

The “double wall” sign: A helpful sign for the diagnosis of orbital hydatidosis

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Echinococcosis is an anthroponosis that is still endemic in several parts of the world, especially around the Mediterranean, Central Asia and North Africa. The main locations of the hydatid cyst are the lungs and the liver. In less than 10% of cases, the parasite may exceed both filters (hepatic and pulmonary) and localize in any organ or tissue.

In the majority of cases these are so-called secondary forms, associated with hepatic and/or pulmonary involvement. Primitive extra-pulmonary and extra-hepatic forms are exceptional; they are thus called “ectopic” or “aberrant”.

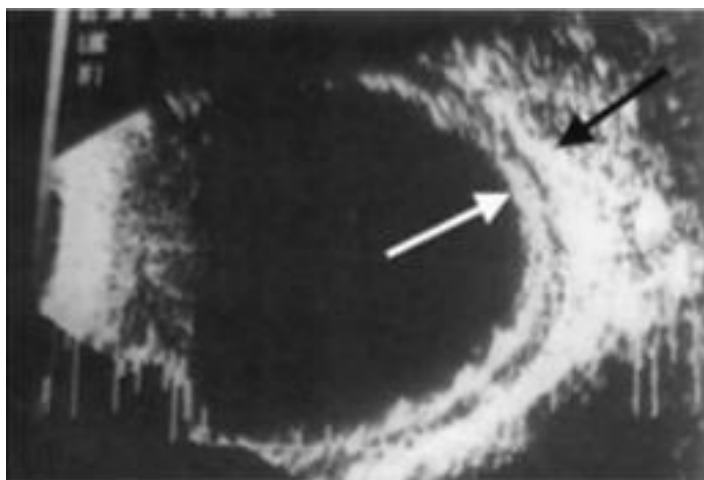


Figure 1. Orbital ultrasound: “double wall” sign specific of giant orbital hydatid cyst.

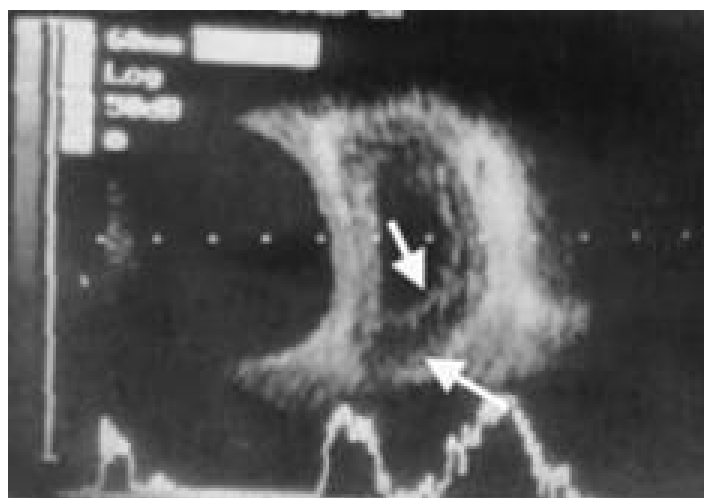


Figure 2. Orbital ultrasound: “double wall” sign specific of orbital hydatid cyst.

Among these locations, the orbits are reached in less than 1% of cases. Orbital hydatidosis is often unique, and predominates on the left side because of the more direct course of the left primitive carotid artery.

Ultrasound is very useful for the positive diagnosis of this location. It confirms the cystic nature of the lesion and can point towards the hydatid cyst if daughter vesicles or if presence of sediment in relation to the hydatid sand.

In 2003, Betharia et al. described for the first time a new sign that could be very useful for the diagnosis of orbital hydatid cyst: the “double wall” sign [1].

This sign appears very specific and very sensitive for the preoperative confirmation of the diagnosis of orbital echinococcosis. It was noted in 100% of cases and allowed the diagnosis even in cases where the orbital CT was inconclusive or doubtful.

This sign is explained by the use of high frequency ultrasound probe compared to other locations.

References

1. Betharia SM, Sharma V, Pushker N. Ultrasound findings in orbital hydatid cysts. *Am J Ophthalmol.* 2003; 135: 568-570.

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