

# Making emergency artery repair safer

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Catheters outfitted with balloons, lasers, and miniature drills have made the treatment of blocked arteries virtually routine. These devices are used to clear plaque from many vessels including coronary, femoral, renal, and carotid arteries. Until recently, a misstep in the delicate procedure usually required risky emergency surgery. Now physicians are using the same technology used to open clogged arteries to repair ruptures and perforations with less risk.

In an article in the *Journal of Interventional Cardiology*, researchers from the University of California, Davis Medical Center review state-of-the-art treatment for vessel punctures.

“Rupture or perforation of a blood vessel during angioplasty can result in life-threatening bleeding,” said lead author John Laird, M.D. “This review provides doctors with a summary of equipment and techniques that will enhance their ability to treat such complications.”

An estimated 0.1% of patients undergoing balloon angioplasty, which uses an inflatable balloon to widen arteries, suffer a perforation during the procedure. Patients treated with a rotator drill have a 1.3% risk of perforation, while those treated with the excimer laser face a 1.9% risk. Balloon, drill, and laser are all attached to a catheter inserted through a small incision in the arm or groin and snaked through an artery to the blockage.

Following a puncture, Laird and his colleagues first recommend inflating a balloon at the site to stem the bleeding. Then they suggest inserting

embolization coils or a flexible tube called a stent graft to repair the vessel. Treatment also involves drug therapy to promote clotting.

In their review, the authors describe several types of balloons, stents, and coils. They urge physicians who perform angioplasty to become familiar with the supplies they stock in order to be prepared for an emergency.

Source: Blackwell Publishing Ltd.

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