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The inner tube sign in Ascariasis

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Two echogenic lines that represent the roundworm's alimentary tract, seen inside and parallel to the two outer echogenic walls of the worm (arrow in Fig. 1 and Video 1 in Supplementary material), constitutes the "inner tube sign" on ultrasound [1]. Thus, longitudinal section of the worm on the ultrasound gives this characteristic tube within a tube appearance. Analogous to this appearance may be appreciated in the barium examinations when the barium ingested by the worm outlines its alimentary tract as a dense line. Ascaris lumbricoides, a nematode, is one of the largest and most common roundworms affecting human small intestine. Sonographic features of adult roundworm are well recognized that include linear or curvilinear, mobile or non-mobile, non-shadowing long echogenic strip with central anechoic area [2] seen within the small bowel or biliary system. A "target appearance" or "bull's eye" sign may be appreciated on ultrasound with axial orientation of the probe, especially when the worm is in the biliary

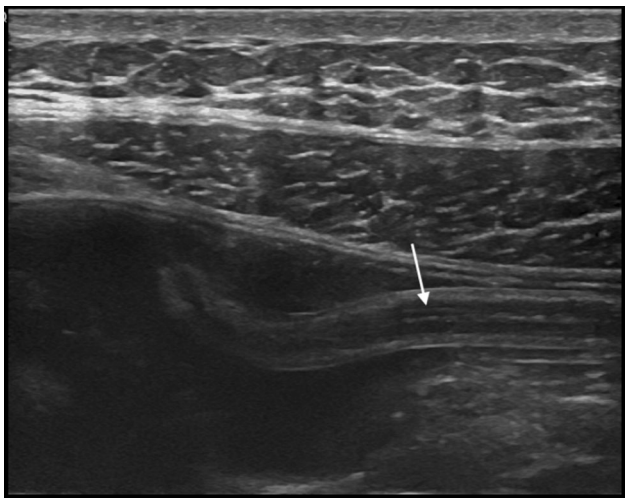

Fig. 1 Ultrasound image of a small bowel loop showing the roundworm in longitudinal section as a tubular curvilinear structure showing echogenic outer walls and two linear echogenic inner lines (arrow) representing its alimentary tract. The "inner tube sign"

Fig. 2 Curved coronal reformatted image of contrast-enhanced computed tomography showing the round worm as a hypodense curvilinear structure (arrow) in the jejunal lumen

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tract [3]. Contrast-enhanced computed tomography of the same patient also revealed the worm as a curvilinear hypodense structure (Fig. 2), within the fluid-filled lumen of the jejunum.

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