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Management of Incisional hernia: A tertiary centre Experience.

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Abstract

Background.

Incisional hernia following abdominal procedure is on the increase in both developed and developing countries. A significant psychological impact in young females especially those who had caesarean section is largely under reported.

Aim.

This was to review the trends of incisional hernia in a tertiary Hospital in south-southern Nigeria.

Methodology.

This was a review of a prospectively collected data of cases performed, stored electronically in Excel spread sheet and Epi-info from December 2016 to March 2021. The review included abdominal incisional hernia repairs, It excluded all non-incisional ventral hernia.
The results were analyzed using SPSS version 23.

Results.

A total of 66 cases were performed. The age range was 20 to 70 years. The mean age was 41.2 ± 11.9 years. Caesarean section resulted in most of the hernia 52 (37.3%), a significant number was seen in a tertiary center. Most of these operations were first performed in private hospitals. Mesh repair constituted 45.5%.

Conclusion.

Incisional hernia is a major burden to the patient and relatives. Most cases arise from caesarean section even tertiary. We recommend use of mesh as it was quite rewarding especially to prevent recurrence.

Key words. *Incisional hernia surgery, tertiary institution.*

Introduction.

An incisional hernia represents a breakdown in the continuity of fascial closure. It is said to occur following approximately five to fifteen percent of laparatomies and usually becomes apparent within the first five years **(Udo I. A, Bassey E. A, Abasiattai A. M. 2014). (J. Hoer, G. Lawlong et al 2002)** in a retrospective study of 2983 laparotomy patients followed over a 10-year period found that 31.5% developed incisional hernia within 6months and 88.1% of patients with incisional hernia developed the condition within 5years.

While much work has been done about incisional hernia, there has been limited studies and paucity of data of incisional hernia in a south-southern hospital. The aim of this study is to identify the trends of incisional hernia in a south-southern hospital.

Methodology.

This was a review of a prospectively collected data of cases performed, stored electronically in Excel spread sheet and Epi-info from December 2016 to March 2021. The review included abdominal incisional hernia repairs in emergency as well as elective conditions. It excluded all non-incisional ventral hernias.
The results were analyzed using SPSS version 23.

Results.

A total of 66 hernia operations were performed. The age range was 20 to 70 years with a mean age was 41.2 ± 11.9 years. The Female to male (F:M) ratio was 32:1. Majority of these

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operations were first performed in private hospitals before incisional hernia occurs. This was followed by teaching hospital operation of which significant number were caesarean section. Caesarean section resulted in most of the hernia 52 (37.3%), followed by laparotomy for other abdominal condition. The size of the defect measured 4 cm to 20 cm with a mean size of 10.3 ±3.5 cm. The sac mostly contained enterocele followed by omentocele. Most of the cases done were elective repair and performed using polypropylene onlay mesh repair. One case was done via laparoscopic intra-peritoneal onlay mesh repair (IPOM). Mesh repair constituted 45.5%. This was followed by Mayo's repair and primary closure respectively. The mean duration of follow-up was 1.9 ± 1.2 years. No case of mesh infection and recurrence during followed was recorded. The age range, place of first surgery, cause of hernia, content, type of mesh, type of repair, and follow-up are shown in tables, while the type of incisional hernia and year are shown in figures.

Age group

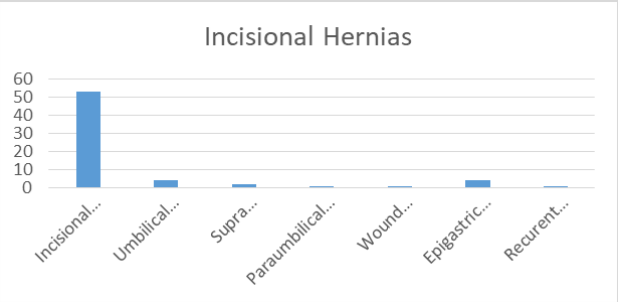
	Frequency	Percent	Valid Percent	Cumulative Percent
<20	1	.9	1.5	1.5
21-30	7	6.4	10.6	12.1
31-40	30	27.3	45.5	57.6
41-50	15	13.6	22.7	80.3
51-60	6	5.5	9.1	89.4
61-70	7	6.4	10.6	100.0
Total	66	60.0	100.0	

Place of primary closure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Private	32	29.1	48.5	48.5
	Teaching Hospital	18	16.4	27.3	75.8
	Health Centre	16	14.5	24.2	100.0
	Total	66	60.0	100.0	

Cause

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Laparotomy	7	6.4	10.6	10.6
	Caesarean Section	52	47.3	78.8	89.4
	Unknown	7	6.4	10.6	100.0
	Total	66	60.0	100.0	



Type of Incisional Hernia.

Elective or Emergency

	Frequency	Percent	Valid Percent	Cumulative Percent
Elective	62	56.4	93.9	93.9
Emergency	4	3.6	6.1	100.0
Total	66	60.0	100.0	

Content of Sac

	Frequency	Percent	Valid Percent	Cumulative Percent
Endometriu	1	.9	.9	40.9
Enterocele	60	54.5	54.5	95.5
Omentocele	5	4.5	4.5	100.0

Type

	Frequency	Percent	Valid Percent	Cumulative Percent
Mayo's	9	8.2	13.6	13.6
Mesh	50	45.5	75.8	89.4

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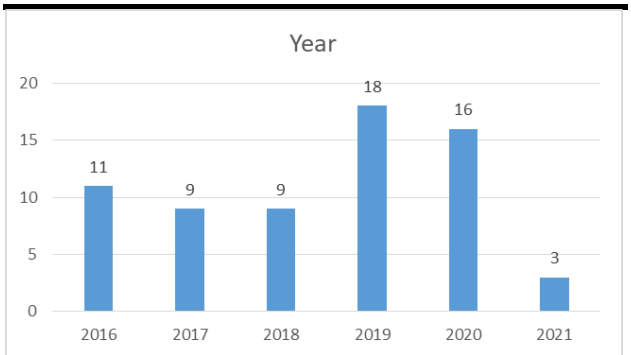
	Primary Closure	6	5.5	9.1	98.5
	IPOM	1	.9	1.5	100.0
	Total	66	60.0	100.0	

Type of mesh

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Available	14	12.7	21.2	21.2
	Polypropylene	52	47.3	78.8	100.0
	Total	66	60.0	100.0	

Follow-up

	Frequency	Percent	Valid Percent	Cumulative Percent
0	1	.9	1.5	1.5
1 year	35	31.8	53.0	54.5
2years	10	9.1	15.2	69.7
3years	9	8.2	13.6	83.3
4 years	11	10.0	16.7	100.0
Total	66	60.0	100.0	



Year of Surgery.

Discussion.

Incisional hernia is said to be more preponderant in females with a ratio of occurrence of females to males as 1.6:1 **(Oluyombo A & Itayemi. S 1983)** and the vast majority of cases is seen in the 4th decade of life **(Olalekan. 0 et al 2016), (Oluyombo A & Itayemi. S 1983).** Risk factors for developing incisional hernia includes wrong suture materials for fascial repair, midline incision, wound sepsis and overweight **(E. Agbakwuru et al 2009), (Isaac A, Emem B, Aniekan A 2014), (J. M. Adotey 2006).** Cesearean section was a strong contributory factor in women of child-bearing age. Women who had cesearean section were particularly at risk with incisional hernia occurring in 0.47% of women with cesearean section compared with 0.12% of women without cesearean section **(Antonia W. S, Jian S. C, Magaret S. & Christine L. R, 2015).** This was the case in our study and most of the cases were done in tertiary hospital.

Incisional hernia can be repaired by the traditional open techniques which can be difficult complicated and also the newer laparoscopic repair. Large incisional hernias which require open repair are commonly associated with significant post-operative pain. Recurrence rates after open repair can be up to 20% **(Park E, Roth J. S 2006), (Bucknall T. E, Cox P. J, Ellis H 1982)** and influenced by mesh size and fixation type **(Edward C, Geiger T, Barlow K et al 2009), (Schumpelick V, Klunge U, Junge K, Slump F 2004). (Turan. A et al 2020)** found onlay technique to be more appropriate than inlay technique when only prolene mesh is preferred because recurrence rates are higher with inlay technique. Most of our patients had onlay repair. One of the patients had laparoscopic intra-peritoneal onlay mesh repair (IPOM).

Patients had satisfactory quality of life following laparoscopic repair of incisional hernia. **(Pierre M, Ashish S. et al, 2020)** using the Carolinas Comfort Scale found 86% of patients who had LIHR rating their experience as excellent or good and 82% reported minimal or no discomfort following surgery. However, **(Emanuele A, Andrea S. et al 2014)** found health related quality of life at 1 year was similar in patients undergoing open or laparoscopic repair of incisional hernia. Laparoscopic repair has been demonstrated to be safe and a more resilient repair than the open method **(Bingener J, Buck L et al 2007), (Nguyen S. Q. & Divino C. M. et al 2008)** and **(LeBlanc K. A. 2005).**

A reduction in the frequency of occurrence in incisional hernia and its complications in patients can be achieved through a combination of health education, sound surgical techniques and wound care **(F. O Dare, O. O Lawal 1991).** This campaign has to be done even in tertiary centres.

Conclusion.

Incisional hernia is quite distressing especially to the patient. A large number was seen in tertiary hospital and during caesarean section. A lot needs to be done to curtail this findings. We recommend use of mesh as it was quite rewarding especially to prevent recurrence.

Conflict of interest.

Author declare no conflict of interest.

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