



**The 38th Congress of**  
The Korean Association of **Hepato-Biliary-Pancreatic Surgery**

**DATE** APRIL 26-27, 2013

**VENUE** JEJU LOTTE HOTEL, JEJU ISLAND

# SINGLE PORT LAPAROSCOPIC CHOLECYSTECTOMY SIMPLE RETRACTION METHOD

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# INTRODUCTION .

- ▶ Single port laparoscopic cholecystectomy displays substantial progress in minimally invasive surgery, and recent reports on the feasibility of this novel technique have challenged the conventional multiport laparoscopic technique as the gold standard in cholecystectomy.
- ▶ Nevertheless, one major drawback of single port laparoscopic surgery is the proximity of different instruments and the laparoscope inserted via the same port, resulting in extracorporeal interference, which potentially compromises the safety of the operation.
- ▶ Concerning safety aspects, an independent retraction technique of the gallbladder fundus is crucial for an optimal exposition of critical structures in the Calot's triangle.



# INTRODUCTION ..

- ▶ This technique should also offer maximum range of motion for the applied instruments during preparation.
- ▶ We describe a simple technique of independent fundal retraction of the gallbladder using additional instrument.



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# PATIENTS

- ▶ All 148 patients that underwent single port laparoscopic cholecystectomy between March 2010 and December 2012 at the Hepatobiliopancreas Division of the Department of Surgery, Korea University Ansan Hospital, were included.
- ▶ All 15 patients underwent conversion to conventional laparoscopic cholecystectomy.
- ▶ We analyzed the perioperative parameters between single port laparoscopic cholecystectomy without fundal retraction and with fundal retraction using additional instrument among 133 patients.



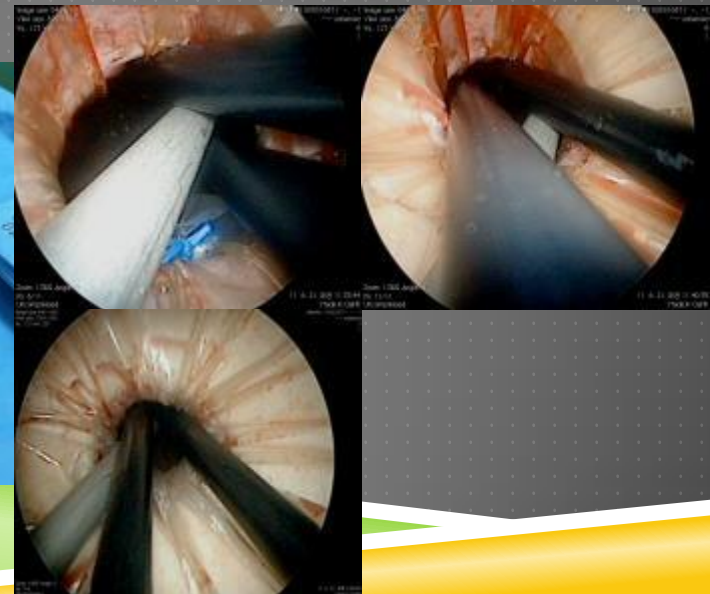
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# METHODS

- ▶ No fundal retraction
  - ▶ Home-made port (Surgical glove, Alexis wound retractor, 12mm trocar, 5mm trocar)
  - ▶ Two Conventional laparoscopic instruments, One 5mm telescope
- ▶ Fundal retraction
  - ▶ Home-made port
  - ▶ Three instruments, One 5mm telescope.



# OPERATION



# RESULTS .

| Variables                            | No retraction<br>(n=109) | Simple<br>retraction<br>(n=24) | P value |
|--------------------------------------|--------------------------|--------------------------------|---------|
| Gender (M:F)                         | 40:69 (1:1.7)            | 6:18 (1:3)                     | 0.275   |
| Age (years old)                      | 42.8 ± 11.5              | 43.3 ± 16.9                    | 0.904   |
| Body mass index (kg/m <sup>2</sup> ) | 23.4 ± 3.1               | 25.7 ± 4.3                     | 0.017*  |
| Previous abdominal op<br>Hx          | 21 (18.3%)               | 6 (25.0%)                      | 0.527   |
| Acute cholecystitis                  | 8 (7.3%)                 | 0 (0.0%)                       | 0.171   |
| Cholelithiasis                       | 78 (71.6%)               | 20 (83.3%)                     | 0.236   |
| Cholesterolosis                      | 23 (21.1%)               | 3 (12.5%)                      | 0.336   |
| Cholesterol polyp                    | 18 (16.5%)               | 2 (8.3%)                       | 0.310   |
| Adenoma                              | 2 (1.8%)                 | 1 (4.2%)                       | 0.452   |
| Chronic cholecystitis                | 105 (96.3%)              | 23 (95.8%)                     | 0.556   |

# RESULTS ..

| Variables              | No retraction (n=109) | Simple retraction (n=24) | P value |
|------------------------|-----------------------|--------------------------|---------|
| Bile leakage           | 41 (37.6%)            | 10 (41.7%)               | 0.907   |
| – Aspiration           | 10 (9.2%)             | 6 (25.0%)                | 0.031*  |
| – Perforation          | 13 (11.9%)            | 6 (25.0%)                | 0.098   |
| Gallbladder distention | 14 (12.8%)            | 5 (20.8%)                | 0.007*  |
| Adhesions [op fields]  | 22 (20.2%)            | 11 (45.8%)               | 0.008*  |
| Wall thickening        | 20 (18.3%)            | 8 (33.3%)                | 0.001*  |
| Inflammation           | 21 (19.3%)            | 5 (20.8%)                | 0.861   |
| Cutaneous fistula      | 1 (0.9%)              | 2 (8.3%)                 | 0.722   |



# COMPLICATIONS

- ▶ No fundal retraction Group
  - ▶ Surgical site infections (n=9)
  - ▶ pain (n=3)
- ▶ Fundal retraction Group
  - ▶ Hernia (n=1)

# SUMMARY & CONCLUSION

- ▶ Single port Laparoscopic cholecystectomy with fundal retraction were significantly performed in cases with gallbladder distention, wall thickening, and adhesions.
- ▶ Operation time in group with fundal retraction was shorter, however, there was no significant difference.
- ▶ There was no significant difference in complications.
- ▶ Simple retraction method using 4 instruments can be easily applied in clinical practice with safety.





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# THANK YOU!



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