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## Emergency endovascular treatment of peripheral arterial injuries occurring during the Syrian civil war: Gaziantep Dr. Ersin Arslan Education and Research Hospital Experience

To the Editor,

As we are working in Gaziantep Dr. Ersin Arslan Education and Research Hospital that is approximately 50 km away from Turkish-Syrian border, we frequently encounter peripheral arterial injuries in terms of emergency endovascular interventions. Therefore, we would like to share our single-center experience of these patients with you and our colleagues. Extremity injuries involving a major artery that are not promptly diagnosed and treated can lead to death or loss of the extremity. Arterial injury can cause distal ischemia because of hemorrhage, hematoma, laceration, or thrombosis, and the complications of the injury can lead to pseudoaneurysm or arteriovenous fistula (1). Endovascular therapy is a continuously developing alternative to surgical therapy in selected patients. Between July 2012 and May 2014, 21 patients were evaluated by digital subtraction angiography in our catheterization laboratory. Twelve of them were operated and nine patients underwent emergency endovascular interventions in our cath lab. Lesion types were hemorrhagic laceration fistulazing to the skin, arteriovenous fistula, pseudoaneurysm, and distal ischemia due to postoperative occlusion. Patients had internal carotid artery, axillary artery, brachial artery, superficial femoral artery, and popliteal artery injuries. The conventional treatment for perforation, aneurysm, pseudoaneurysm, and arteriovenous fistula caused by penetrating arterial trauma is surgery; however, the deteriorated anatomy and hematoma around

the lesion as well as the risks of performing the surgery again can make surgical option a challenging procedure (2). Endovascular interventions also have their own risks and complications such as stent occlusion, stent fracture, restenosis, and loss of collaterals during stent placement (3). The most often traumatized vessel is the femoropopliteal artery, the same as in our series. Direct penetrating injuries caused by deep stabs, gunshots, or high-kinetic energy weapons can cause pseudoaneurysm or arteriovenous fistulas. The graft stent implantation in femoral interventions provides a patency rate of 88% in one year. Less thrombogenic heparin-bonded stents are being implanted for arteries running through joints. These stents are resistant to fracture and have high radial strength (4). As this is a case series of nine patients treated with covered stents in one center, we could say surgery should be the first-line treatment for these kinds of lesions (5). However, because of reoperation and anatomical challenges, reluctance of the vascular surgical team to redo the procedure, and patient preferences, endovascular treatment of these kinds of lesions could be another option.

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