

Quality-of- life, Body Image and Cosmesis after Single Incision Laparoscopic Cholecystectomy (SILC) Versus Conventional Laparoscopic Cholecystectomy (CLC)

M.D.Huseyin SINAN
M.D. Mehmet SAYDAM*
M.D. M.Tahir OZER
M.D. Sezai DEMIRBAS
Ass.Res.Pervin DEMIR

*Mevki Military Hospital,
Ankara, TURKEY

- Conventional Laparoscopic cholecystectomy (CLC) was first performed by Erich Mühe in 1985.
- Paradigm shift in the surgical arena (1).
- Become the standard surgical procedure for diseases of gallbladder.
- Generally four ports are needed
- A lot of data are available in the literature for CLC

- Seeking new techniques
- Less pain
- Less scaring
- Shorter operative time
- Shorter hospital length of stay
- High level of satisfaction

- The Conventional Laparoscopic Technique enjoy all these advantages
- Single- Access Surgery was described in 1992 (2)
- Single Incision Laparoscopic Cholecystectomy (SILC) in 1997 (3)

- Reduced postoperative pain (3,4)
- Reduced trauma to the abdominal wall (3,4)
- Reduced scar (3,4)

3. Hirano Y, Watanebe T, Uchida T et al: Single-incision laparoscopic cholecystectomy, single institution experience and literature review. *World J Gastroenterol* 16(2):270-274 2010

4. Lee PC, Lo C, Lai PS et al: Randomized clinical trial of single-incision laparoscopic cholecystectomy versus minilaparoscopic cholecystectomy. *Br J Surg* 97(7):1007-1012 2010

- Technical problems of SILC
 - Collision of instruments (5)
 - Time to learn
 - Patience for surgeon
 - Patience for the surgical team

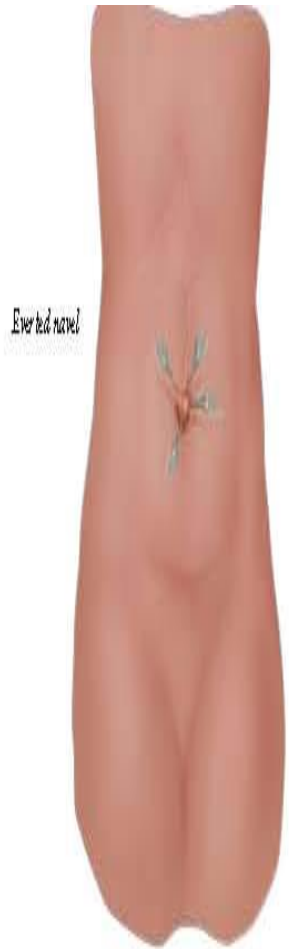


figure 1.



figure 2

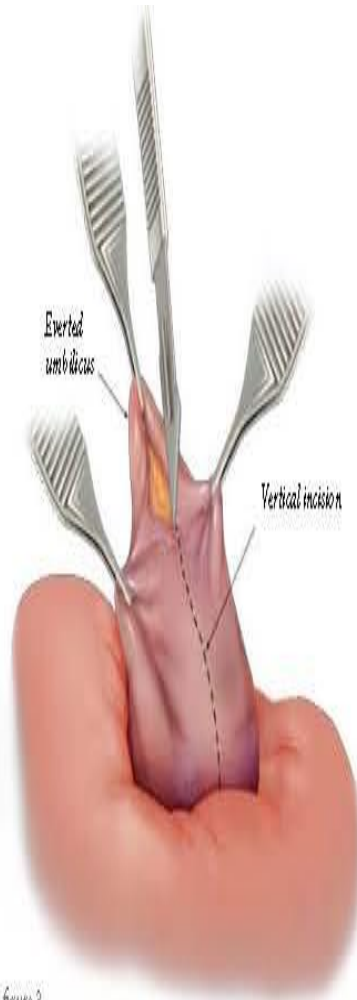


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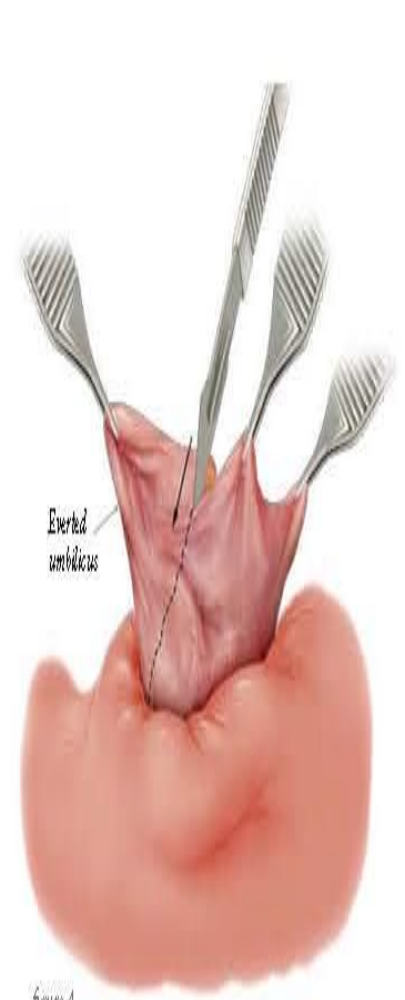
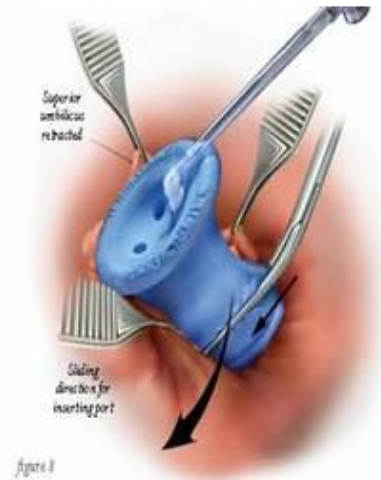
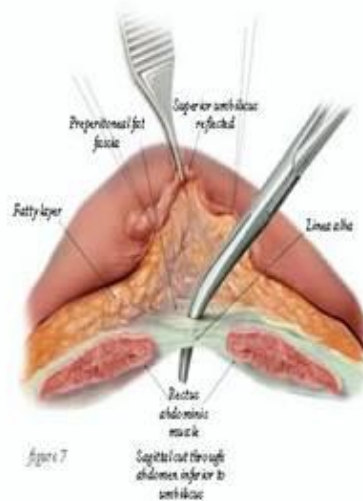
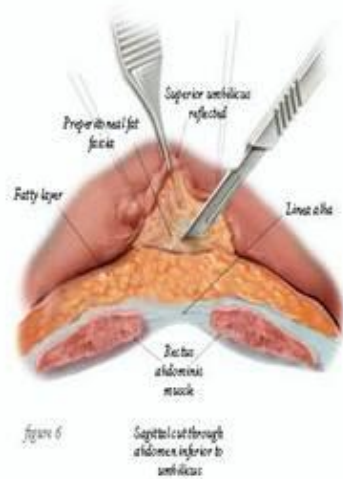


figure 4



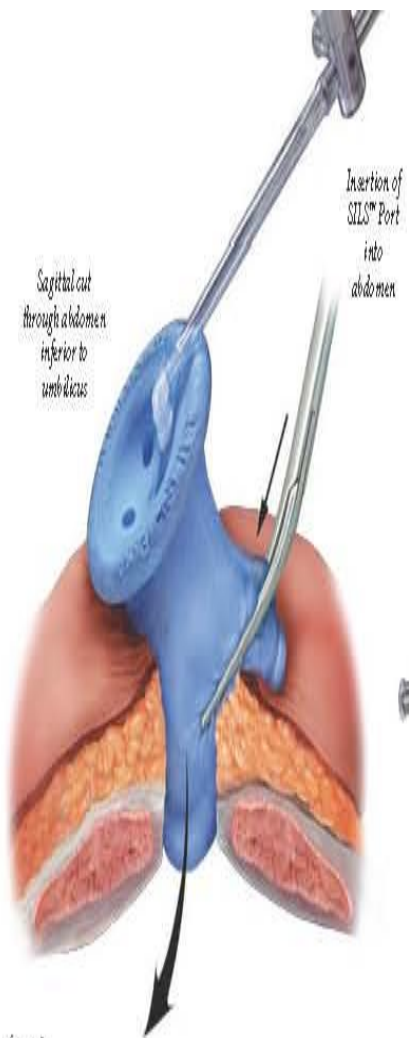


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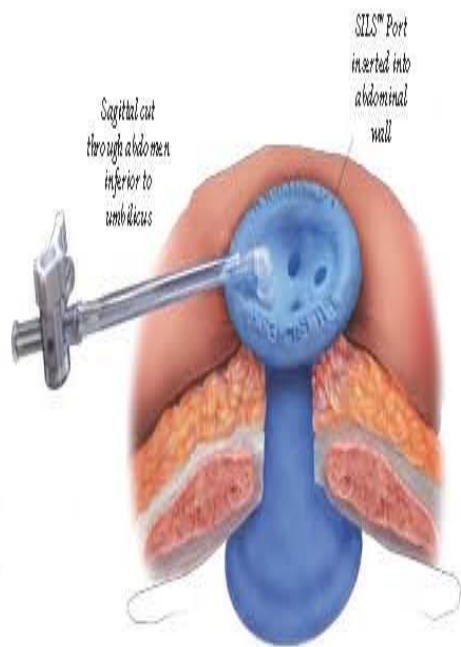


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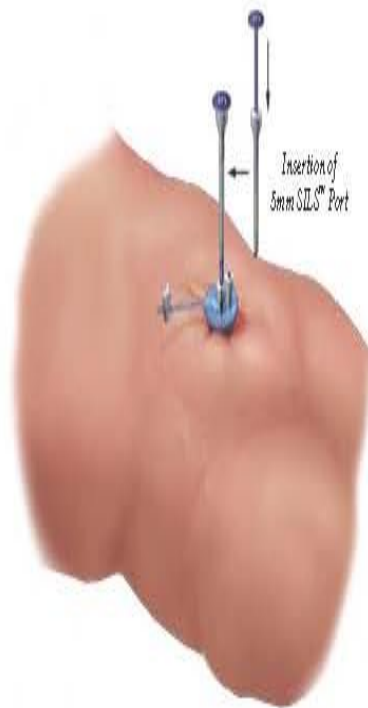


figure 11



figure 12

SILC (6 minutes video sample)

- 33 age male
- BMI: 21,9
- USG: Cholelithiasis

- Relatively less data in the literature
- Aim: Comparing outcomes of the SILC with LC in the terms of quality-of-life measures and cosmesis
- Prospective randomized study
- January 2011 and March 2013 in Turkey

- All operations were performed by the same team.
- 52 patients in two groups
- 26 patients were underwent SILC (f/m: 16/10)
- 26 patients were underwent CLC (f/m: 13/13)

- 6 months after surgery
- EuroQol EQ-5D questionnaire

EQ-5D

Describing your health TODAY

Under each heading, please tick the ONE box that best describes your health TODAY

1 - Mobility (walking about)

I have no problems walking about

I have some problems walking about

I have a lot of problems walking about

2 - Looking after myself

I have no problems washing or dressing myself

I have some problems washing or dressing myself

I have a lot of problems washing or dressing myself

3 - Doing usual activities (for example, going to school, hobbies, sports, playing, doing things with family or friends)

I have no problems doing my usual activities

I have some problems doing my usual activities

I have a lot of problems doing my usual activities

4 - Having pain or discomfort

I have no pain or discomfort

I have some pain or discomfort

I have a lot of pain or discomfort

5 - Feeling worried, sad or unhappy

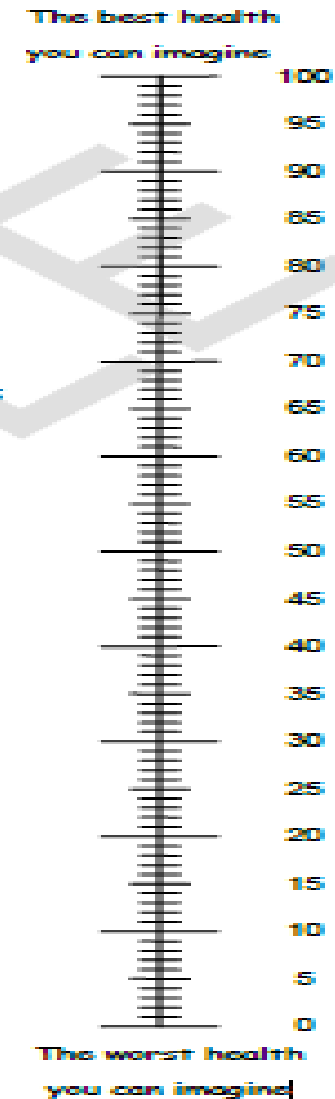
I am not worried, sad or unhappy

I am a bit worried, sad or unhappy

I am very worried, sad or unhappy

How good is your health TODAY

- We would like to know how good or bad your health is TODAY.
- This line is numbered from 0 to 100.
- 100 means the best health you can imagine.
0 means the worst health you can imagine.
- Please mark an X on the line that shows how good or bad your health is TODAY.



Body Image Questionnaire

1) Are you less satisfied with your body since the operation?

- 1- Yes, extremely
- 2- Quite a bit
- 3- A little bit
- 4- No, not at all

2) Do you think the operation has damaged your body?

- 1- Yes, extremely
- 2- Quite a bit
- 3- A little bit
- 4- No, not at all

3) Do you feel less attractive as a result of your operation?

- 1- Yes, extremely
- 2- Quite a bit
- 3- A little bit
- 4- No, not at all

4) Do you feel less feminine/masculine as a result of your operation?

- 1- Yes, extremely
- 2- Quite a bit
- 3- A little bit
- 4- No, not at all

5) Is it difficult to look at yourself naked?

- 1- Yes, extremely
- 2- Quite a bit
- 3- A little bit
- 4- No, not at all

6) On a scale from 1 to 7, how satisfied are you with your (incisional) scar?

- 1- Very unsatisfied
- 7- Very satisfied

7) On a scale from 1 to 7, how would you describe your (incisional) scar ?

- 1- Revolting
- 7- Very beautiful

8) Could you score your own scar on a scale from 1 to 10?

- 1- Nasty
- 10-Excellent

9) How confident were you before your operation?

- 1- Not very confident
- 10- Very confident

10) How confident were you after your operation?

- 1- Not very confident
- 10- Very confident

Statistical Analysis

- Shapiro –Wilks[®] test for age variable
- Number (n), percentage (%)
- Pearson Chi Square[®] test for gender distribution

Statistical Analysis

- Percentage and (n) values for Body Image Questionnaire (BIQ) 1 to 5 answers
- Mann-Whitney U test[®] for EQ-5D and BIQ 6 to 10
- IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp. and MS-Excel 2007
- $p < 0.05$

Results

- 55,8 % female
- 44,2 % male
- Mean age: 46,6

Table 1. The comparison of the specified variables in the groups

	Group				Test statistic
	SILC		CLC		p
	Min; Max	Median	Min; Max	Median	
Age	20.0; 79.0	47.5±14.7	25.0; 76.0	45.7±13.7	0.641
EQ_5D index	0.755; 1.000	1.000 (0.090)	0.755; 1.000	1.000 (0.090)	0.831
EQ-5D_self determination of the current health status	40.0; 100.0	85.0 (21.0)	65.0; 100.0	90.0 (11.0)	0.202

Results

Table 2: Distribution of the individuals' responses to the EQ-5D test

Variables	Group	
	SILC n (%)	CLC n (%)
EQ-5D_1		
1	21 (48.8)	22 (51.2)
2	5 (55.6)	4 (44.4)
EQ-5D_2		
1	23 (51.1)	22 (48.9)
2	3 (42.9)	4 (57.1)
EQ-5D_3		
1	23 (51.1)	22 (48.9)
2	3 (42.9)	4 (57.1)
EQ-5D_4		
1	18 (52.9)	16 (47.1)
2	8 (44.4)	10 (55.6)
EQ-5D_5		
1	21 (48.8)	22 (51.2)
2	5 (55.6)	4 (44.4)

Results

Table 3: Distribution of the individuals' answers to the BIQ's 1-5 th questions in the groups

Variables	Group	
	SILS n (%)	C LC n (%)
BIQ_1		
2	1 (100.0)	0 (0.0)
3	7 (77.8)	2 (22.2)
4	18 (42.9)	24 (57.1)
BIQ_2		
2	1 (100.0)	0 (0.0)
3	10 (62.5)	6 (37.5)
4	15 (42.9)	20 (57.1)
BIQ_3		
3	8 (47.1)	9 (52.9)
4	18 (51.4)	17 (48.6)
BIQ_4		
3	5 (41.7)	7 (58.3)
4	21 (52.5)	19 (47.5)
BIQ_5		
3	6 (66.7)	3 (33.3)
4	20 (46.5)	23 (53.5)

Results

Table 4: Answers of the Body Image Questionnaire's 6-10 questions in the groups

Variables	Group		Test statistic
	SILC Median (min; max)	CLC Median (min; max)	p
BIQ_6	6.0 (3.0;7.0)	6.0 (5.0; 7.0)	0.193
BIQ_7	6.5 (4.0; 7.0)	6.0 (4.0; 7.0)	0.007
BIQ_8	8.5 (7.0; 10.0)	8.0 (5.0; 10.0)	0.024
BIQ_9	8.0 (6.0; 10.0)	8.0 (6.0; 9.0)	0.524
BIQ_10	9.0 (5.0; 10.0)	9.0 (7.0; 10.0)	0.938

Conclusion

- Cosmesis scale was the only statistically significant variable
- Patients have better satisfaction of their scar appearance
- SILC may be a preferable technique
- Further studies are needed for the final assessment

