

CLINICAL PRACTICE

Caren G. Solomon, M.D., M.P.H., *Editor*

Groin Hernias in Adults

Robert J. Fitzgibbons, Jr., M.D., and R. Armour Forse, M.D., Ph.D.

This Journal feature begins with a case vignette highlighting a common clinical problem. Evidence supporting various strategies is then presented, followed by a review of formal guidelines, when they exist. The article ends with the authors' clinical recommendations.

From the Department of Surgery, Creighton University School of Medicine, Omaha, NE. Address reprint requests to Dr. Fitzgibbons at the Creighton University School of Medicine, Department of Surgery Administration, 601 N. 30th St., Suite 3520, Omaha, NE 68131, or at fitzjr@creighton.edu.

N Engl J Med 2015;372:756-63.

DOI: 10.1056/NEJMc1404068

Copyright © 2015 Massachusetts Medical Society.

A 67-year-old man presents with a bulge in his right groin, which he recently noticed while in the shower. He is easily able to push it back completely, but it reappears intermittently. He says it is not painful and that he has not altered his activity level because of it. Physical examination confirms the presence of a right inguinal hernia. How should his case be managed?

THE CLINICAL PROBLEM

The lifetime risk of development of a groin hernia has been estimated at 27% for men and 3% for women.¹ The frequency of surgical correction varies among countries and ranges from 10 per 100,000 population in the United Kingdom to 28 per 100,000 in the United States.²

The word “hernia” is from the Latin word “rupture”; the condition occurs when an organ normally contained in one body cavity protrudes through the lining of that cavity. Groin hernias have three components: the neck, which is the opening in the abdominal wall; the sac, which is formed by the protrusion of the peritoneum through the opening; and the contents — that is, any tissue or organ that protrudes through the neck into the hernia sac (Fig. 1). The abdominal wall in the groin region is composed of the peritoneum, transversalis fascia, internal and external oblique muscles and their aponeurotic structures, subcutaneous tissue, and skin. A failure of the transversalis fascia to prevent the intraabdominal contents from protruding through the anatomical area known as the myopectineal orifice of Fruchaud is the final common denominator in the development of all groin hernias (Fig. 2). Groin hernias are inguinal or femoral; inguinal hernias are either direct or indirect. Both direct and indirect hernias protrude above the inguinal ligament; a direct hernia is medial to the inferior epigastric vessels, whereas an indirect hernia is lateral. A femoral hernia protrudes below the inguinal ligament and medial to the femoral vessels (Fig. 1 and 2).

DEMOGRAPHICS AND RISK FACTORS

Inguinal hernias are more common on the right side than on the left and are 10 times more common in men than in women.³ Indirect inguinal hernias are twice as common as direct hernias. The reported prevalence of inguinal hernias varies widely from study to study; hernia repair is often used as a surrogate. In a study using the Danish national registry, groin hernias were found to be most commonly diagnosed