

# Rare and unusually massive left ureteroinguinal and scrotal hernia

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A 76-year-old man was admitted to a cardiology department due to exacerbation of chronic heart failure symptoms. On physical examination, a massive, acquired, central inguinoscrotal hernia was noted, which the patient had been refusing to have operated for over 20 years (FIGURE 1A and 1B). The patient reported that scrotal enlargement had begun approximately 25 years before, and gradually increased in size. The main reason for not seeking medical attention was fear and embarrassment. During the interview, he reported that approximately 20 years ago, he was consulted by a surgeon who, even at that time, assessed the risk of surgery as high. Since then, the patient has learned to live with the hernia, securing it in a manner to minimize impairment to his motor capabilities.

Currently, the testicles and penis are encompassed within the extensive hernial sac and are not externally visible. The patient had been experiencing urinary difficulties, with urine only trickling out from the visible opening of the urethra on the extended skin. Computed tomography (CT) imaging revealed a large left inguinal hernia (FIGURE 1C–1F), containing the left dilated and distally entrapped ureter. Unilateral trapping of the ureter resulted in considerable left-sided hydronephrosis. Despite all this, the patient's kidney function parameters remained within the reference range. The loops of the small intestine involved in the hernia did not display any signs of ischemia. A significant amount of free liquid was also noted in the hernial sac.



**FIGURE 1** A, B – huge inguinoscrotal hernia reaching the knees and embracing external genital organs: frontal view (A) and right lateral view (B)

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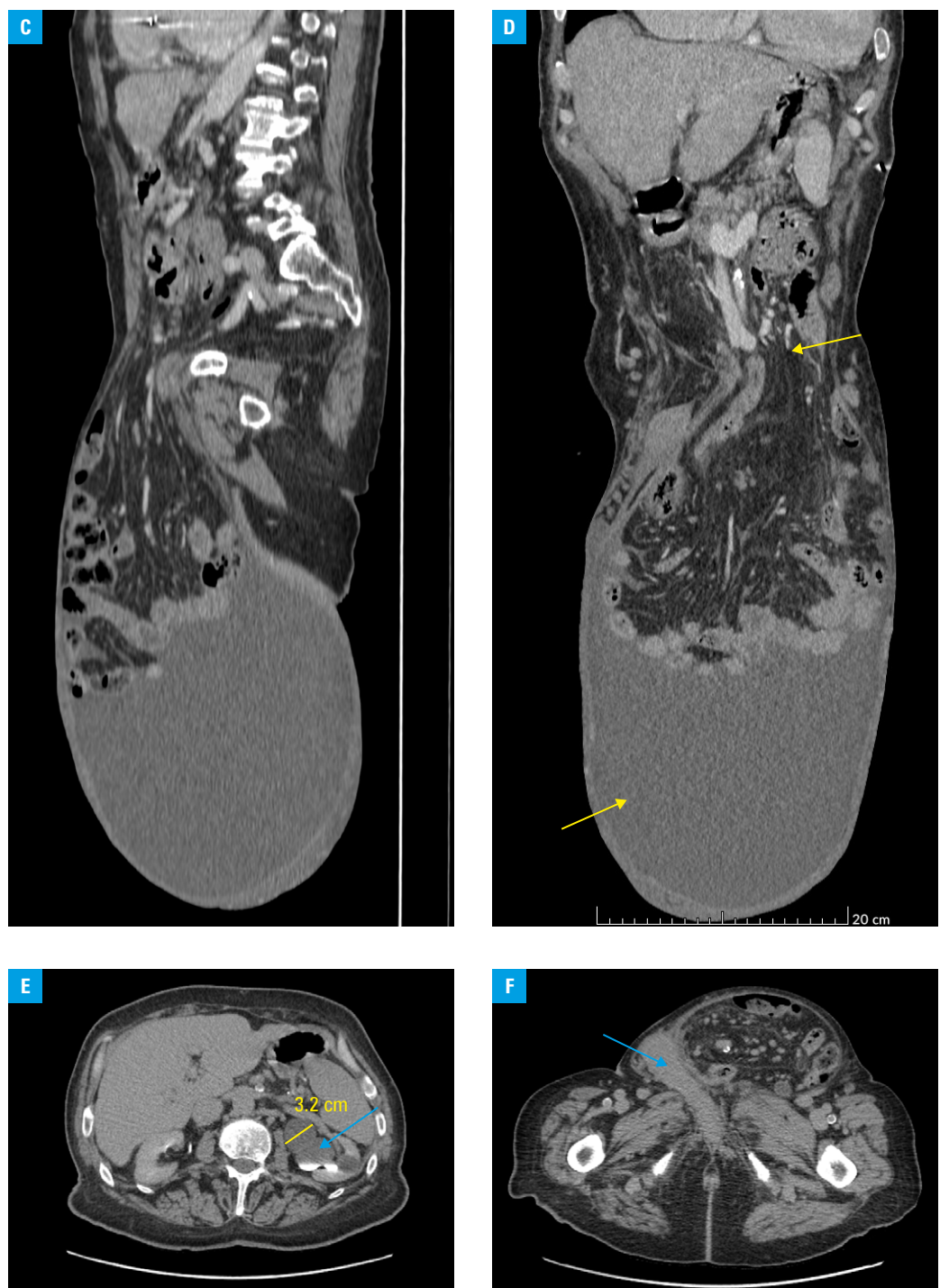
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**FIGURE 1** C, D – sagittal computed tomography (CT) image showing massive inguinal hernia, hernial opening (upper arrow) with a huge amount of free liquid (lower arrow); E – axial CT urogram showing severe left hydronephrosis (arrow) with considerable dilatation of the proximal ureter (scale bar); F – axial CT image depicting the penis (arrow) inside the hernial sac

Inguinal hernias belong to the most common types of hernias worldwide; however, ureteral involvement is rare and can pose a challenge for the operating general surgeon.<sup>1</sup> Most inguinal and particularly scrotal hernias are considered sliding hernias, and belong to the acquired, indirect paraperitoneal type of ureteroinguinal hernia. Risk factors for developing ureteral inguinal hernia include male sex, advanced age, and a history of kidney transplant. Under normal circumstances, ureters residing in the retroperitoneum

are seldom involved in inguinal hernias, and if they are, they typically cause signs of uropathy and acute kidney failure.<sup>2</sup> In the available literature, no article describing such a massive hernia, involving ureteral trapping and causing hydronephrosis, was found. Usually, massive hernia is considered to be the one that extends below the midpoint of the thigh,<sup>3</sup> while the hernia in our patient reaches below the knees. Possible complications of such a hernia primarily include worsening of kidney function and perforation of organs

within the hernial sac, posing a risk of peritonitis and sepsis. There are several surgical options for the removal of such massive hernias, however, all elective procedures require prior patient's preparation to prevent sudden increase in intra-abdominal pressure that might cause the compartment syndrome.<sup>3</sup> Despite exhaustive information provided to the patient and his family regarding the potential benefits, including return to normal life, but also the possible complications associated with the presence of such a massive hernia, the patient did not consent to a surgical intervention until the completion of this article. Upon discharge, he was informed that should he change his decision, a surgical intervention could be considered.

## ARTICLE INFORMATION

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