COMPLICATED INGUINAL HERNIA MANAGEMENT IN A TERTIARY CARE HOSPITAL: PROSPECTIVE STUDY

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ABSTRACT :

BACKGROUND:-As we know Hernia is very common condition and well managed if we intervene timely. In all hernias, inguinal hernia is most common and indirect inguinal hernia is commonest among all irrespective of gender. Due to lack of awareness ,negligence ,social stigma, poverty ,lack of surgical facilities in periphery will lead to serious complications sometimes death.

AIM:-This study was conducted to find out modes of presentation , management and post operative outcome of complicated inguinal hernias.

METHODS:-20 patients of complicated Inguinal Hernia admitted in general surgery department under SMT. Shardaben general hospital from september 2020 to august 2022 were included in this study.

RESULTS:-12(60%) cases admitted within 24 hours of onset of symptoms and 8(40%) cases after 24 hours of onset of symptoms.14(70%) cases of right sided complicated inguinal hernia and 06(30%) cases of left sided complicated inguinal hernia in which 5(25%) cases of bilateral presentation with one sided complicated inguinal hernias. 04(20%) cases have direct type of complicated inguinal hernias and 16(30%) cases have indirect type of inguinal hernias. All 20(100%) patients present with irreducible inguinal hernias in which 07(35%) patients having symptoms of obstruction and 01(5%) patient having symptoms of strangulation. All 20(100%) patients present with irreducible inguinal swelling in which 14(70%) patients having severe pain and 07(35%) patients having associated vomiting and other complains. In 20 operated cases 10(50%) patients having sac containing small bowel only , 07(35%) patients having omentum only , 02(10%) patients having both and 01(5%) patient having appendix with omentum. All 20(100%)patients undergo hernia repair and Mesh-plasty done in 18(90%)patients in which 02(10%)patients having omentectomy. 01(5%) patient under go resection and anastomosis surgery and 01(5%) under go appendectomy with omentectomy and in this both patients only hernia repair was done ,no hernia mesh was placed. All 4 of this patients(2 patients of omentectomy and 01 patient of R.A. and 01 patient of appendectomy+omentectomy) appears after more than 24 hours of onset of symptoms. Among all, 13(65%) patients were obese or having co-morbidity , 07(35%) patients were non obese or without co-morbidity. 06(30%) patients having wound gap and seroma formation as post operative complication in which 4(20%) patients having co-morbidity or obese and admitted after 24 hours of onset of symptoms. No death reported , no cases of post operative mess extraction surgery.

CONCLUSIONS:-Patients who admitted within 24 hours of onset of symptoms has less hospital stay and less chances of complication in compare to patient who admitted after 24 hours of onset of symptoms. Obese and/or co-morbid patients have more chances of complication like discharge from stitch line ,seroma formation in compare to those who were non obese and/or with out co morbidity.complicated inguinal hernia is more common in male compare to female and most commonly presented as right side indirect non reducible inguinal hernia.

By spreading awareness regarding inguinal hernia ,decreasing social stigma regarding elective surgery and timely intervention leads to prevention of complicated inguinal hernias.

KEY WORDS:- complicated inguinal hernia, meshplasty, social stigma

INTRODUCTION :

Hernia is defined as abnormal protrusion of viscus or part of viscus through the wall which contains it. Most common type of hernia is inguinal hernia in which indirect inguinal hernia is commonest type irrespective of gender. 1st inguinal hernia surgery performed in 1884 by bassini. At present elective hernia surgery is more developed and evolved in compare to complicated hernia surgery in which more chance of intra operative , post operative complication and risk(3).

irreducibility,incarceration, obstruction and strangulation are complication of hernias and associated with poor prognosis if not timely intervene(1). Incarcerated inguinal hernia is second most common cause of small bowel obstruction(2). So hernia as electively repaired to prevent complicated presentation. complicated inguinal hernias was result of NEGLECTED LONG STANDING HERNIA, CONTINUOUS STRAINING, LACK OF SOCIAL AWARENESS , SOCIAL STIGMA AND POVERTY which can be improved by spreading awareness regarding it and early intervention(4).

METHODS :

The material for this study was taken from cases which were admitted in surgery department of shardaben general hospital,saraspur, ahmedabad,gujarat which is tertiary care hospital from september 2020 to august 2022.

Inclusion criteria :

All adults (>18years of age) , admitted with complicated presentation of inguinal hernias i.e. irreducibility, incarceration, obstruction and strangulation during the time period of study.

Exclusion criteria :

Patient <18 years of age, patient admitted with uncomplicated inguinal hernias and irreducible inguinal hernia which reduced spontaneously were excluded from study.

Patient admitted with irreducible inguinal hernia advised for NIL BY MOUTH. General examination done and according to vitals resuscitation done, iv fluids and iv antibiotics given, ryles tube and catheterisation done. History taken in which symptoms like swelling, pain, vomiting, constipation, obstipation evaluated in chronological order. Clinical systemic examination done in which abdominal , bilateral inguino scrotal, per rectal examination done and no any trial given for manual hernia reduction. Co morbidity checked and managed medically. All routine blood investigation like complete blood count(HB,Total count,Platelet count), PT/INR, Renal function test(RFT), Liver function test(LFT), Blood group and cross match and blood preservation sos, RBS, serological markers(HIV, HBSAG, HCV) done.

ECG and CHEST X RAY done as part of preoperative workup. Other radiological investigation like ABDOMINAL X RAY standing to rule out obstruction and ultrasound of abdomen pelvis KUB and bilateral inguinoscrotal region done.pre anesthetic evaluation done and patient were taken for surgery as soon as possible.

almost all patient operated under spinal anesthesia, some required general anesthesia.after deciding appropriate incision site,reaching up to sac was done and sac cut open, content visualized and check for viability. If viability of content doubtful than for 3 to 5 mins 100% oxygen administration done, warm saline mop was placed, if color of bowel return than peristalsis check after stimulation and mesenteric pulsation checked and confirmed than bowel returned to abdominal cavity and closer with hernioplasty(mesh placement) done. If bowel found non viable than it was resected and end to end anastomosis done in this kind of scenario only herniorrhaphy(hernia repair with out mesh placement) was performed.in some of cases non viable omentum was cut out and hernioplasty done.

In post operative care iv fluids given,blood transfusion done if necessary. Precipitating factors like cough,constipation,urological problems were manage medically and straining and weight lifting prohibited strictly.

Patient was discharged as soon it can be and sutures were removed with in 10 to 12 days of surgery and if any wound complication

than it was treated accordingly.Patient who presented with in 24 hrs of onset of symptoms required lesser hospital stay.

RESULTS :

During september 2020 to august 2022 total 314 inguinal hernias operated in which 20 patients were matched to study criteria which was approx 6% of total inguinal hernia patients operated during this period.among this 314 patients 2 patients were female rest 312 were male.All 20 patients operated for irreducible inguinal hernia were male suggested that complicated inguinal hernia is common in male compare to female(6).

12(60%) cases admitted within 24hr of onset of symptoms and 8(40%) cases after 24hr of onset of symptoms (table no 1).

PATIENT PRESENTED WITH COMPLICATED INGUINAL HERNIA	<24 HOUR OF ONSET OF SYMPTOMS	>24 HOUR OF ONSET OF SYMPTOMS
20	12(60%)	08(40%)

TABLE NO.1

14(70%) cases of right sided complicated inguinal hernia and 06(30%) cases of left sided complicated inguinal hernia in which 5(25%) cases of bilateral presentation with one sided complicated inguinal hernias (table no.2) (6).

COMPLICATED INGUINAL HERNIA SITE	NO.
RIGHT SIDE	14(70%)
LEFT SIDE	06(30%)

TABLE NO.2

04(20%) cases have direct type of complicated inguinal hernias and 16(30%) cases have indirect type of inguinal hernias (table no 3).

TYPE OF HERNIA	NO.
INDIRECT	16(80%)
DIRECT	04(20%)

TABLE NO.3

All 20(100%) patients present with irreducible inguinal hernias in which 07(35%) patients having symptoms of obstruction and 01(5%) patient having symptoms strangulation (table no.4).

TYPE OF COMPLICATION	NO.
IRREDUCIBLE	20(100%)
OBSTRUCTION	07(35%)
STRANGULATION	01(5%)

TABLE NO.4

All 20(100%) patients present with irreducible inguinal swelling, in which 14(70%) patients having sever pain and 07(35%) patients having associated vomiting and other complication (table no.5) (8).

SYMPTOMS	NO.
IRREDUCIBLE SWELLING	20(100%)
SEVERE PAIN	14(70%)
VOMITING AND CONSTIPATION	07(35%)
ABDOMINAL DISTENTION	05(25%)
DEHYDRATION	02(10%)

TABLE NO.5

In 20 operated cases 10(50%) cases contain small bowel only, 07(35%) cases having omentum only ,02(15%) cases having both and 01(5%) patient having omentum with appendix in sac (table no.6) (6).

CONTENT OF SAC	NO.
SMALL INTESTINE	10(50%)
OMENTUM	07(35%)
SMALL INTESTINE+OMENTUM	02(10%)
APPENDIX+OMENTUM	01(5%)

TABLE NO.6

All 20(100%)patients undergo hernia repair. Mesh-plasty done in 18(90%)patients in which 02(10%)patients having omentectomy. 01(5%) patient under go resection and anastomosis surgery and 01(5%) under go appendectomy with omentectomy and in this both patients only hernia repair done ,no hernia mesh were placed. All 4 of this patients(2 patients of omentectomy and 01 patient of R.A. and 01 patient of appendectomy+omentectomy) appears after more than 24 hours of onset of symptoms(table no.7) (9).

PROCEDURE PERFORMED	NO.	PATIENT PRESENTED AFTER 24 HOUR OF ONSET OF SYMPTOMS
HERNIORRHAPHY	20(100%)	—
HERNIOPLASTY ONLY	16(80%)	04(20%)
OMENTECTOMY WITH HERNIOPLASTY	02(10%)	02(10%)
RESECTION AND ANASTOMOSIS WITH HERNIORRHAPHY	01(5%)	01(5%)
APPENDECTOMY AND OMENTECTOMY WITH HERNIORRHAPHY	01(5%)	01(5%)

TABLE NO.7

13(65%) patients were obese or having co-morbidity , 07(35%) patients were non obese or without co-morbidity. 06(30%) patients having wound gap and seroma formation as post op complication in which 4(20%) patients having co-morbidity or obese and admitted after 24 hours of onset of symptoms. No death reported , no cases of post op mess extraction surgery (5).

HOSPITAL STAY	NO.
<7 DAYS	14(70%)
7 TO 14 DAYS	05(25%)
>14 DAYS	01(5%)

TABLE NO.8

CONCLUSION:-

Incident of complicated inguinal hernia cases was approx 6% of all inguinal hernia cases.12(60%) cases admitted within 24 hours of onset of symptoms and 8(40%) cases after 24 hours of onset of symptoms and this cases have more chances of post operative complication and long hospital stay. Right sided complicated inguinal hernia is more common than left sided complicated inguinal hernia.04(20%) cases have direct type of complicated inguinal hernia and 16(30%) cases have indirect type of inguinal hernia. All 20(100%) patients presented with irreducible inguinal swelling in which 14(70%) patients having severe pain and 07(35%) patients having associated vomiting and other complications. Obese and/or co-morbid patients 13(65%) have more chances of complication like discharge from stitch line ,seroma formation 06(30%) in compare to those who were non obese and/or without co morbidity. Complicated inguinal hernia is more common in male compare to female and most commonly presented as right side indirect non reducible inguinal hernia. No death was reported , no cases of post operative mesh extraction surgery. this kind of complicated hernia was result of neglected long standing hernias, continuous straining, lack of social awareness , social stigma and poverty which can be improved by spreading awareness regarding inguinal hernia and early intervention.

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