Case	(296) Aortocaval fistula
Authors	A. Perez Bartolome, L. Galván Herraez, C. Sanchez Rodriguez, L. Fernandez Vila, C. Arizaga Ramirez.
Centre	Hospital Clinico San Carlos.

CASE PRESENTATION

A 88 year old man with a history of abdominal aortic aneurysm presented to the Emergency Department with tachycardia, coldness, hypotension and nausea. He looked pale and sweaty. Cardiac examination showed yugular ingurgitation at 30º with and ejective murmur III/ IV in aortic focus.

On adbomen examination he presented a nonpainful, pulsatil, soft, mid-abdomina mass. An acute aortic syndrome was suspected, so a TC angiografy was performed, acquiring images in arteria and porta phase and comparing the findings with previos study. It showed that the known infrarenal adbominal aortic aneurysm diameter had increased up to 7.7 cm (previous 5.3cm).

Contrast filling of the inferior vein cava (IVC) in the arterial phase study was noteworthy (figure 1, 4) and the communication between the aortic aneurysm and the inferior vein cava was appreciated (figure 2,3).

DISCUSSION

Aortocaval fistulas are an infrecuent compication of abdominal aortic aneurysms (approximately 1%), being most of them spontaneous, followed by traumatic and iatrogenic. Clinical manifestations are variable and sometines indistinguishable from acute aortic syndrome.

The technique of choice is CT angiography because it provides more information on the anatomical details and hemodynamic repercussion on the organs, allowing a better presurgical evaluation. Under normal conditions, IVC opacification in the adrenal segmen is maximim about 12 seconds after aortic enhancement, due to fron renal veins.

The infrarenal portion delays 60 seconds bescause the flow is provided by iliac veins. In the arterial phase of CT angiography the presence of contrast in the IVC with the same attenuation as the abdominal aorta is characteristic of aortocaval fistula. Sometime a communication point between both vessels (which is the most specific sign) can be seen.

However, the non-detection os the communication point does not rule out an aortocaval fistula. Doppler-Pulsed ultrasound is a good diagnostic choice when CT is not availabe. Arterialization of the IVC flow can be observed as well as an aliasing artefact in the communication point.

CONCLUSION

Aortocaval fistula is an infrequent complication os abdomina aortic aneurysms, being difficult to identify it by clinical examination.

CT angiography is the technique of choice, which should be performed in arterial and portal phase. The most characteristic radiologic sign is the presence of contrasts in the IVC with the sameattenuation as the abdominal aorta in the arterial phase, and the most specific sign is identification os a point os communication bettwen both vessels Dopper utrasound is a useful technique when a CT is not avaiable.

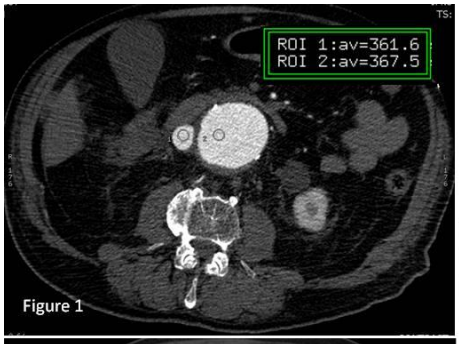

Figure 1


Figure 2


Figure 3


Figure 4

Figure 1. Axial image shows similar enhace on IVC (ROI 1 , 361 HU) and aorta (ROI 2, 367 HU) on arterial phase.

Figure 2 and Figure 3. Axial and coronal average image where the communication point (*) is visible.

Figure 4. VR reconstruction (IVC and aorta shows similar enhance)

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