

A Prospective clinical and epidemiological study of Incisional Hernia in a Tertiary care Institution in TamilNadu

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Abstract: Incisional hernia surgeries have been a challenge to surgeons from time immemorial. Term Incisional hernia have been described synonymously with post operative ventral hernia, since large majority of such hernias do occur after midline, paramedian and oblique incisions in anterolateral regions of abdominal wall. But, no incision in the abdomen is immune to development of incisional hernia. As these hernias are responsible for considerable economic loss to the patient, study of incisional hernia takes it priority. Our study focuses on magnitude of the problem of incisional hernia through a prospective clinical study on incisional hernias in a tertiary care institution for a period of 2 years.

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I. Introduction

Incisional hernia surgeries have been a challenge to surgeons from time immemorial. Term Incisional hernia have been described synonymously with post operative ventral hernia, since large majority of such hernias do occur after midline, paramedian and oblique incisions in anterolateral regions of abdominal wall. But, no incision in the abdomen is immune to development of incisional hernia. As these hernias are responsible for considerable economic loss to the patient, study of incisional hernia takes it priority.

II. Aims and Objectives

- 1-To study the age , sex, incidence of Incisional hernia.
- 2- To study the time of occurrence of Incisional hernia
- 3- To study the incidence of Incisional hernias following various abdominal incisions.

III. Materials and methods

- 1- Study design: prospective non-randomised study.
- 2- Study Group: Over 2 years, 110 patients with incisional hernias in general surgery department of Thanjavur medical college hospital were enrolled in our study.
- 3- Inclusion criteria-
 - a. Male and female with incisional hernias
 - b. Age between 15 and 70 years.
- 4- Exclusion criteria-
Not willing for study
- 5- Study method instituted:-

A detailed history has been taken and thorough general examination especially assessment of tone of abdominal muscle was made. Certain complicated factors like obesity, hypertension, diabetes, anaemia, chronic bronchitis, smoking, chronic constipation were particularly looked for clinical observation, Statistical analysis, follow up, results were noted. Data were compared with available literature.

IV. Results

1-Age incidence:-

Maximum age incidence of incisional hernia in present series has been 31- 50 years. 90% cases occurred in patients between 21 to 70 years. The highest incidence was between 21 to 50 years

Table:1: Age Incidence

Age group	No: of cases	Percentage
<20 years	1	0.9%
21- 30 years	10	9.09%
31-40 years	27	24.55%
41-50 years	30	27.27%
51-60 years	20	18.18%
61- 70 years	16	14.55%
71- 80 years	7	6.36%

2-Sex incidence:-

Table:2: Sex Incidence

Female cases		Male Cases	
No. of cases	Percentage	No. of cases	percentage
71	64.55%	39	35.45%

Our study states that incidence of incisional hernia is higher in females. In this study of 110 patients with incisional hernia, the gynaecological causes of laparotomy were most commonly associated with incisional hernia formation(46.36%) and naturally the incidence was found to be high among females (64.55%). If we consider only those operations were performed on both sexes, then incisional hernia occurred more frequently in males than females by a ratio of approximately 2:1

3- Clinical presentation:-

Most of the patients presented only with a swelling, few with pain and 11 patients presented with signs of obstruction and strangulation.

Table:3: Clinical Presentation

Initial presentation		
Swelling alone	65 cases	59.09%
Swelling + pain	34 cases	30.91%
complicated	11 cases	10%

4-Time of occurrence of incisional hernia:-

Table:4: Time of occurrence after Index surgery

Time of occurrence	No. of cases	Percentage
With in 6 months	48	43.64%
6 months to 1 year	36	32.73%
1 year to 5 year	20	23.64%

5- Incidence of Incisional hernia following various abdominal incisions:-

Table:5: Incidence of Incisional Hernia following abdominal incisions

Site of hernia	No. of cases
Vertical hernia	20
Infraumbilical hernia	26
Supra umbilical hernia	14
Right paramedian	4
Pfannensteil	31
Lumbar	3
Right subcoastal	8
Bilateral Subcoastal	2
Mcburney	2

V. Discussion

Incisional hernias occur as a result of failure of fascial tissues to heal after a major abdominal surgery. This condition not only imparts psycho social trauma to patient, but also creates scar to the name and fame of the surgeon. Among 110 consecutive patients with incisional hernia admitted in our tertiary care hospital, this analysis does not reflect all the aspects of incisional hernia. But our study also goes in par with many other previous studies in literature survey. Brendon⁽¹⁾ Devin states that in most series, the incidence is more around 40 years. This goes well with present series. In other study Subas states the highest incidence in 21 to 50 years. Our study shows highest incidence between 21 – 50 years⁽²⁾. This may be due to the fact that many surgeries like hysterectomy, LSCS, Emergency laparotomy are done in large number of cases in this age group. The incidence

in females is very similar to many such studies⁽³⁾. The incidence in female patients is more because of laxity of abdominal muscle due to multiple pregnancies. In males the incidence of incisional hernia is relatively rare as most surgeries are above umbilicus and integrity of abdominal wall is good because of well developed muscles and fascia.

If we consider only those surgeries performed on both sexes, then the incisional hernia occurred more frequently in males than females by a ratio of approximately 2:1. This is in comparison with the similar study done at Henry Ford hospital of 794 patients, the sex distribution was in the ratio of 3:2⁽⁴⁾

In our study, 24% of hernias occurred through infraumbilical midline. This is due to the fact that, (i) Intra-abdominal pressure is hydrostatic and in the erect posture, the upper abdominal pressure remains at 8cm of water while lower abdominal pressure increased by 2 to 20 cm of water, with change of position from recumbency to standing⁽⁵⁾

(ii) Absence of posterior rectus sheath below arcuate line in the lower abdomen. Most of the lower abdominal incisions were used for pelvic operations.

(iii) Vertical incisions resulted in more incisional hernias. Since all vertical incisions were subjected to more stress when compared to transverse incisions, greater care should be exercised in preventing disruption in these cases with more meticulous and careful closure of lower abdominal wound⁽⁵⁾

(iv) Early time of onset of hernia following the index surgery occurred mostly in patients with wound dehiscence postoperatively, which was more common in emergency procedures and gastrointestinal procedures. The etiology of late occurring hernia is not very clear. The hernia develops in what apparently is a perfectly healed wound⁽⁶⁾ that has functionally satisfactory for 5, 10 or even more years after surgery. This incidence is presumably due to failure of collagen in the scar. The ageing and weakening of the tissues and the raised intra-abdominal pressure associated with chronic cough, constipation and prostatism are cited as factors.

Limitations of this study:-

- No randomisation of the patients done in this study
- Limited in its validity due to small size and short follow up period.
- Unblinded study with chance of observational bias.

VI. Conclusion

Incisional hernias, being second most common type of hernias has been the commonest pathology eroding the name and fame of surgeon. Our study stresses the magnitude of problem of incisional hernia and our study tries to sensitize the surgeons regarding the clinical spectrum of incisional hernia in a tertiary care institution in Tamilnadu.

References

- [1]. Brenden Devlin recent advances in surgery-II, Longman group limited-1982
- [2]. Incisional hernia- A prospective study of 50 cases for 1 year, subasKondreddyetal, Indian journal of applied research4(5): 403-407, October 2011; <https://www.researchgate.net/publication/270237654>
- [3]. A clinical study of incisional hernia, SudhirDyandeoBhamre et al, MVP journal of Medical sciences, volume 3, Issue 1 January-june 2016/ <http://doi.org/10.18311/mvpjms/2016/v3/i1>
- [4]. Mudge M, Hughes L.E, Incisional hernia: a 10 year prospective study of incidence and attitudes.Br.j.Surg 1985 Jan ; 72 (1): 70-1 <http://www.ncbi.nlm.nih.gov/pubmed/3155634>
- [5]. Jenkins Incisional hernia, a mechanical approach, British journal of Surgery, 67:335-336, 1980: <http://Onlinelibrary.iley.com/doi/abd/10.1002/bjs.1800670511>
- [6]. Santora Ta, Rosy/Nji.Incisional hernia, surg.clin.North.AM.1983;73;557-70 <https://www.ncbi.nlm.nih.gov/pubmed/8497803/>

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