



How to Best Manage a Patient with Renal Artery Stenosis?

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The detection of atherosclerotic renovascular disease is much more frequent today than previously owing to the use of Doppler ultrasound for renal arteries and of renal scintigraphy investigations, which have facilitated the early diagnosis of significant renal artery stenosis. Moreover, in some invasive radiology and cardiology units routine renal artery angiography is performed in cases of aortic, coronary or peripheral artery arteriography. Since renal artery stenosis is known to be frequent in atherosclerotic patients, these routine examinations have increased the number of significant renal artery stenosis diagnosed even without abnormal laboratory or clinical findings. The question as to what to do in these patients with a well-recognized artery stenosis continues to challenge physicians. Hypertension, mild renal failure, angina pectoris, ischemic heart disease, peripheral vascular disease, transient ischemic attack and cerebrovascular disease are the most common problems dealt with daily by the medical profession, particularly in the elderly population with renal artery stenosis.

As we can see from the arguments presented below by Dr. Benchetrit and Dr. Golan, the decision to recommend invasive procedures cannot be made solely on the basis of a clear-cut diagnosis. The complications that can occur immediately after renal artery catheterization must be taken into consideration. These include contrast acute renal failure, atherosclerotic plaque embolus, renal artery thrombosis, bleeding and/or pseudoaneurysm at the level of the punctured artery, or later on with cholesterol emboli in the kidneys, legs, intestine and/or brain – with unexpected and sometimes extremely severe clinical consequences – and/or stent obstruction. This is particularly important since the statistical data in the literature have shown that the use of balloon and/or stent introduction does not dramatically modify the long-term evolution

in most patients with regard to renal failure and/or hypertension as compared to medically treated similar patients. We can see from various publications that researchers have tried to identify factors (ultrasound, clinical, laboratory) that may be predictive for the ultimate success of invasive treatment in cases of renal artery stenosis. The number of tests evaluated demonstrates the difficulty in proposing an accurate method of diagnosis that is both effective and has no side effects. The conclusion is that the physician's clinical judgment, based on the various data obtained with the different tests performed, and only after discussion with the patient, will determine what course to follow. It is important that the patient understand the reason for the invasive procedure as well as the possible severe complications that may occur.

In summary, each elderly patient with significant atherosclerotic renal artery stenosis must be evaluated individually, bearing in mind that the presence of renal failure and hypertension is not synonymous with a *sine qua non* indication for a risky invasive procedure, particularly when the renal functions are stable and the blood pressure is controlled. We cannot recommend firm and clear-cut guidelines but we can certainly mention once again that a good integration of experience, prudence, common sense, interpretation of clinical, laboratory and radiologic data, as well as the patient's agreement, remain fundamental for an appropriate medical decision.

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Capsule

Better stem cells, better ejection

In a randomized controlled trial, patients after myocardial infarction were treated with coronary infusion of bone marrow hematopoietic stem cells or placebo. Six months later, left ventricular ejection fraction increased significantly more in the

stem cells group, without increasing other adverse events. The mechanism of this treatment is still not known.

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