

Takayasu Arteritis: Case Report

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Citation

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Abstract

Background: Takayasu arteritis (TA) is a chronic, idiopathic, inflammatory disease that primarily affects large vessels such as the aorta and its main branches.

Case Report: We present here a 45-year old female patient scheduled for surgery because of uterine myomatosis who refused regional anesthesia. Magnetic resonance (MR) angiography revealed irregular contours in the right brachiocephalic artery and in the proximal left common carotid artery; total occlusion in bilateral subclavian arteries. Arterial blood pressure was monitored over popliteal artery during surgery for myoma uteri.

Conclusions: We believe that general anesthesia techniques can also be used with additional hemodynamic stabilization to prevent cerebral ischemia.

INTRODUCTION

Takayasu arteritis (TA) is a chronic, idiopathic, inflammatory disease that primarily affects large vessels such as the aorta and its main branches^(1,2). The main pathology is the fibrosis in major large arteries that results in occlusion.

Because of severe uncontrolled hypertension, organ failure due to hypertension, negative impact of stenosis of large vessels on regional circulation and the difficulty in screening of arterial blood pressure, care must be taken in anesthesiology practice.

We present here a hypertensive patient scheduled for total abdominal hysterectomy due to myoma uteri who refused regional anesthesia. Preoperative and postoperative management is discussed particularly.

CASE REPORT

The patient was a 45-year-old woman with typical pulseless upper body of TA who had documented severe stenosis of bilateral subclavian arteries. She also had myoma uteri and was scheduled for surgery. Her preoperative diagnostic work up revealed no hematological and biochemical abnormalities. We evaluated whole body arteries in our patient using MRI. Cervical magnetic resonance and carotid artery angiography revealed the following abnormalities:

contour irregularity proximal to the left common carotid artery at the level of orifice, small caliber of the proximal internal carotid artery; narrowing at the level of the right vertebral artery at the level of its orifice, total occlusion distally in the vertebral artery and bilateral collateral circulation. Thoraco-abdominal MR revealed contour abnormalities in the brachiocephalic artery and proximal left common carotid artery, total occlusion in bilateral subclavian arteries; 40% short segment narrowing at the level of the left renal artery orifice (Figure 1,2,3).

Because regional anesthesia had failed in the past she demanded general anaesthesia for total abdominal hysterectomy. Processed electroencephalography was used to assist in monitoring for signs of cerebral ischaemia and the surgery was uncomplicated.

Figure 1

Figure 1: Total occlusion in bilateral subclavian arteries; Irregular contours in the right brachiocephalic artery.



Figure 2

Figure 2: Irregularity in vertebral artery; occlusion and collateral circulation in bilateral subclavian arteries. Irregular margins in the proximal left CCA and small caliber in the proximal left internal carotid artery.

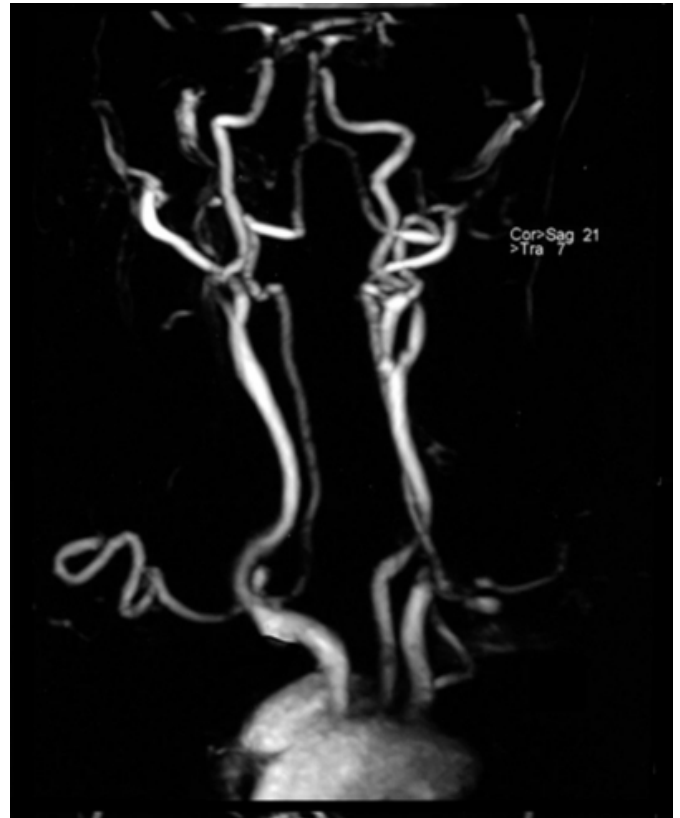


Figure 3

Figure 3: Narrow right and left renal arteries. A short segment 40% occlusion in the mid left renal artery; a short segment 40% occlusion at the level of the orifice of the right renal artery.



DISCUSSION

The clinical presentation of TA and the results of laboratory tests at the onset of the disease are typically nonspecific, which may lead to delayed diagnosis and most of the patients present with the late-phase disease. Magnetic resonance angiography (MRA) advantages include the lack of the need for ionizing radiation and iodinated contrast

material; therefore, MRA is ideal for serial evaluation of patients with TA who are undergoing treatment. We evaluated whole body arteries in our patient using MRI. We saw 40% short segment narrowing at the level of the left renal artery orifice. However her preoperative diagnostic work up revealed no hematological and biochemical abnormalities. An MRA can give good information about the thickening of the vessel wall, which may be the earliest manifestation of the disease. When compared to conventional angiography, MRA is a reliable alternative tool for the diagnosis, severity assessment, and follow-up of large vessel vasculitides such as TA, with the advantages of not using nephrotoxic contrast media or ionizing radiation⁽³⁾. The anesthesia management (general, regional or combined) of patients with Takayasu's arteritis requires a knowledge of the location and pathophysiology of vascular lesions. We evaluated whole body arteries using MRA.

We believe that general anesthesia techniques can also be used in these patients with preoperative MRA and peri-operative electroencephalographic monitoring.

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References

1. Kerr GS, Hallahan CW, Giordano J, Leavitt RY, Fauci AS, Rottem M and Hoffman GS. Takayasu Arteritis. *Ann Intern Med.* 1994; 120(11): 919-929
2. Achari V, Prakash S. Takayasu's disease presenting with pain chest, prolonged pyrexia and pleural effusion. *J Assoc Physicians India.* 2005 Aug; 53: 722-724.
3. Nastri MV, Baptista LPS, Baroni RH, Blasbalg R, de Ávila LF, Leite CC et al. Gadolinium-enhanced three-dimensional MR angiography of Takayasu arteritis. *Radiographics* 2004;24:773-786

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