Marianne Brodmann, MD

This expert from the Medical University of Graz in Austria discusses the optimal treatment protocols for various endovascular diseases at her center.

Which trials have had the biggest impact on your clinical decision making for superficial femoral artery disease?

The now available and published data on drug-eluting balloon (DEB) and drug-eluting stent use have had the most impact in my practice. LEVANT I, THUNDER, and PACIFIER have influenced my decision making in daily clinical practice, as they have convinced me with their outcomes concerning reobstruction rates. When treating patients with DEBs, it has been shown that we can expect a much lower reintervention rate in the follow-up period than patients treated with plain old balloon angioplasty.

What do you consider to be the role of DEBs for peripheral vascular interventions? What don't we know about when this technology should be used?

I think DEBs can become the workhorse balloons or even the workhorse devices in the future. If upcoming trial results confirm previously published results, it might be more effective to treat a patient already for the initial event with a DEB than with plain old balloon angioplasty to avoid the need for short-term reintervention.

However, we do not have valid long-term data from large cohorts for indications such as long lesions, in-stent restenosis, highly calcified lesions, etc. These groups have not been evaluated until recently. Besides, we need to know what kind of coating is best.

What novel oral anticoagulants are you utilizing for the treatment of deep vein thrombosis (DVT) and why?

In Austria, only rivaroxaban may be prescribed for the treatment of patients with deep vein thrombosis and pulmonary embolism (PE), and therefore, it is the only anticoagulant I am using at this time. I use it primarily in all newcomers who have provoked DVT because they do not need to be anticoagulated for longer than 3 months. A short course of vitamin K antagonists may lead to difficulty in reaching therapeutic international normalized ratio (INR) levels within 3 months. I also use rivaroxaban for idiopathic DVT in patients who do not have a major bleeding risk (high HAS-BLED score) and for patients who are not willing to take vitamin K antagonists.

Why do we use novel oral anticoagulants? Very simple: trials have proven their efficacy, the lower rate of food and drug interactions provides a safer treatment option for the patient, and they eliminate the need for routine monitoring.

In patients with PE, we apply the same algorithm, although we only place hemodynamically stable patients on novel oral anticoagulants. If a patient presents in the intermediate-risk group, we tend to administer low-molecular-weight heparin for the initial period until we can be sure that the patient will not become unstable and need thrombolytic therapy.

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In what circumstances do you believe it is best to continue medical therapy beyond 3 months for patients with DVT?

Only patients who are at high risk for recurrence should receive medical therapy longer than 3 months. We use the Vienna prediction model to evaluate that risk for the individual patient, and after evaluating the recurrence risk, we balance it with the bleeding risk according to the HAS-BLED score. If a patient then

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qualifies for long-term treatment, we will begin this therapy, with annual risk-benefit evaluation.

What is your regimen for periprocedural anticoagulation for peripheral endovascular revascularization?

The patient receives a bolus of 3,000 intravenous units of unfractionated heparin during the procedure and low-molecular-weight heparin for 48 hours immediately following the procedure (dosage of 40 mg enoxaparin twice daily).

How do you manage bleeding complications when they do occur?

We have a vascular care unit where all patients are monitored for 24 hours after the procedure. If bleeding complications occur, we first stabilize the patient with fluid and blood transfusions and antagonize the applied heparin with protamine sulfate if necessary. A CT scan is performed in all patients in whom a nonapparent bleeding is suspected to exclude retroperitoneal bleeding, and if the bleeding cannot be stopped, a surgical procedure is performed.

Do you utilize any particular method of risk assessment before treating patients with CLI?

Yes, in all patients, we evaluate their general condition, obtain their medical history (eg, angina symptoms, etc.), compare ECGs from former hospital admissions, measure their renal parameters, and qualify the risk-benefit ratio in relation to their presentation of CLI.

How do you establish a successful relationship with dedicated wound care specialists?

We have a wound care clinic at our institution, and every nurse working there has special training as a "wound manager." Every nurse at our institution must undergo a special training that includes theoretical knowledge of any kind of vascular diseases, as well as knowledge of vascular procedures and theoretical and hands-on training concerning different wound dressings. They are in contact with the nursing facilities for each respective patient and supervised by vascular specialists.

What CE Marked device's uptake is most inhibited by reimbursement issues in Austria? If reimbursement were not a problem, in what ways would your standard of practice change?

Atherectomy devices! If they would be reimbursed adequately, we would use them more frequently in dedicated patients with calcified lesions. ■

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