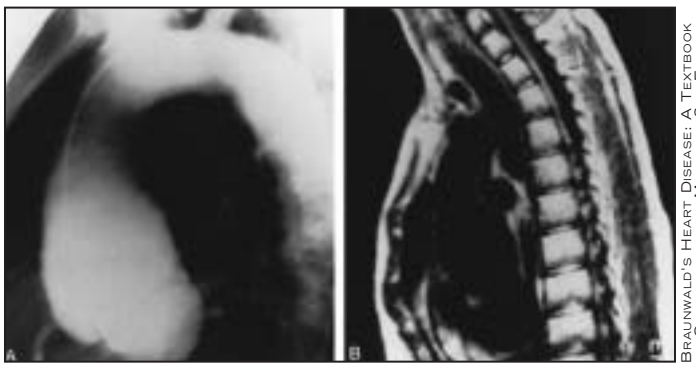
Aortic Surgery in Marfan Predisposes to Migraine



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Left: Lateral angiogram of the ascending aorta shows dilation of the sinuses of Valsalva and proximal ascending aorta and normal ascending aorta. Right: Lateral MRI of the same patient.

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MUNICH — Patients who have Marfan syndrome also experience a sharply increased prevalence of migraine, especially migraine with aura, according to a group of Dutch investigators.

Moreover, those Marfan syndrome patients who undergo aortic root surgery have an independent further increase in the risk of migraine, Dr. Jeroen C. Vis reported at the annual congress of the European Society of Cardiology.

The explanation for the association between aortic root surgery and a high rate of migraine in Marfan syndrome patients is unclear.

One possibility mentioned by the researchers is that the aortic graft throws off microemboli, which trigger headache attacks, according to Dr. Vis of Academic Medical Centre, Amsterdam.

Dr. Vis reported on 97 adults with Marfan syndrome and who had a mean age of 39 years, plus an additional 80 age- and gender-matched controls.

All of the patients underwent a clinical interview in which diagnosis of migraine was based on International Headache Society criteria.

Migraine was diagnosed in a total of 44% of the patients with Marfan syndrome, compared with 28% of the control patients.

Marfan syndrome patients who had undergone aortic root surgery had a 3.9-fold higher risk of migraine, and a 4.5-fold increased risk of migraine with aura.

Thirty-seven percent of Marfan syndrome patients had migraine with aura, as did 10% of the controls.

Interestingly, the prevalence of migraine among the controls was higher than usual, Dr. Vis reported.

This observation is most likely due to the influence of familial migraine; 16 of the 80 controls were first-degree relatives of participating Marfan syndrome patients, he commented.

Marfan syndrome was an independent risk factor for migraine overall, and conferred an adjusted 2.4-fold increased risk, along with a 6.2-fold increased risk for migraine with aura.

Thirty-five percent of the Marfan syndrome patients underwent aortic root surgery.

Having a history of the aortic root surgery was independently associated with a 3.9-fold increased risk of migraine, as well as a 4.5-fold greater risk of migraine with aura.

The study investigators also looked at other cardiovascular features of Marfan syndrome.

Neither mitral valve surgery, aortic dilatation, aortic dissection, mitral valve prolapse, nor mitral regurgitation was showed to be independently associated with an increase in migraine.

Aortic root surgery was therefore unique in this regard.

Dr. Vis said he and his colleagues are planning, as a next step, to observe the headache patterns in patients who do not have Marfan syndrome but who have undergone aortic root surgery.

The goal of that research will be to determine whether a history of the surgery is a risk factor for migraine and migraine with aura in those patients, too. ■