

Cardiac Imaging

Superior Vena Cava Syndrome: 1757-2007

PETER G. DANIAS^{1,2}, ATHANASIOS G. PIPILIS¹

¹"Hygeia" Hospital, Athens, Greece; ²Tufts University Medical School, Boston, MA, USA

Key words:

SVC, superior vena cava syndrome, William Hunter.

Manuscript received:
October 30, 2007;
Accepted:
November 7, 2007.

Address:

Peter G. Danias

Cardiac MRI Center
Hygeia Hospital
4 Erythrou Stavrou St.
& Kifissias Ave.
151 23 Maroussi,
Athens, Greece
e-mail:

pdanias@hygeia.gr

peter.danias@tufts.edu

In 1757, exactly two hundred and fifty years ago, the occurrence of superior *vena cava* obstruction was first described in the medical literature by the Scottish physician William Hunter (1718-1783). The journal of the Society of Physicians in London, *Medical Observations and Inquiries*, 1757; Vol. 1, pp 323-357, published Hunter's article "The History of an Aneurysm of the Aorta, with some Remarks on Aneurysms in general." The case of "Isaac Bradwell, a man of a well made active body, and of a quick and choleric disposition [who] died of an aneurysm of the aorta ... at the age of 39 years" was elegantly described from initial symptoms to death. At *post mortem* among all other findings the "*vena cava* superior and the common trunk of the left subclavian and jugular vein [were] both so much compressed by the dilated artery, as hardly to have any thing left of their natural capacity and appearance" (Figure 1).

Two hundred and fifty years later, to commemorate Hunter's publication, we present a case of superior *vena cava* obstruction in a young patient with lymphoma. Contrast-enhanced magnetic resonance angiography demonstrated obstruction of the venous return to the right atrium and clearly visualized the subcutaneous collateral venous circulation from the upper body to the inferior *vena cava* (Figure 2). Modern imaging technology allows for noninvasive visualization of vascular structures with anatomic clarity and establishes accurate diagnosis at a much earlier stage, reminding us of the progress of medicine over the last centuries.

Acknowledgement

We thank Panagiotis G. Kyrtatos, University College London, UK, for providing us with copies of the original Hunter's publication.

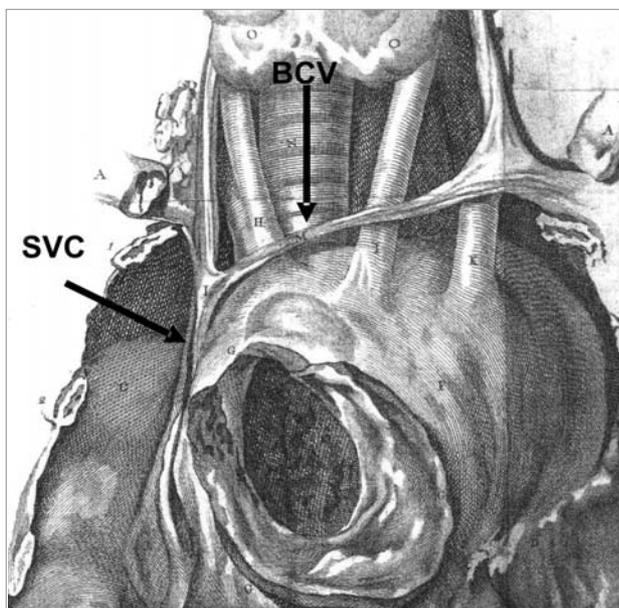


Figure 1. Drawing of the post mortem findings by William Hunter, as published in *Medical Observations and Inquiries*, 1757; Vol 1, pp 323-357. Compression of both superior *vena cava* (SVC) and brachiocephalic vein (BCV) is indicated by arrows.

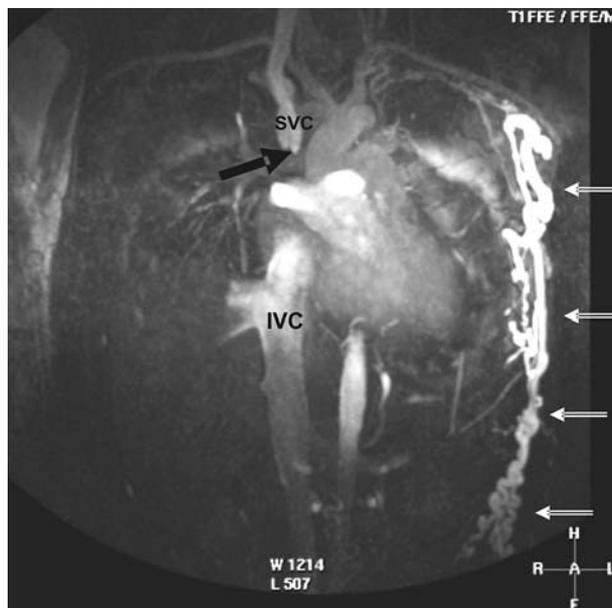


Figure 2. Single frame (anterior view) from a three-dimensional reconstruction created from the contrast-enhanced magnetic resonance angiography. The brachiocephalic vein is not visualized. The superior *vena cava* (SVC) obstruction is readily apparent (straight arrow). The highly developed superficial collateral venous circulation from the upper body to the inferior *vena cava* (IVC) is indicated by open arrows.