

Disadvantages of Various Blunt Dissection Techniques in Laparoscopic Surgery: A Survey amongst Telangana Surgeons

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Abstract

Background: Laparoscopic techniques have revolutionized the field of surgery and have taken it to new horizons. Nevertheless, there is still a lot of room for innovation in various aspects like blunt dissection techniques. This survey is based on the disadvantages of various blunt dissection techniques in laparoscopic surgeries.

Methodology: Minimally invasive surgeons belonging to the state of Telangana were sent the survey as a google form about various problems generally encountered during blunt dissection and their responses were noted along with which the results of the survey were tabulated graphically and reviewed in the light of previously available data.

Results: Amongst 105 MAS surgeons, 93.3% chose suction cannula and 46.7% chose gauze piece with or without suction cannula. With suction cannula usage they faced difficulties such as, drop in pressure (86.7%), fear of injury to nearby structures (33.3%), and omentum or viscera pulled into the field (73.3%). With gauze piece usage, obscuration of operative field(33.3%), fear or loss of gauze piece(46.7%). With either technique they required conversion to open surgery(26.7%), frequency of change of instruments or gauzes >10 times (92.9%),prolongation of surgery(53.3%), increased morbidity(49%). Summatively on a scale of difficulty from 1 to 10, 60% more than 5.

Conclusion: This survey and available literature review about blunt dissection techniques in laparoscopic surgeries revealed that there is still a lot of scope for new techniques or instruments in view of present difficulties.

Keywords: Blunt dissection techniques, laparoscopic surgery, survey.

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Introduction

laparoscopic techniques have revolutionized the field of surgery and have taken it to new horizons. Its application in various procedures has changed the

outcome in many procedures and it has become the gold standard procedure for a lot of surgical pathologies.

Nevertheless, there is still a lot of room for innovation in various aspects like blunt dissection where a variety of mechanisms are being used to deal with dense adhesions, bleeding and capillary ooze. Blunt dissection using the present array of instruments may not be as effective. For a dissection technique to be perfect it has to have features of both hemostasis and tissue selectivity which ensures minimal damage to the tissues due to excessive handling¹. Other features that are also very vital include safety, efficiency and size of the instrument as it can block the view of the field along with being cost effective².

Instruments available for blunt dissection include-

- Closed scissors tips
- -scissor points
- -graspers - straight & curved.
- -suction cannula. --pledget.

These blunt dissection techniques are relatively safer especially in presence of adhesions and other difficulties. It also has

other advantages of being simpler but it also has some disadvantages like injury to vital structures, obscuration of anatomy, pressure loss, pulling of unwanted viscera and omentum into the field of work. All of this leads to prolonged operative times, increased risk of injury & increased morbidity in patient which may lead to increased recovery time & prolongation of hospital stay. Loss of gauze piece or pledget in the peritoneum, conversion of laparoscopic procedure into an open surgery, inability to control bleed efficiently are some other disadvantages.

Methods: Minimally invasive surgeons belonging to the state of Telangana were sent the survey as a google form about various problems generally encountered during blunt dissection and their responses were noted along with which the results

of the survey were tabulated graphically and reviewed in the light of previously available data

Survey of disadvantages of various blunt dissection instruments and techniques.
Form description

Email *
Valid email address
This form is collecting email addresses. [Change settings](#)

Experience of the surgeon
 <5 years
 >5years

Type of blunt dissection used-
 Suction
 Gauze
 Other...

Drop of pressure?
 Yes
 No

Obscuration of anatomy by the instruments?
 Yes
 No

Fear of Injury or Injury to the vital organs?
 Yes
 No

Describe the injury or complications, if happened.
Long-answer text

Fear of loss of gauze piece or lost gauze piece?
 Yes
 No

Surgeries converted to open due to the
 Yes
 No

Frequency of change of instruments or gauze
 <10
 >10
 Other...

Omentum or viscera pulled into the field of interest
 Yes
 No

Difficulty in handling massive bleeds with the
 Yes
 No

If yes, on the scale what would you rate the
 1 2 3 4 5 6 7 8 9 10

Prolongation of the surgery due to shortcomings
 Yes
 No

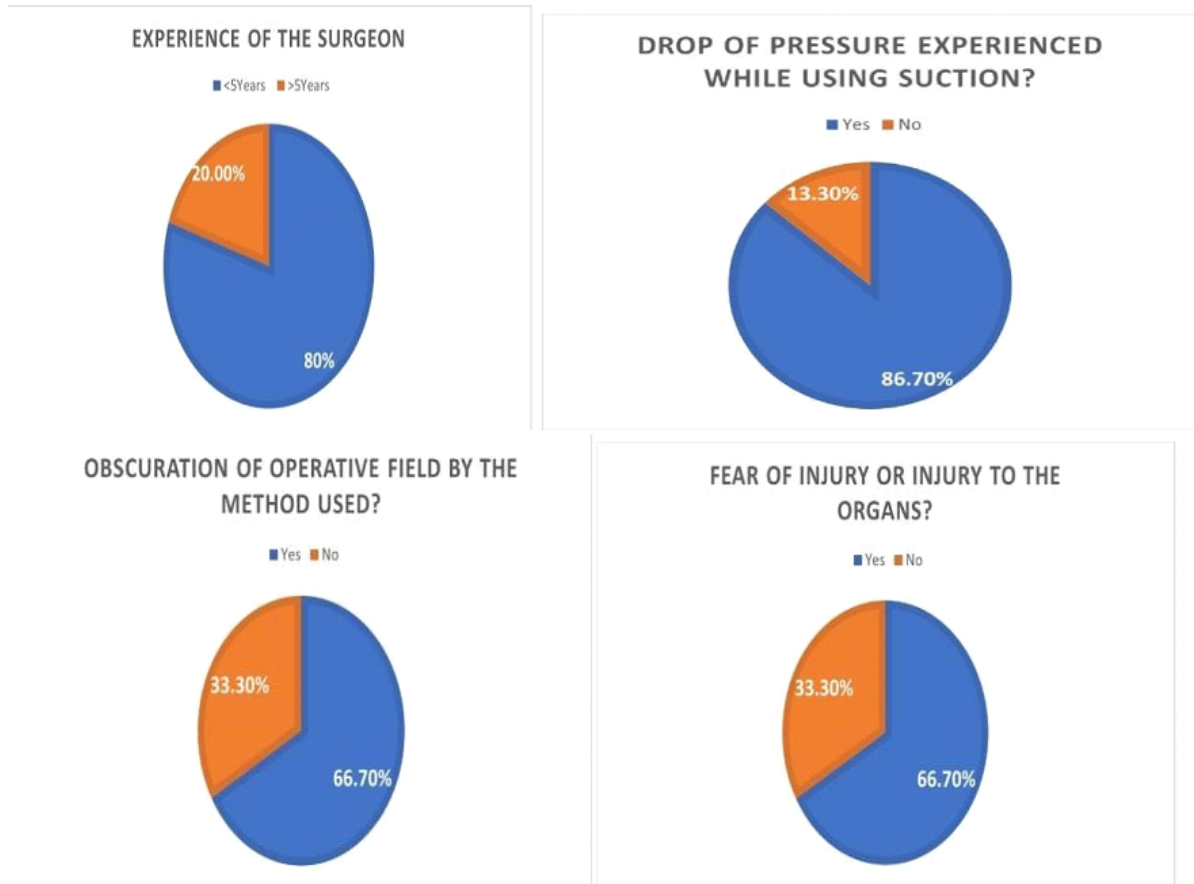
If yes, did it lead to increased morbidity in the
 Yes
 No
 Maybe

Comments
Long-answer text

Result:

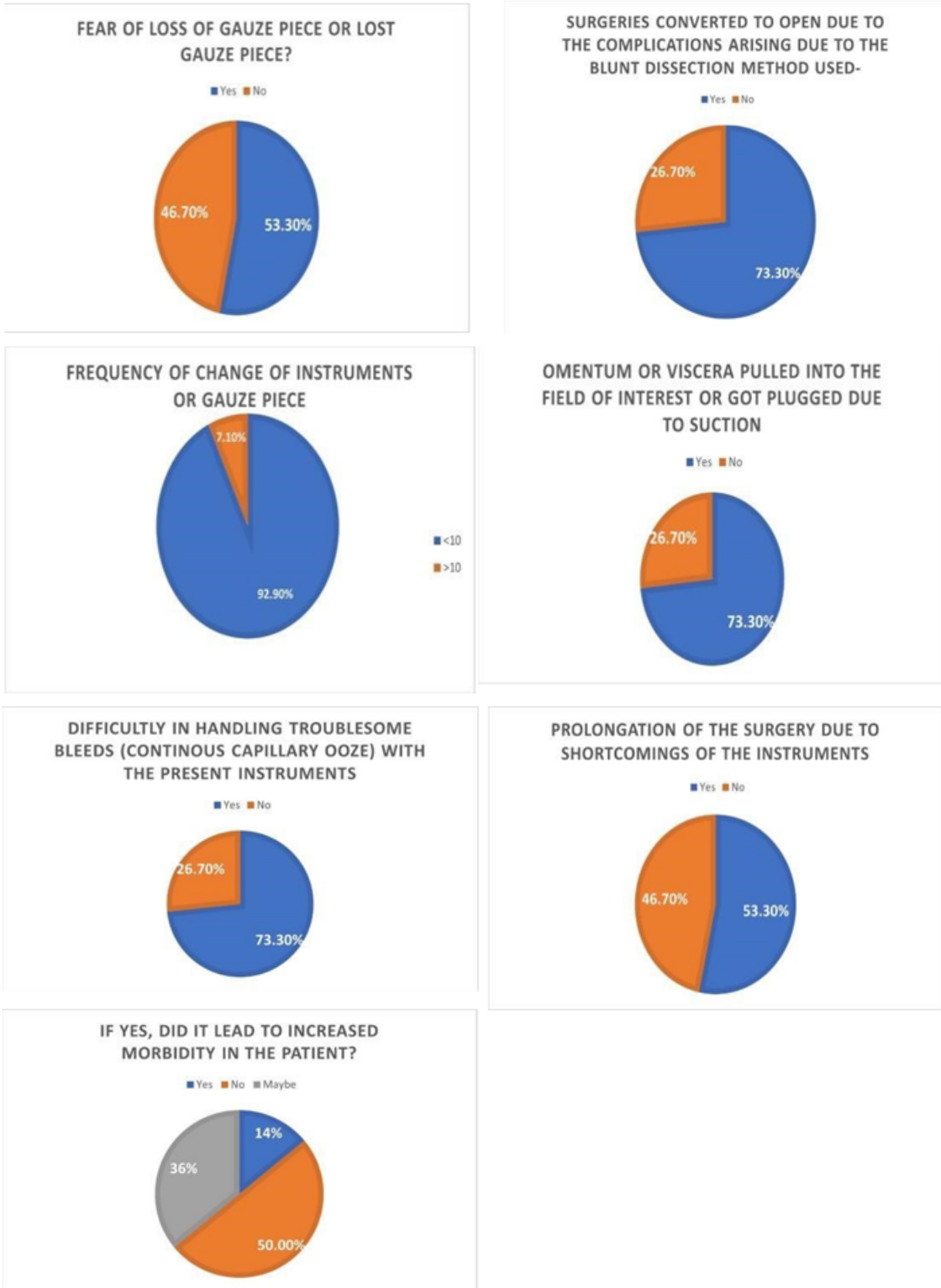
The data gathered from google form in graphical format showed following results. Amongst 105 MAS surgeons, majority of them have more than 5 years of experience who agreed suction cannula (93.3%) as method of blunt dissection compared to 46.7% who were using gauze piece

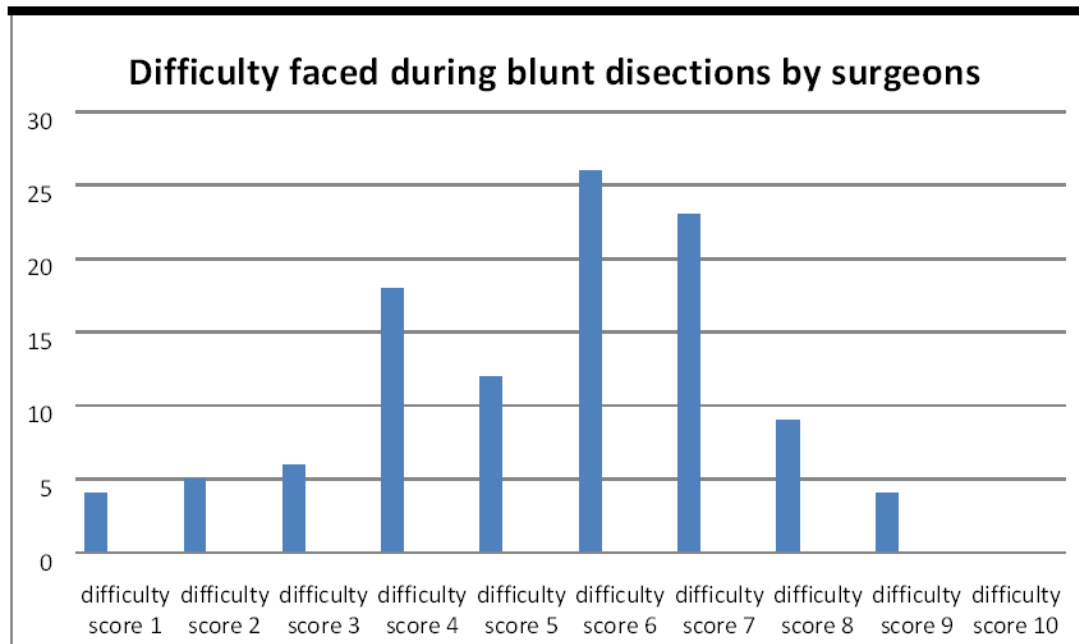
with/without suction cannula. In the blunt dissection techniques used, problems like drop of pressure (86.7%) were faced during suction canula usage. Obscuration of operative field(33.3%) by gauze piece or pledget was observed. Fear of injury/injury to nearby structures (33.3%) due to suction tip or closed scissor/instrument dissection.



Fear or loss of pledget or gauze pieces (46.7%) particularly when dissecting under oozing area. Required conversion to open surgery (26.7%), due inefficient blunt dissection techniques or loss of gauze piece. Frequency of change of instruments >10times (92.9%) , to clear the area and go to targeted organ using blunt dissection was observed. Omentum(most commonly) or viscera pulled into the field(73.3%) ,particularly while using suction canula.

Difficulty in handling tissue in the scenario of arterial or continuous bleed(73.3%), Prolongation of surgery (53.3%), was observed due to one or more of above mentioned problems. Increased morbidity was observed by operating surgeons , in patient(49%) due to prolonged operative time or conversion to open Summative, on the scale of difficulty from 1 to 10, 60% were on the scale of >5 and 46.3% surgeons were open to new suggestions.





Conclusion

This survey and available literature review about blunt dissection techniques in laparoscopic surgeries revealed that though these techniques have aided us to take laparoscopic surgeries to new horizon there is still a lot of scope for new techniques or instruments in view of present difficulties which can make hemostasis, suctioning and good dissection to be done side by side in a cost effective manner.

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