

Impression and compression of vascular structures by a giant left atrium

Impresión y compresión de estructuras vasculares por una aurícula izquierda gigante

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The emergence of angiocardiology in the first half of the last century allowed the first findings related to the impression of massively dilated left atriums in neighboring structures. Subsequent development of cardiac echocardiography and tomography has allowed us to carry out a deeper exploration of such anomalies. Being a thin-walled intraluminal low pressure chamber, the left atrium is particularly vulnerable to the impression of nearby structures; while being at the same time, unlikely to compress and compromise adjacent organs.

Tomographic images of a 28-year-old patient with previous heart operation due to severe mitral regurgitation show a giant left atrium (82 × 54 mm;

volume 465 ml), resulting in both, impression and compression of vascular structures. **Figure 1A** shows the impression of a vertical groove in the middle portion of the left atrial posterior wall. According to recent articles, this impression is thought to be caused by a pathological structure (increased volume) dorsal to the atrium. However, in our case, similar to that reported in the first works on this topic, the impression was originated by an enlarged left atrium which has subsequently projected itself to “encompass” the normal descending thoracic aorta (**Figure 1B**).

Figure 2 shows impression and compression examples: the ascending aorta also stamps a groove in the left atrial anterior wall, which –in turn– compresses (asymptotically) the proximal segment of left main coronary artery (arrow), causing a straight angle (close to 90°) and a sudden change of direction in the rest of the artery. A small notch printing the angulated segment of the arterial trunk in the anterior face of the giant left atrium is also observed.

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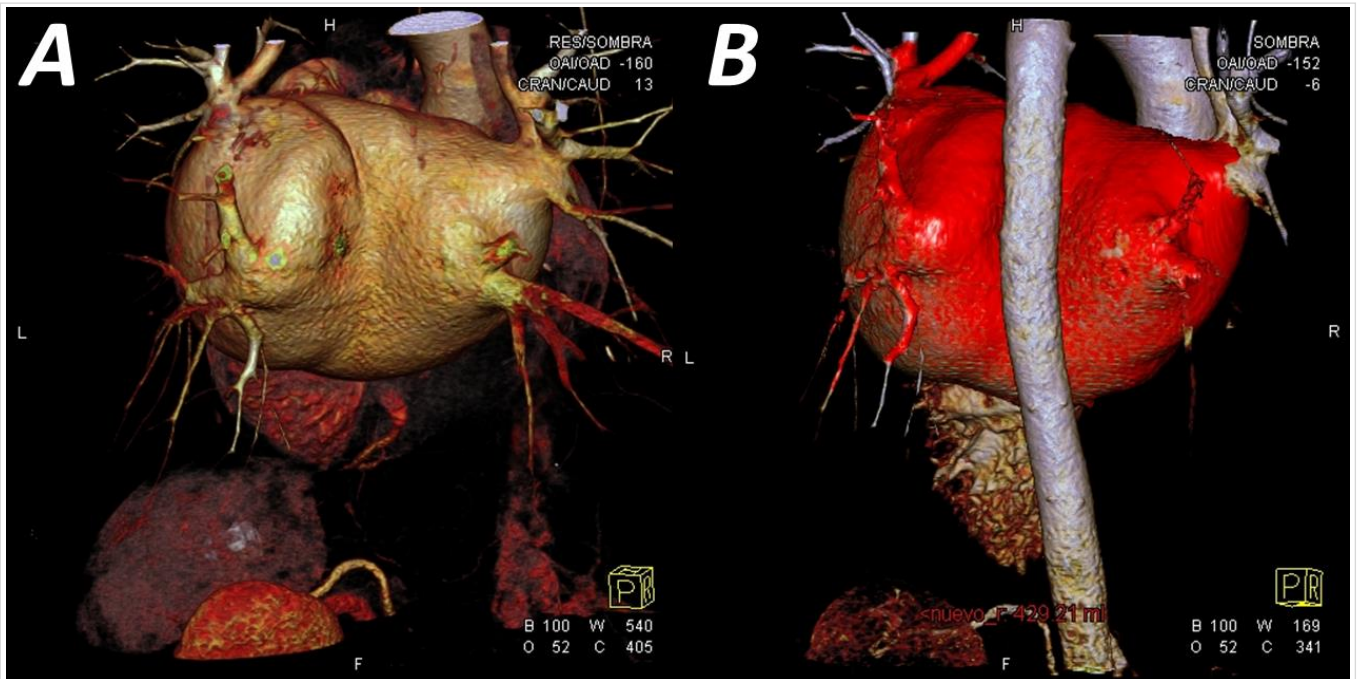


Figure 1

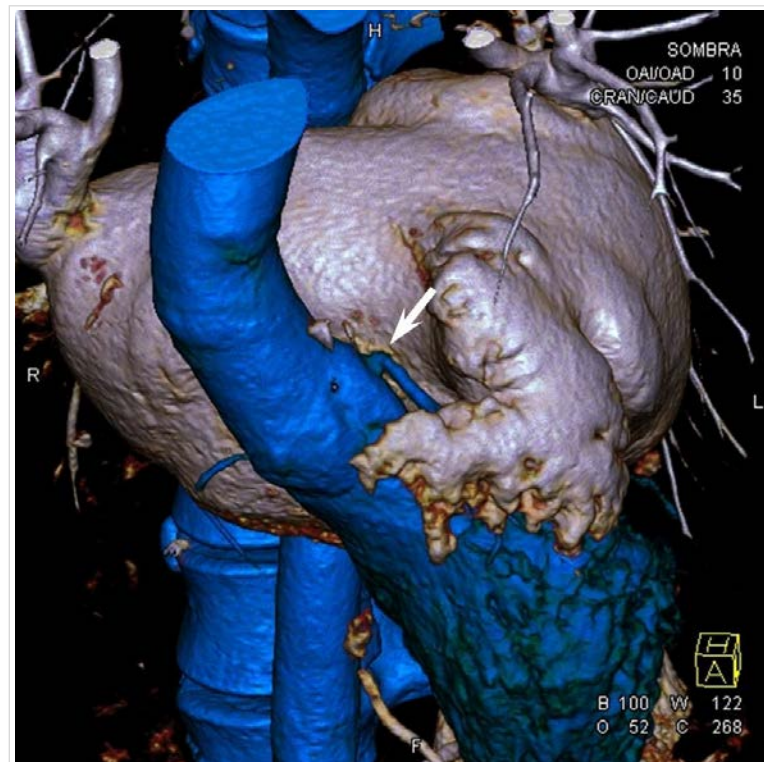


Figure 2