Situs inversus totalis discovered incidentally at the age of 84 years

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DESCRIPTION

Situs inversus totalis is a rare occurrence wherein the organs of an individual are 'mirrored' in position, with the right-sided organs swapping positions with the left. The thorax features the heart placed in the right hemithorax, with the left lung being trilobed and the right lung bilobed (figure 1). The liver lies in the left, while the spleen lies in the right (figure 2).

Patients with situs inversus totalis have a 3–5% risk of congenital cardiac disease, most often the transposition of great vessels. About 20% of patients also suffer from the Kartagener syndrome, which features bronchiectasis and sinusitis as consequences of congenital ciliary dysfunction.^{1 2}

However, most patients with situs inversus totalis lead normal healthy lives, and the detection of the condition is often incidental. As an example, this case describes a lady diagnosed to have situs inversus totalis at the age of 84 years, incidentally, when she was imaged as part of the evaluation for a carcinoma of the urinary bladder.

Despite the individuals leading normal routine lives, a few implications of this anatomical anomaly do exist. For example, classical clinical signs of various diseases may have to be expected on the contralateral side. Surgical interventions for any requirement must be planned keeping the patient's anatomical uniqueness in due consideration.

Figure 1 Coronal CT-slice (A) demonstrating the mirrored locations of the thoracoabdominal viscera. Volumetric-3 dimensional reconstruction (B) from the CT-data demonstrating the location of the cardia, and that the right lung is smaller than the left.

Figure 2 (A) Coronal rendition created from the CT-volumetric data depicting the mirrored positions of the heart (green arrow) and the liver (blue arrow). (B) The spleen (red arrow) visualised as located in the right side, rather than the left.

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Learning points

- ▶ Even though a majority of people situs inversus totalis lead normal healthy lives, about 1 in 20 patients may suffer cardiac anomalies and about 1 in 5 patients may have a coexisting Kartagener syndrome.
- ▶ Recognition of the condition may help prevent unanticipated difficulties and mistakes during interventional procedures.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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