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**News Highlights from June's Journal of Vascular and
Interventional Radiology (JVIR)**

**Evaluation of Combination Drug Therapy to Treat Acute Blocked Peripheral
Arteries**

**Addition of ReoPro, a Platelet Inhibitor, to the Clot Busting Drug, Reteplase, is
Effective in Breaking Up Difficult Clots Without Increasing Complications**

Interventional radiologists have used a variety of drugs for catheter-directed thrombolysis for the past 30 years to dissolve clots blocking arteries in the legs or arms, known as the peripheral arteries. Although clot busting drugs, known as thrombolytics, are effective, in some cases continued platelet activity causes new clots to form as the existing clot is being dissolved, or shortly thereafter. A platelet inhibiting drug may make dissolving a blood clot more effective because no new platelets are being added as the clot is being dissolved.

This study retrospectively evaluates one institution's experience using reteplase as the thrombolytic drug alone, and with the addition of the platelet inhibiting drug reopro, in more difficult cases. Although reopro has been used in combination with acute coronary syndromes, little data exists on using this drug in combination with thrombolytic drugs to treat peripheral arterial occlusions. These occlusions are acute and are due to severe peripheral arterial disease, which, if left untreated could result in amputations.

The study consisted of 40 consecutive patients. Nineteen patients were treated with reteplase alone and 21 patients were treated with reteplase and reopro. Reopro is a GPII/IIIa inhibitor drug, which prevents the platelets from sticking together to form a clot. The use of reopro resolved the problem of sudden clot formation during catheter-directed thrombolysis. In this study, the addition of reopro showed a trend toward better results without increasing complications. The six-month amputation-free survival rate was 78 percent.

Clot-Busting Drug-Device Combination Therapy Provides Effective Interventional Radiology Treatment for Deep Vein Thrombosis

Method Shows Great Promise as a Safe Way to Reduce Long-Term Disability in Many DVT Patients

Catheter-directed thrombolysis with stent placement is an established interventional radiology treatment option for extensive Deep Vein Thrombosis (DVT). Research has shown that DVT causes permanent vein valve damage and vein blockage, which in turn causes many DVT patients to experience chronic leg pain, swelling, severe skin changes, and/or ulcer formation. Unlike blood-thinning drugs, which prevent future clotting but leave the existing clots in place, catheter-directed thrombolysis delivers clot-busting drugs directly into the clots, causing them to dissolve. By re-opening the vein to improve blood flow, thrombolysis can significantly reduce the amount of permanent leg damage, known post-thrombotic syndrome.

This study evaluated a new combination strategy intended to improve clot removal and safety during catheter-directed DVT thrombolysis procedures. First, the clot-busting drug reteplase was used in combination with the Helix mechanical thrombectomy device to more efficiently remove the clot. If there was residual clot or vein narrowing after thrombolysis, metallic stents were placed to keep the vein open. Technical success, clinical success, complications, treatment time, and long-term follow-up were assessed.

Results

This study reports a retrospective analysis of a three-year period, in which 23 symptomatic limbs in 18 patients with iliofemoral DVT (a clot in the large vein in the thigh and pelvis area) were treated in a single center. Technical success was achieved in 23 limbs or 100 percent of cases. Clinical success was achieved in 22 of 23 limbs or 96 percent. During follow-up of almost 2 years (mean, 19.8 +/- 11.6 months), only two limbs had moderate disability and no limbs had severe disability - these results are superior to those expected for blood-thinning treatment.

Conclusion

In a preliminary experience, the drug device combination catheter-directed DVT treatment with early stent placement was safe and effective. This method shows great promise as a safe way to reduce long-term disability in many DVT patients.

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