatment of cholecysto-choledochal lithiasis. Personal experience

**AIM OF THE STUDY:** *To demonstrate how, on the basis of the personal experience, the rendez-vous technique, in the management of cholelithiasis associated with choledocolithiasis, whenever there is the indication, is better than the sequential treatment.*

**METHODS:** *From January 2008 to May 2011, 48 patients with cholelithiasis and choledocolithiasis combined were treated with endolaparoscopic technique. Of these patients, 23 were treated with the sequential treatment and 25 with the rendez-vous method. We attempted to define the indications for endolaparoscopic rendez-vous:*

- *cholelithiasis associated with choledocolithiasis or biliary sludge not bigger than 1 cm;*
- *permeability of the coledocystic duct;*
- *a clinical picture of medium-low importance.*

**CONCLUSIONS:** *The data of the study confirm the superiority of the rendez-vous technique because it resolves cholelithiasis associated with choledocolithiasis in a single surgical act with greater acceptance of the patient who avoids a second invasive surgical act; moreover it requires shorter hospitalization and convalescence, resulting in reduced costs. Finally the data analyzed show a reduction in complications compared to sequential treatment.*

**KEY WORDS:** Cholecysto-choledochal lithiasis, ERCP, Rendez-vous, Sequential treatment.

### Introduction

In past years, in the laparotomic era, the stones in the gallbladder-common bile duct were treated by cholecystectomy associated with the papilla sphincterotomy or choledochotomy transduodenal. Today it is approached in a radically different way thanks to the acquisition of sophisticated laparoscopic and endoscopic techniques which have allowed a treatment called “sequential”, it consists of ERCP and after a few days, the clinical and

laboratory permitting, the CVL or the “reverse sequential”, less common and reserved for special cases such as a bile duct gallstones misunderstood or migration bile duct stones post-operative. These therapeutic procedures have still a technical and strategic importance and are a reference method for this disease even though being two separate acts operators are burdened with the fact that each one has its own morbidity. That's why the surgeon has embarked on a treatment in one stage and the further refinement of the laparoscopic techniques has allowed the approach to the common bile duct stones by trans-cystic or trans choledocha.

But often, however we still had to resort to post-operative ERCP for which it was reduced the exclusive laparoscopic approach in the lithiasis associated with gallbladder-common bile duct.

Hence the combined treatment of endo-laparoscopic (Rendez-Vous), which consists of the CVL with CIO or colangiography MRI pre-operative associated to ERCP. It

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is made with the introduction of a CVL trans-cystic guide wire protruding from the papilla of Vater, the endoscopist recovers to in the duodenum allowing a PSE wide, fast and safe with any subsequent drainage of the bile duct by using a Dormia or a balloon catheter. He then completes the surgery completing the CVL. According to in our experience, the limits in this seemingly simple technique combined are the size of choledochal stones, cystic duct patency and the organizational aspect.

The aim of our study is to demonstrate how, in the experience of our group, where there is an indication, the Rendez-Vous is preferable to sequential treatment for the patient outcome, for the costs of hospitalization and the fewer complications this technique seems to have.

## Materials and methods

Since 1994 we have performed in our hospital 3650 CVL, but only since January 2008 our attention has been addressed to the gallbladder stones associated with bile duct by endo-laparoscopic technique. Of the 411 of gallbladder lithiasis treated in this period (January 2008-May 2011) we have enrolled 48 patients (11.6%) who had bile duct stones diagnosed through clinical and the alteration of the indices of biliary stasis and confirmed by pre-operatively with MR -cholangiography.

Two groups were formed: the first group 23 patients (9 males and 14 females, age range 30-80) have performed a sequential treatment (ERCP + CVL).

The second group: 25 patients (9 males and 16 females, age range: 35-78) have had a Rendez-Vous, 5 of them with open surgery.

Four of the first group had presented a history of med.sized pancreatitis, 6 had presented jaundice and 5 had presented jaundice associated with pancreatic spat.

Two of the patients in the second group had a history of mild pancreatitis, 3 had presented jaundice and 3 had associated jaundice and pancreatic spat.

We tried to put the display to the Rendez-Vous in pre-operatively for gallstones and gallbladder stones or sludge endo bile duct stones, the latter in size below the centimeter, certified by the MR-cholangiography in a clinical picture of uncomplicated biliary stasis and values of mild, medium size and patency of the cystic duct.

## Results

Intra-and postoperative mortality was nil. In two cases it was not possible however to make the cystic duct cannulation so we have opted for a sequential treatment. Complications of the first group (Table I): 4 pancreatitis of medium severity, treated with medical therapy; in the second group 3 treated for mild pancreatitis with medical therapy too.

TABLE I - *Complications*

Group I°	pancreatitis of medium severity, 4
Group II°	mild pancreatitis 3

TABLE II

Group I°	Average length of stay 7 days
Group II°	Average length of stay 5 days

The days of hospitalization (Table II) of the first group were on average seven and five for the second group. The average duration of surgery was ninety minutes.

## Discussion

Rendez-Vous certainly combines both the advantages of the laparoscopic technique and the endoscopic, resolving with a single therapeutic act the presence of a gallbladder-common bile duct stones by reducing hospitalization times, saving the patient another gesture, however, invasive treatment, with an extension, after all reasonable of operating time.

The candidates for this procedure are selected on the basis of the criteria set out above, but it is possible that with the consolidation of the experiences can be enlarged. As for the complications of this method the most frequent is acute pancreatitis that in our cases have occurred in three cases, but of a mild nature, but more important were pancreatic complications occurred in the sequential treatment group after ERCP. This probably because the endoscopist in the Rendez-Vous is facilitated in the bile duct cannulation and then there is less chance the duct of Wirsung has a wrong cannulation <sup>6</sup>.

Another aspect to consider is the organization of the Rendez-Vous, which is facilitated thanks to working groups consisting of endoscopists and surgeons together, like ours <sup>9</sup>.

## Conclusions

The Rendez-Vous is an effective technique for the solution of gallstones-associated gallbladder and bile duct in selected cases and in experienced hands with a team of surgeons, endoscopists tested and it is preferable to sequential treatment for the greater approval of the patient who avoids a second invasive therapeutic act, as it reduces hospital stays, produces fewer complications and has a reasonable operating time.

## Riassunto

**OBIETTIVO:** Lo scopo di questo studio è dimostrare come nella nostra esperienza sia preferibile, nei casi in cui ci sia l'indicazione, il rendez-vous nel trattamento della calcolosi colecisto-coledociche rispetto al trattamento sequenziale.

**MATERIALE E METODI:** Delle 48 calcolosi colecisto-coledociche che dal Gennaio 2008 al Maggio 2011 sono state trattate con tecnica endo-laparoscopica, 23 hanno avuto il trattamento sequenziale e 25 il rendez-vous. Si è cercato di definire un quadro di indicazione al rendez-vous che consiste nella presenza di calcoli colecistici endocolodocici o fango biliare di dimensioni non superiori al cm (quelli endocolodocici), pervietà del dotto cistico in un quadro clinico e laboratoristico di lieve-media gravità.

**CONCLUSIONI:** Dai dati della nostra esperienza il rendez-vous risulta efficace perché in un solo atto operatorio risolve la calcolosi associata della colecisti e delle vie biliari con un maggiore gradimento per il paziente che così evita un secondo atto terapeutico comunque invasivo: riduce i tempi di degenza e quindi i costi ed in ultimo dai nostri dati risulta avere minori complicanze rispetto a quelle del trattamento sequenziale.

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