Suppurated Inguinal Node mimicking a Strangulated Inguinal Ovarian Hernia on Ultrasound

Sir,

Inguinal swelling in pediatrics is a common reason for prescribing ultrasound and the result is often a hernial pathology.^[1] Our case was a 3-year-old girl with a right inguinal swelling and whose ultrasound result presented a diagnostic problem between suppurative adenitis and inguinal hernia with strangulated ovarian contents. Surgical exploration confirmed the suppurative node origin of the lesion inguinal. The lesson that we can learn is that ultrasound can make an etiology directive.

The case was a 3-year-old girl who presented with a right inguinal swelling discovered fortuitously recently by her parents during her bath. The child has no specific antecedents. Clinically, the swelling was oval, with no skin inflammation, and not mobile during crying. Its probe tenderness is difficult to determine due to the state of agitation of the child.

On ultrasound, the swelling corresponded to two oval structures measuring 21 mm in transverse diameter and 16 mm in anteroposterior diameter, continuing between them, oblong in longitudinal section [Figure 1], with regular external limit but with irregular and necrosed edges [Figure 2] comparable to the intestinal villi. The content was very hypoechoic, with a reinforcement



Figure 1: Inguinal ultrasound in longitudinal section, showing an oval lesion with a blurred inferior margin (arrow)

of the posterior echoes [Figure 3]. There were no reciprocating movements of this structure during the child's crying. Around these lesions was a discrete, heterogeneous, hyperechoic infiltration of fats [Figure 4]. Crying of the child created a change in the image with an appearance of linear hypoechoic band connecting with the above-mentioned lesions which was considered as a communication with the peritoneal cavity [Figure 5]. Diagnosis was made intraoperatively, showing suppuration adenitis.

The ultrasound is the first-line examination in pediatrics, especially for the exploration of inguinal swelling. However, this examination is limited in infants and newborns, in the absence of sedation, due to agitation and crying. Inguinal hernias are often ovarian in small girls.^[2] These lesions result from the persistence of the inguinal canal.^[3] Node hypertrophy is also a source of inguinal swelling.^[1]

On ultrasound, the ovarian hernia appears as a solid mass containing cysts,^[4] and during strangulation, the appearance is a pseudo mass with a heterogeneous fluid content with false septation.^[5]



Figure 2: Ultrasound with inguinal Doppler in longitudinal section, showing an irregular false-wall appearance of the internal walls (arrow)



Figure 3: The content of the oval structure is hypoechoic and heterogeneous (upper arrow) with reinforcement of the posterior echoes (lower arrow)



Figure 4: Inflammatory hyperechogenic infiltration of soft tissue in the periphery (arrow)



Figure 5: Linear hypoechoic band in continuity with the oval lesions indicative of the lesion's pseudo-permeability of the inguinal canal

On ultrasound exam, a suppurative adenitis inguinal is presented by a heteregenous mass with fluid content and septa. This form can be seen in hematoma, abcess, begnin or malignant tumor. The pictures of these lesion can mimic a strangulated inguinal hernia.

The absence of mobility, highlighted by increased abdominal pressure during crying of the child, caused the doubt to be raised between a strangulated inguinal ovarian hernia and suppurative adenitis. Achieving ultrasound in a calm child, under the right conditions, would improve the result with the help of Doppler.

Ultrasound exploration in pediatrics is limited by nonco-operating states, agitation, cries, and tears that limit the completion of the examination.

In the presence of immobile inguinal swelling, mass with heterogeneous fluid content in ultrasound exam, the diagnosis that we should think in first are strangulated hernia with annexe in femal patient and adenitis supprativa.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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REFERENCES

- Park HR, Park SB, Lee ES, Park HJ. Sonographic evaluation of inguinal lesions. Clin Imaging 2016;40:949-55.
- Narci A, Korkmaz M, Albayrak R, Sözübir S, Güvenç BH, Köken R, *et al.* Preoperative sonography of nonreducible inguinal masses in girls. J Clin Ultrasound 2008;36:409-12.
- 3. Jedrzejewski G, Stankiewicz A, Wieczorek AP. Uterus and ovary hernia of the canal of Nuck. Pediatr Radiol 2008;38:1257-8.
- Artas H, Gurbuzer N. Inguinal hernia containing both ovaries and the uterus in an infant. J Ultrasound Med 2012;31:1138-9.
- Aydin R, Polat AV, Ozaydin I, Aydin G. Gray-scale and color Doppler ultrasound imaging findings of an ovarian inguinal hernia and torsion of the herniated ovary: A case report. Pediatr Emerg Care 2013;29:364-5.

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