

# **Effect of internal ring narrowing on the rate of recurrence of large inguinoscrotal hernias in the pediatric age group**

## **Introduction and purpose**

Risk factors and causes of recurrence following inguinal hernia repair in the pediatric age group are not well understood. In this work, we aimed to describe a cutoff value of internal ring diameter in male children who presented with large inguinoscrotal hernia above which internal ring narrowing (plication of inguinal canal floor) may affect the rate of hernia recurrence.

## **Patients and methods**

A prospective study was conducted on male children who presented clinically with large unilateral or bilateral inguinoscrotal hernias. Preoperative ultrasound was performed for all of them to assess the diameter of the internal inguinal ring. Cases were categorized into two groups: group 1, internal ring diameter less than 12mm, and group 2, internal ring diameter 12mm and more. Patients in either group were blindly selected to be operated upon by one of the two operative techniques, either just high ligation of the sac or high ligation of the sac followed by plication of the floor of the inguinal canal (narrowing of the internal ring). The recurrence rate was compared between the two operative techniques, and the results were statistically analyzed.

## **Results**

This study included 204 inguinoscrotal hernias divided into two groups: group 1 included 142 cases in which the internal ring diameter was below 12mm. Half of them were operated upon by just high ligation of the sac, and the other half were operated upon by high ligation of the sac and internal ring narrowing. We encountered no recurrence in either group. Group 2 included 62 cases in which the internal ring diameter was 12mm or more. A total of 31 patients were operated upon by high ligation of the sac only, and we encountered three (10%) recurrent cases. The other 31 cases were operated upon by high ligation of the sac and narrowing of the internal ring, with no recurrence.

## **Conclusion**

Narrowing of the internal ring if dilated above 12mm or more may decrease the recurrence rate in such cases.

**Keywords:**

huge hernia, inguinal, internal ring, narrowing of internal ring