

Research Article**Practice of Diagnosing Indirect and Direct Inguinal Hernia: Should it be Abandoned****Pawan Tiwari^{*1}, Madhu Tiwari², H.L. Khatri³**¹Associate Professor, Department of Surgery, Faculty of Medicine and Health Sciences, SGT University, Budhera, Gurgaon, Haryana, India²Associate Professor, Department of Anaesthesia, Faculty of Medicine and Health Sciences, SGT University, Budhera, Gurgaon, Haryana, India³Ex. Professor, Department of Surgery, Faculty of Medicine and Health Sciences, SGT University, Budhera, Gurgaon, Haryana, India***Corresponding author**

Dr. Pawan Tiwari

Email: tiwaripawan58@gmail.com

Abstract: An inguinal hernia was clinically diagnosed as indirect 80 out of 150 [53.33%] or direct 70 out of 150 [46.66%] by couple of surgeons in 150 cases. When compared with the findings at operation the hernia was correctly diagnosed in 69 out of 80 [86.25%] observations when it was indirect and in 48 out of 70 [68.57%] when it was direct. This level of correctness does not advocate continuing the practice of attempting to distinguish one type of inguinal hernia from another.**Keywords:** inguinal hernia, observation, operation

INTRODUCTION

The features that are said to enable the clinician to distinguish a direct inguinal hernia from an indirect inguinal hernia are restated with each edition of the standard surgical textbooks [1] and are included in a more recent volume [2]. These features are generally accepted as being reliable guides that make the differentiation usually straightforward [3]. None the less, the various techniques do not appear to have been objectively scrutinized, that was the purpose of this study.

METHODOLOGY

The study was confined to men aged over 30 with inguinal hernias. Each patient was examined independently by two experienced surgeons using the following commonly used methods to attempt to determine whether the hernia was direct or indirect.

Impulse on coughing

A bulge projecting spherical on coughing indicates a direct hernia, in contrast with an impulse passing oblique along the line of the inguinal canal which indicates an indirect hernia.

Finger invagination test

The examining finger is passed along the inguinal canal with the patient supine to determine whether a cough impulse hits the fingertip (indirect hernia), or the

pulp of the finger (direct hernia). This is combined with the “sign of the pubic bone” as described by Hamilton Bailey [4]: when the pubic tubercle can be clearly defined this indicates a lax posterior wall to the canal and thus a direct hernia.

Shape of swelling

Rounded swelling indicates direct hernia while long and obliquely placed, hernia was indirect.

Deep ring occlusion test

The internal ring is occluded with finger pressure; if the cough impulse is controlled the hernia is indirect, but if it still manifests, the hernia is direct.

The diagnosis and the basis for making it were recorded. When the three signs conflicted, the clinical diagnosis was made on the results of the two that best matched. This diagnosis was compared with the findings at operation.

RESULTS

One hundred and fifty observations were made on 87 groins and compared with the findings at operation, which indicated that 80 out of 150 [53.33%] hernias were indirect and 70 out of 150 [46.66%], were direct hernias. The table shows that the diagnosis was correct in 86.25% of the indirect hernias and in 68.57% of the direct hernias.

Table1: Showing operative findings related to clinical diagnosis in inguinal hernias

Inguinal hernia	Operative findings	Diagnosis	
		Correct	Incorrect
Indirect	80	69	11
Direct	70	48	22

Thus, even allowing for the higher incidence of indirect hernias in this series, there was a significant difference between the actual incidence of hernia and the proportion of correct diagnoses both in cases of direct hernia and in cases of indirect hernia. The diagnosis was significantly more accurate when the hernia proved indirect than when direct.

Clinically, therefore, a diagnosis of an indirect hernia was correct in 86.25% (69 out of 80) of cases and a diagnosis of a direct hernia was correct in 68.57% (48 out of 70) of cases. No sign of differentiation proved infallible and no one surgeon did significantly better than another. When the same clinical diagnosis was agreed between two surgeons, however, this proved more often correct than when it was in dispute.

DISCUSSION

Many clinical signs are taught to newer generations of medical students, yet their usefulness and validity have not been as carefully assessed as have more recent aids to diagnosis. The four principal methods used in this study to distinguish direct hernias from indirect hernias were chosen because they seemed to be the most likely to give an unambiguous result. Men below the age of 30 were excluded to prevent any observer bias towards a diagnosis of indirect inguinal hernias, which are well known to preponderate in that age group.

Our results indicated that although the methods enable correct prediction of the nature of the hernia to be made more often than by chance, even considering the relative incidence of the types of hernia, they do not enable a diagnosis to be made with complete accuracy. Two observers in agreement were much more accurate in their diagnosis than when in dispute, but since agreement occurred in just over half the cases the overall accuracy remained disappointing. Agreement

was reached probably only when the signs were more evident.

At the start of this study the opinion of the participating surgeons was that the inguinal occlusion test was the most helpful method of distinguishing between the types of hernia. This did not prove so in practice. Two reasons for this were encountered during the study. Firstly, the internal ring may be so distended by a large hernia sac that the occluding finger fails to control the ring, and the hernia is adjudged as direct. Secondly, a laterally placed funicular direct hernia may be controlled by a finger slightly displaced medially, leading to a diagnosis of an indirect hernia sac.

These findings may be of little clinical importance where the policy is to operate on all inguinal hernias. Occasionally, however, it has been implied that it is acceptable to treat direct hernias conservatively because they seldom strangulate [3, 5]. Here a policy of management has been constructed on flimsy grounds because our study shows that the diagnosis of direct hernias is suspect.

While we advocate medical judgment based on skill and experience, where the possibility of assessing these arts objectively arise we suggest that a disservice is done to clinical science by not heeding the results of such a study. At a time when there are great pressures on the student curriculum any exercise that can be shown to be of little relevance or of poor reliability, however hallowed by usage, is best disregarded. We therefore opine that there is no benefit in exercising to distinguish between indirect and direct inguinal hernias.

REFERENCES

1. Rains AJH, Ritchie HD, eds. Bailey and Love's short practice of surgery. 17th ed. London: Lewis, 1977.
2. Browse N. An introduction to the symptoms and signs of surgical disease. London: Arnold, 1978.
3. Ellis H. Inguinal hernia. Br F Hosp Med 1970; 4:9-14.
4. Clain A, ed. Hamilton Bailey's physical signs in clinical surgery. 15th ed. Bristol: Wright, 1973.
5. Kettlewell MGW. Lumps in the groin and scrotum. Br F Hosp Med 1973; 9:724-30.