

“A Comparative Study between Single Incision Multiport Laparoscopic Appendicectomy and Conventional Laparoscopic Appendicectomy in Karpaga Vinayaga Medical College and Hospital, Madhuranthagam”

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Abstract:

AIMS & OBJECTIVES: To compare the outcome of Single incision multiport laparoscopic appendicectomy Vs Conventional laparoscopic appendicectomy in terms of :Patient recovery time ,Post operative pain in Karpaga Vinayaga Medical College And Hospital, Madhuranthagam.

Materials & Methods: A randomised control study was done by alternation with sample size of 50 which divided into two groups(study group 25 and control group 25)and study period is from August 2012 to September 2014.

Conclusion: Patient in single incision laparoscopy group show less post operative pain in the first 6 and 12 hours compared to the conventional laparoscopy group, but no difference was noticed between the two groups after 24 hours.No significant difference in operating times was noted between the procedures,One patient in 25 who underwent Single incision laparoscopy had wound infection, but no wound complications were noted in the conventional appendicectomy group,Patients underwent Single incision laparoscopy are more happy with scar when compared with conventional laparoscopy group.No difference noted in the duration of post operative hospital stay.

I. Introduction

Recent advances in laparoscopic instrumentations have made it possible to perform intra abdominal operations entirely through a small incision that can be hidden within the umbilicus, which provides better cosmetic results, decreased stay in hospital and better satisfaction to the patients.

Single incision laparoscopic surgery is a major breakthrough in minimally invasive surgeries, involving access to the abdomen through a specialised port or through an incision which appears single externally but fascially has multiple punctures.

The prospective comparisons of single incision and conventional laparoscopy are lacking. There are only ongoing trials available, some of which will be complete prior to this study's conclusion.

II. Aims & Objectives

To compare the outcome of Single incision multiport laparoscopic appendicectomy Vs Conventional laparoscopic appendicectomy in terms of :

Patient recovery time,Post operative pain

Wound complications

Duration of the procedure

Patient satisfaction as regards cosmesis.

III. Materials & Methods

A randomised control study was done by alternation with sample size of 50 which divided into two groups(study group 25 and control group 25)and study period is from August 2012 to September 2014
Inclusion criteria: All patients with acute appendicitis diagnosed on basis of clinical examination, radiological correlation and leucocytosis, Age> 18.

Exclusion criteria: Patient with Phlegmon, mass, peri appendicular abscess, diffuse peritonitis, Age<18, Pregnancy.

IV. Study design:

Patients diagnosed with Acute and recurrent appendicitis planned for surgery are randomized into study group or control group by alternation. After obtaining consent, the patients are taken up for conventional laparoscopic or Single incision laparoscopic surgery according to the randomization. Post operatively, the following parameter are monitored.

1. Post operative pain
2. Duration of the procedure
3. Surgical site infection
4. Patient satisfaction regarding scar

Proforma:

Name: _____ Age: _____ Sex: _____ Date _____

Address: _____ 6 hours 12 hours 24 hours

Pain:

- 0: No pain
- 1: Just noticeable pain
- 2: Mild pain
- 3: Uncomfortable pain
- 4: Annoying pain
- 5: Just bearable
- 6: Moderate pain
- 7: Strong pain
- 8: Severe pain
- 9: Horrible pain
- 10: worst pain

Duration of procedure:

Conversion to conventional laparoscopy or Open laparotomy

Wound infection:

Patients satisfaction as regarding to scar as per a standard scaling system :

- 0,1,2: Unhappy
- 3,4,5,6: some what happy
- 7,8,9,10: Happy

Observation:

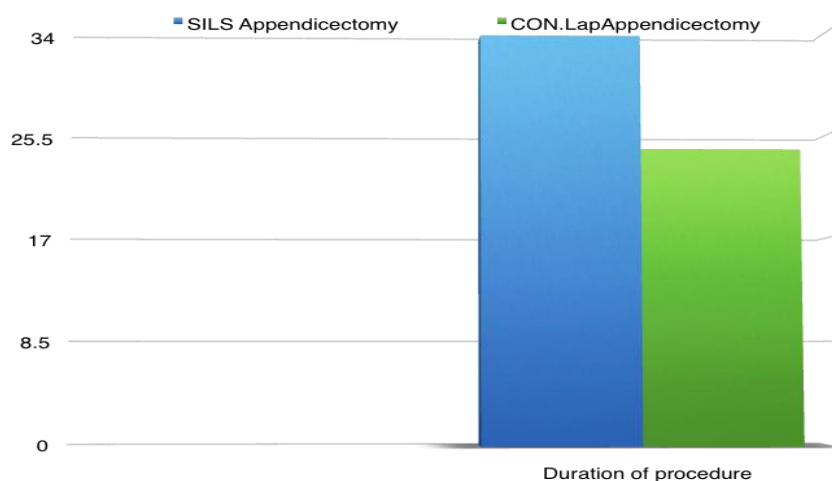
Duration of procedure:

Table 1

Group	N	Mean	STD.Devia tion	STD.Error mean	p value
SILS appendicectomy	25	33.36	0.476	5.999	.000
CON.Lap appendicectomy	25	24.08	0.510	5.204	.000

Pain Score:

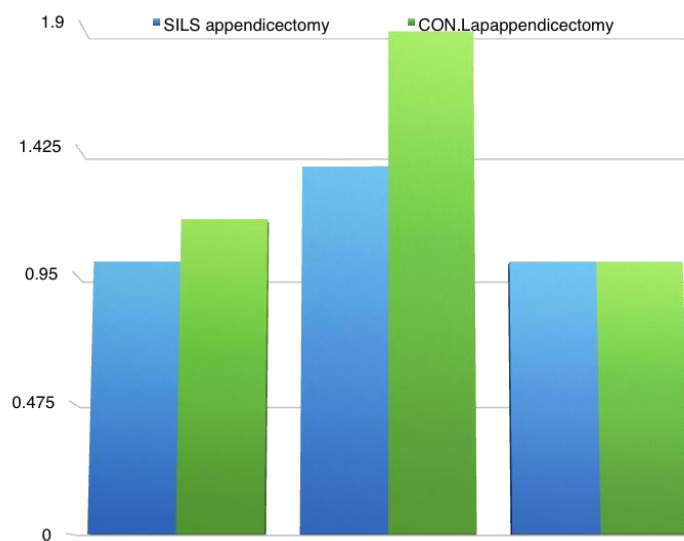
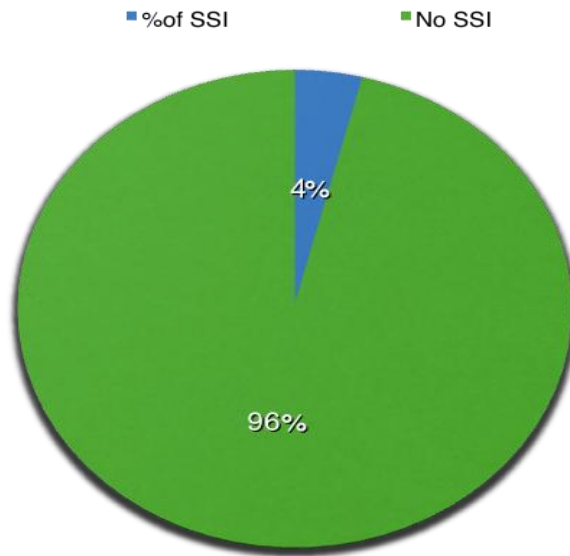
SILS:



Single incision

laparoscopic surgery,
Surgical Site Infection:

CON: Conventional laparoscopic surgery



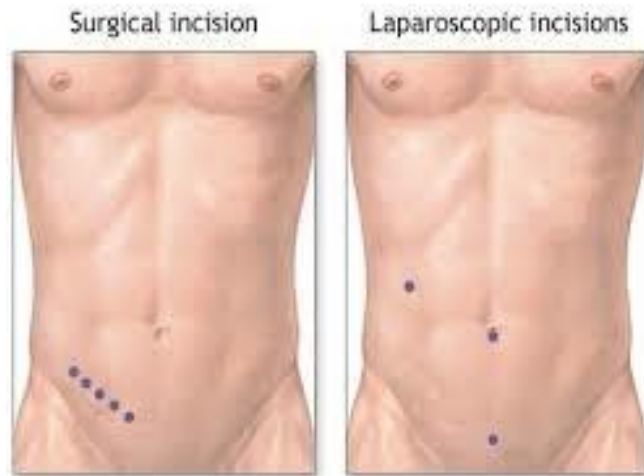
V. Discussion:

In my study total number of 62 patients presented with acute appendicitis in which six patients was diagnosed as appendicular mass , three patients diagnosed with appendicular abscess and three patients were lost to follow up, hence they were excluded from the study. A randomised control study was done by alteration with sample size of 50 which divided into two groups (study group 25 and control group 25) and study period was between August 2012 to September 2014.

The following parameters were monitored following the surgery

1. Post operative pain after 6 hours, 12 hours and 24 hours
2. Duration of the procedure
3. Surgical site infection
4. Patient satisfaction regarding scar

In my study, I observed less postoperative pain in first 6 and 12 hours after the procedure in Single incision laparoscopy group than conventional laparoscopy group. But no significant difference was noted after 24 hours. Dolores et al (1) say that significant difference were observed for post operative pain with less pain reported in single incision group, Jieding at al(2) says that Single incision laparoscopy surgery has the advantage of less post operative pain when compare with conventional laparoscopy group, Bong-Hyeon Kye at al(3) say that pain score on the visual analog scale on postoperative Day 1 was significantly lower in the single-incision group than in the three-port group.



There was no significant difference noted in the duration of the procedure ,Jin A Lee at al(4) says that no significant difference noted for mean operative time for Single incision laparoscopy group and conventional laparoscopy group. Study done by Zheng Pan at al (5) says that study did not show any difference with operative time.



One patient in Single incision laparoscopy group had wound infection which was treated with antibiotics and re admission was not required. Dolores et al(1) says that three patients in the single port group had an asymptomatic peri umbilical hematoma which did not require admission and resolve spontaneously. In conventional laparoscopy group, 2 patients had a hematoma around the surgical wound in the lower left quadrant, which did not require treatment, Study done by Zheng Pan at al (5) says that one patient in single incision laparoscopy group had incisional hernia on follow up.



Patient in Single incision laparoscopy group are very happy regarding post operative scar when compare with conventional laparoscopy group Gasior AC at al (6) says that Single incision laparoscopy surgery express superior scar assessment, Buckley FP et al(7) says that patients are more happy regarding post operative scar when compare with conventional laparoscopy group.

Single Incision Laparoscopy through Multi-Port
Technique



VI. Conclusion:

Patient in single incision laparoscopy group show less post operative pain in the first 6 and 12 hours compared to the conventional laparoscopy group, but no difference was noticed between the two groups after 24 hours.

No significant difference in operating times was noted between the procedures.

One patient in 25 who underwent Single incision laparoscopy had wound infection, but no wound complications were noted in the conventional appendectomy group.

Patients underwent Single incision laparoscopy are more happy with scar when compared with conventional laparoscopy group.

No difference noted in the duration of post operative hospital stay.

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