

Intraoperative angiography in the prone position.

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Introduction

Comprehensive management of neurovascular lesions may necessitate intraoperative angiographic evaluation. Intraoperative DSA has been routinely utilized for both aneurysms and AVM to verify complete occlusion and resection. Surgery for spinal and posterior fossa neurovascular lesions are usually done in the prone position. Intraoperative angiography in the prone position is challenging and has not been well characterized.

Methods

We reviewed our experience with intraoperative prone position angiogram between 2013-2014. Patients were treated in a hybrid endovascular operating room. High cervical lesions were studied via brachial access, while lower thoracic via femoral approach. Brachial access was obtained using ultrasonographic guidance and small caliber sheath (4F). Femoral access utilized long braided sheath.

Results

We have treated 5 patients in this cohort. Two lesions were high cervical arteriovenous radicular malformations. Two patient was treated for lumbar lesions, one pial AVM and one dural AV fistula. The fifth case was mid- thoracic dural AV fistula. Four patients were treated in the Hybrid room. Two patients were treated via right brachial access the others via left femoral access. All patients tolerated the procedure without technical or clinical complications. The angiographic guided and verified complete occlusion prior to completion of the surgery

Conclusions

Intraoperative angiography in the prone position is a valid option in the treatment of spinal and posterior fossa neurovascular lesions. Brachial or femoral accesses can be obtained safely. A hybrid operative room enables high quality imaging, reliable diagnosis to confirm complete resection. Multidisciplinary team approach is necessary in these complex procedures.