

## **Echocolor Doppler: to know more about it**

Interview from the site [www.dottorbellezza.it](http://www.dottorbellezza.it) (October, 3<sup>rd</sup> 2004)

The diagnostic methods based on the Doppler effect have been a prerogative of a limited number of specialists mostly involved in the research.

Since when the echographic and Doppler method have been confirmed in the 70's, the field of the application of this method has been remarkably amplified, allowing an extensive use of this diagnostic method.

And it is not over yet... The echocolor Doppler has been well known as the "gold standard" exam (the best: nrd) in the diagnosis of the vascular diseases, both venous and arterial.

To illustrate it, let us say that this diagnostic method allows a very accurate diagnosis of all the arteries and all the veins for what regards the circulation, excluding the heart and the thoracic aorta

### **A NOT INVASIVE METHOD**

"The echocolor Doppler – doctor Alessio Redaelli, vascular surgeon from Milan, explains – uses the echographic diagnosis, well-known since long time, with the supplement of the physical Doppler effect. Moreover the hemodynamic dimension is added, with a colour code: a corps in movement (in our case the blood) makes the ultrasounds rebound, according to certain laws that in the end are underlined on the screen. All of this allows a very accurate evaluation of the bloody vessel, both venous and arterial. The method consists on a very reliable evaluation of all the arteries and veins that elapse in the subcutaneous layer, but also deep in the abdomen for a very precise diagnosis, but especially not invasive! No injections, rays or other stuff".

So, it is an absolutely safe and very accurate diagnostic method. Alessio Redaelli continues: "The advent of this diagnostic method changed the diagnosis of the vascular diseases and it allows a big step forward in the prevention of these very disabling diseases such as cerebral ictus or the phlebothrombosis of the lower limbs.

### **THE DIAGNOSTIC INDICATIONS**

It is useless to say that the indications of the echocolor Doppler are many and very useful: let us see them in the specific.

- Carotid and the Trunk above the Aorta's echocolor Doppler (TSA): it allows a morphologic and hemodynamic evaluation of the carotid and vertebral arteries, the arteries that bring the blood to the brain. Very useful in the prevention of the cerebral arteriosclerotic disease and in the prevention of the ictus. But it is basic also in the monitoring of the surgery operations of the carotid revascularisation.

- Abdominal arterial and the lower limbs' echocolor Doppler: it allows an accurate evaluation of the arteries that brings the blood to the lower limbs permitting to diagnose the enrapturing diseases of the aorta and of other arteries of the lower limbs (the aneurysm), that is practically to say when an artery enlarges. The method is also used to diagnose pathologies stenosis (that occlude) the arteries of the lower limbs.

- Abdominal venous and the lower limbs' echocolor Doppler: it allows an evaluation of the status of our veins, or the vessels that bring the blood back to the heart. It is very useful for the diagnosis of the phlebitis; this methodology is also very useful to underline the presence of the varices, so that before any operations it becomes absolutely an indispensable exam for this kind of problems. It allows the so-called mapping of the

varices and it allows the surgeon to know where exactly he has to do the micro incisions through which dissect and correct the enlarged veins.

- Scrotal echocolor Doppler: it is also very useful in the diagnosis of the varicocele; the method underlines the enlarged veins of the spermatic cord. The varicocele is one of the most frequent causes of sterility of men.

## **QUESTIONS TO THE SPECIALIST**

### **Is it required a particular preparation for the exam?**

Redaelli replies again: "The echocolor Doppler does not need a particular preparation. A preparation to reduce the air of the abdomen is needed only in the case of an abdominal evaluation. In fact the air, for the ultrasounds, is certainly an obstacle: they do not pass! And it is for this reason that the preparation, before an echography or an abdominal echocolor Doppler, is so important".

### **Who are the patients who should take this exam?**

"Let us say that, seen the harmlessness of the exam – the vascular surgeon continues – everyone can take it without any sort of risk, included pregnant women. But it is particularly proper for the patients at risk, men, smokers, with arteriosclerotic and cardiopath relatives, over 50, hypercholesteremics. Especially people who suffer from a TIA, a temporary ischemic attack, should control the carotids, the arteries that bring the blood to the brain. Also the patients who suffer from oedema, swelling at the legs, especially if it sudden, should undergo this exam, even if the visit with the angiologist remains the first thing to do. Then, we can not forget that, for the aneurysm of the abdominal Aorta, the echocolor Doppler is the first choice exam".

"Concluding – doctor Redaelli adds – I advise all of our patients, especially over a certain age and in particularly if mostly at risk, to take this fundamental exam. The risks are inexistent while the possibility of prevention and precocious diagnosis of very disabling diseases are extremely important.

Date: 03/10/2004

**Author: Brunella Paciello**