DGAFMS MEDICAL MEMORANDUM ON INGUINAL HERNIA AND THEIR DISPOSAL

Definition :-

1. Hernia is defined as the protrusion of a viscus on part of a viscus through an abnormal opening.

Etiology :

2. Three Primary causes can be distinguished in the etiology of Hernia.

   (a) A peritoneal sac, protrusion or defect either congenital acquired, e.g. prolonged funicular process in indirect hernia.

   (b) A weakness of natural retaining muscle or fascial layers from advancing age, lack of physical exercise, adiposity, multiple pregnancies, starvation, disuse, nerve injury and in association with previous surgical incisions.

© Internals pressures that may be either the acute, sudden strain of lifting a heavy object or the more gradual and insidious strain of continuous heavy work or condition such as chronic cough, constipation or straining on micturition.

In many cases two or three proceeding cause may be combined.

Incidence

3. Inguinal hernia occurs in 3.8% of population and accounts for approximately 12.5% of all surgical admission.

4. For the purpose of laying down guidelines of management the hernia can be typed as under :-

Indirect type

5. It is universally agreed that indirect inguinal hernia occur due to a preformed sac. In addition, various precipitating factors, like raised intra-abdominal pressure, chronic cough, urinary obstruction and/or constipation definitely play their deleterious effect/role. Irrespective of the surgical technique of repair and material used the recurrence rate remains at 1-7% at the end of two years.

Direct Type :

6. In these cases the fundamental cause of hernia is the weakness of abdominal musculature, usually in elderly patients with factors of increased intra-abdominal pressure operating in all cases. Incidence of Recurrence 4-10%.
**Recurrent type**

7. A host of predisposing factors i.e. age, sex, persistence of predisposing factors, weak abdominal musculature, faulty selection of cases, type of material used, imperfect homeostasis, faulty technique, missed sac and sepsis play an important role, not forgetting strenuous physical exertion in the immediate post-operative period. The recurrence rate following operations in Recurrent Hernia is quoted at anything from 5-35%. It may be noted that the material used in repair has no significant influence in the incidence of recurrence so long as it is non absorbable.

**Sliding Hernia:**

8. All experienced surgeon do encounter a rare instance of Sliding Hernia where the contents lie outside the peritoneal sac and the surgeon has to take a special note of it to perform the meticulous repair

**Treatment**

9. Surgical repair remains the accepted treatment of Hernia. There are a few important points to be observed during the operation for Inguinal Hernia.

10. (a) Pre-operative

   (i) Correct diagnosis as to the type of Hernia

   (ii) Detection of any predisposing factor and their treatment.

   (iii) Assessment and development of tone of abdominal musculature.

   (b) Operative

   (i) Strict asepsis

   (ii) Perfect homeostasis

   (iii) Correct technique depending on the merits of the case.

   (iv) Use of non-absorbable suture material in the repair of the posterior wall of inguinal canal.

   (v) Plication of fascia transversal’s

   (vi) Narrowing of the deep ring.

   (vii) High ligation of the sac right upto the neck
(viii) Looking for a coexistent direct sac in indirect type and indirect sac in direct type (pantaloon hernia).

(ix) Avoidance of tension on the suture lines of repair.

(x) Plastic repair of the posterior wall of the inguinal canal in selected cases with autogenous/synthetic material.

(xi) Taking thick bites of conjoint tendon and bites at different levels in the inguinal ligament and the first bite through the public tubercle.

(xii) Currently tension free repair with use of prosthetic mesh is in vogue to decrease the incidence of recurrence due to suture line tension that is inherent in Bassinis original repair.

(xiii) Tensionless repair either anterior open (Liechtenstein) or laparscopic is performed with a synthetic mesh. In anterior open, suture fixation is most often used to fix the mesh.

(xiv) Laparoscopic Repair: This repair is done either trans-abdominally or by a total extraperitoneal approach. In both methods, a mesh is used for reinforcing the posterior wall of inguinal canal. The mesh is fixed using an Endo-Hernia Stapler. This method has the advantages of smaller incision, less postoperative pain, and quicker return to work. However, long term recurrence rates are not yet fully established.

(xv) Conventional proportional repair: Here the incision is made infraumbilically in the midline and the internal inguinal ring is exposed by infraumbilically in the midling and the internal inguinal ring is exposed by opening pre peritoneal space. An optimum sized synthetic mesh is affixed either for one sided inguinal hernia or a larger on covering both the inguinal rings for bilateral inguinal hernia. This repair is ideal for a recurrent hernia. It can also be combined with Freyer’s prostatectomy in one sitting.

Post operative

(i) Early ambulation

(ii) Avoidance of strenuous physical exertion in the immediate post-operative period (upto 4-8 weeks). The rationale of this is as follows:

Satisfactory wound healing depends upon intact suture line and maturation of the collagen tissue which gains tensile strength over many months. At the end of 8 weeks only 70% of the last tissue strength is regained.
Scar healing continues from one wk to 6 wks, the simultaneous remodeling commences from 2 wks and continues upto 2 years, whereas maturity of scar commences at 6 months, and completes by 2 years.

10. **Complications:**

Preoperative complications in the form of incarceration, intestinal obstruction, and/or strangulation must be used as motivational factors for persuading individuals to undergo early surgery in appropriate cases.

Wound infection, retention of urine, recurrence of hernia etc, do occur in a small percentage of cases. Transaction of the spermatic cord, severance of nerves or the vas deference, disruption of testicular blood supply, and injury to the urinary bladder have also been mentioned as extremely rare complications in literature.

**Conclusion and Disposal**

11. From the above discussion it is evidence that disposal of cases of inguinal hernia will be decided on the merits of individual case taking into consideration the type of hernia, age and sex of the patient and the type of repair carried out. Although no hard and fast rules can be formulated to this effect the following guidelines may be considered as a working principle in Armed Forces :-

(a) After any type of hernia repair a period of 6-8 weeks sick leave is mandatory to ensure proper wound healing.

(b) In case of direct hernia the individual should be placed in low medical category to avoid strenuous physical exertion, for a minimum period of 6 months (P3-T24).

© In case of Direct Hernia the period of low medical category should also be minimum six months P3 (T-24).

(d) Following repairs of Recurrent Hernia the low medical category should be awarded for a minimum period of one year P3(T-24)+P3(T-24).

(e) Hernia in ladies is rare. However, their disposal will be same as in their male counterparts.

12. Sub para 17 (f) of appendix ‘C’ to SAO 4/S/71 is under revision by Recruiting Directorate. This deals with medical standards for Recruits. Sub para 2 (m) of Appendix to Army HQ letter No 999/DMS-5 of 25 Jan 82 is superseded by letter No 76054/Policy/DGMS-5 dated 5 Dec 2000. This deals with medical boards for candidates seeking commission in the Army/Navy. This includes candidates for branch commission aspirants. Sub para 2 (m) is as follows :-

Inguinal hernia (unoperated) will be a cause for rejection i.e. permanent unfit. Those who have been operated for hernia may be declared medically fit provided :-
(i) One year has clasped since operation. Documentary proof to this aspect is to be produced by the candidate.

(ii) General tone of the abdominal musculature is good.

(iii) There has been no recurrence of the hernia or complication connected with the operation.

13. Refusal of hernia operation while in service.

Refusal of hernia operation can have deleterious effects including incarceration, intestinal obstruction and even strangulation, which could be life threatening. Morbidity in the form of dragging pain and physical inability to perform military duties assigned to a uniformed person can have adverse effects on the individual’s morale. Adequate time must be given to the individual to make up his/her mind to undergo surgery. During this period, a low medical classification of P3(T-24) should be offered. After this, if the refusal persists, placement in permanent category P3 (Perm) should be automatic. No aggravation or attributability is considered in such cases. However, the surgeon should use his discretion in disposing such cases based on the merits of the case.

REFERENCES


2. Recent advances in Surgery No 18 by I Taylor/CD Johnson “Modern hernia management” AN Kingsworth Pages 151 to 178.


4. Maingor’s Abdominal Surgery : Hernia chapter (14) Page 479 to 580


   “Results of Hand Sutured Laparoscopic Hernioplasty” – An effective method of repair page 339 to 341

6. DGMS Policy letter No 76054/Policy/DGMS-5(A) dated 22 Dec 2000,

7. 76058/DGMS-5(A) dated 05 Apr 95.