**Sonographic Examination of Carotid Arteries**

**Optimal Technique and Doppler Settings**

**Color Doppler Parameters**
- **Optimal color scale (39 cm/s)**
  - **Color box steered left**
  - **Too much aliasing**
- **Tortuous ICA**
  - *of color*

**Spectral Doppler Parameters**
- **Optimal color Doppler settings:**
  - Vectors of blood flow making an angle between 30°-60°.
- **MHz for Doppler, 4-9 or 5-12 MHz for plaque morphology.**

**Extra-cranial Carotid Disease**

**Atherosclerotic Carotid Disease**
- **ICA and CCA Stenosis**
  - **PSV (A)=65.4 cm/s**
  - **PSV (B)=77.2 cm/s**
  - **EDV= 109.4 cm/s**
  - **PSV= 297.2 cm/s**

**Non-atherosclerotic Carotid Disease**
- **Focal IM thickening**
- **Severe IM thickening (>1.5 mm)**

**Vertebral, Subclavian and SCA**
- **Trickle flow**
  - **A reversed low-resistance flow pattern**
- **Turbulent flow**
  - **Aortic valve incompetency**

**Pitfalls in Carotid Ultrasound**

**Intimal-Media Thickness (IMT)**
- **IMT=3 mm**
- **DB**

**Stenosis was detected when the color box was steered to the right.**

**References**