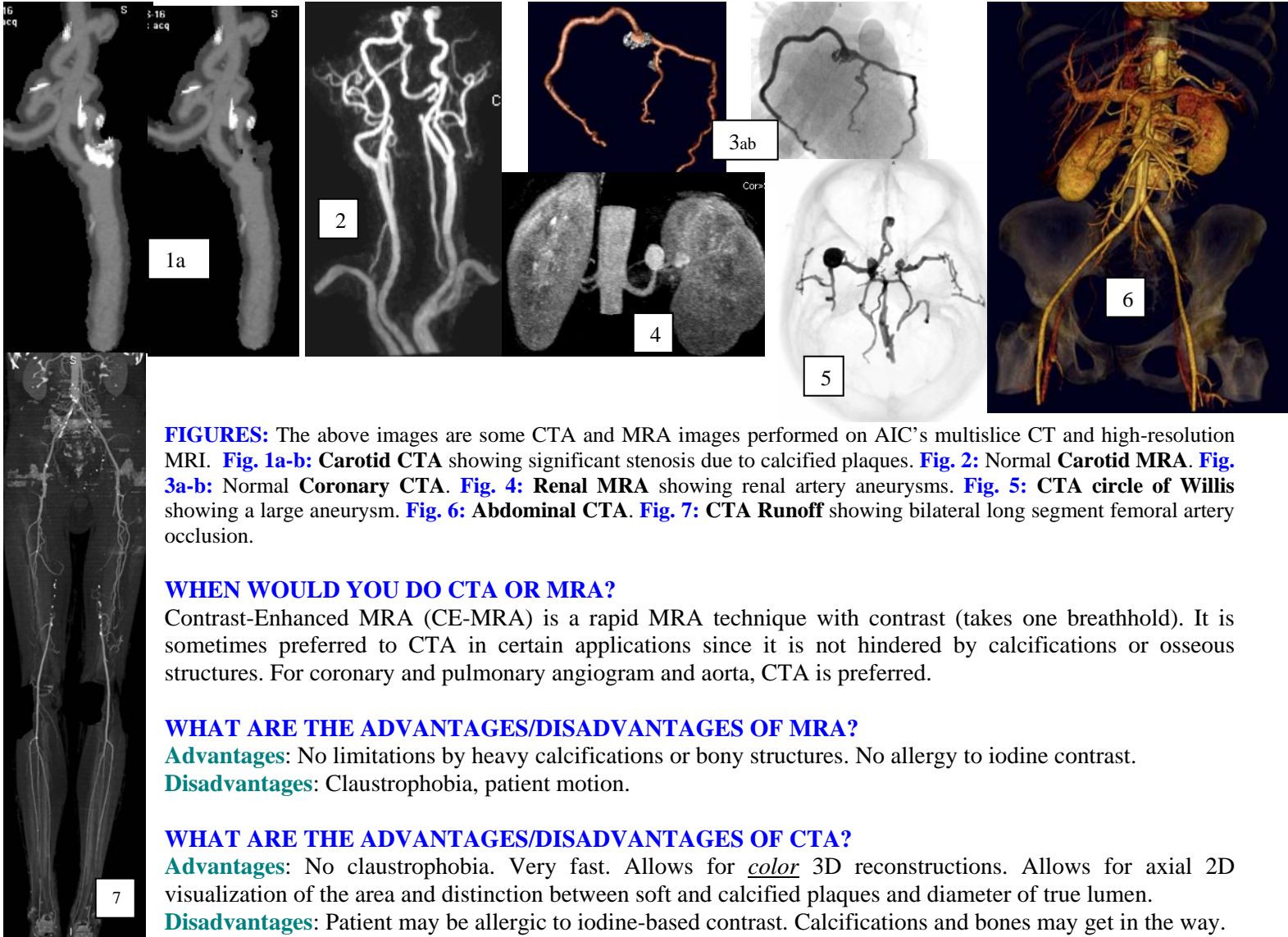


MR & CT ANGIOGRAPHY (MRA/CTA); 64-SLICE CORONARY CTA



FIGURES: The above images are some CTA and MRA images performed on AIC's multislice CT and high-resolution MRI. **Fig. 1a-b:** Carotid CTA showing significant stenosis due to calcified plaques. **Fig. 2:** Normal Carotid MRA. **Fig. 3a-b:** Normal Coronary CTA. **Fig. 4:** Renal MRA showing renal artery aneurysms. **Fig. 5:** CTA circle of Willis showing a large aneurysm. **Fig. 6:** Abdominal CTA. **Fig. 7:** CTA Runoff showing bilateral long segment femoral artery occlusion.

WHEN WOULD YOU DO CTA OR MRA?

Contrast-Enhanced MRA (CE-MRA) is a rapid MRA technique with contrast (takes one breathhold). It is sometimes preferred to CTA in certain applications since it is not hindered by calcifications or osseous structures. For coronary and pulmonary angiogram and aorta, CTA is preferred.

WHAT ARE THE ADVANTAGES/DISADVANTAGES OF MRA?

Advantages: No limitations by heavy calcifications or bony structures. No allergy to iodine contrast.

Disadvantages: Claustrophobia, patient motion.

WHAT ARE THE ADVANTAGES/DISADVANTAGES OF CTA?

Advantages: No claustrophobia. Very fast. Allows for *color* 3D reconstructions. Allows for axial 2D visualization of the area and distinction between soft and calcified plaques and diameter of true lumen.

Disadvantages: Patient may be allergic to iodine-based contrast. Calcifications and bones may get in the way.

EXPLAIN 64-SLICE CORONARY CTA:

A rapid cardiac-gated CT study during fast infusion of **intravenous** (not arterial) contrast is obtained through the heart and 3D images of the coronaries can be displayed one at a time or all together (top 2 middle **Figures**). It is preferable to slow the heart rate down TO around 60 BPM with beta blockers for optimal display. Wall motion studies and ejection fractions can also be obtained. The study should not take more than 15 minutes from start to finish.

Please call me for more information.

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