PATIENT NAME: ASHBURN,TRENTON HALE
UNIT NO: AQ02533217

EXAMS:
004037673 ANG COM CAROTID CERV CEREB BIL

DIAGNOSTIC CEREBRAL ANGIOGRAM
DIAGNOSTIC CEREBRAL VENOGRAM
INTRACRANIAL VENOUS PRESSURE MEASUREMENTS

EXAM DATE AND TIME: 1/27/2023 11:44 MST

INDICATION: 44-year-old male with skull base headache and concern for venous outflow obstruction.

COMPARISON: Most recent CTA/CTV head and neck 2/24/2021

PHYSICIAN: Dr. Ian Kaminsky.

ASSISTANT: None

ANESTHESIA: Moderate Sedation was administered by a trained independent observer, under my direct supervision, who provided constant monitoring of the patient and was present with myself throughout the procedure. Sedation time: 90 minutes

CONTRAST: 170 cc of Isovue 250

FLUOROSCOPY METRICS: Air kerma: 291.3 mGy or Time: 20 minutes.

PROCEDURE: Informed consent was obtained from the patient. A timeout was performed to confirm the patient's identity and planned procedure. The procedure was performed using maximal sterile barrier technique including cap, mask, sterile gown, sterile glove, large sterile sheet, hand hygiene, and 2% chlorhexidine scrub for cutaneous antisepsis. The patient was placed supine on the angiography table. After sedation was induced, the right groin was prepped and draped in standard sterile fashion with ChloraPrep. A 21-gauge micropuncture needle was utilized to access the right femoral vein under ultrasound guidance. A representative ultrasound image was saved which demonstrated a patent artery. A 5-French sheath was placed over a wire and connected to a pressurized, regulated infusion of heparinized saline.

A 21-gauge micropuncture needle was utilized access right common femoral artery with ultrasound guidance. An image of the ultrasound guided access was saved in the medical record demonstrating vessel patency. A 5 French sheath was introduced in the right femoral artery.

Swedish Medical Center Imaging
Swedish Medical Center
501 E Hampden Ave
Englewood, CO 80113
PHONE #: (303)788-6080
FAX #: (303)788-4067

NAME: ASHBURN,TRENTON HALE
HP: (617)308-7993 AGE: 44 S:M
DOB: 04/29/1978 LOC: AQ.ACUVAS
PHYS: aSCHNI - Schraeder,Nicolle L
EXAM DATE: 01/27/2023 STATUS: REG SDC
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Selective catheterization of the vessels listed below was performed. Angiography of the vessels in the views listed below was performed.

A total of 3000 units of heparin was administered IV.

CATHETER(S) AND WIRE(S):
0.038 glidewire
Headway 27 microcatheter
Synchro 2 standard 0.014 microwire
5-French Berenstein catheter x2

VESSELS CATHETERIZED WITH SUBSEQUENT DIAGNOSTIC ANGIOGRAPHY/VENOGRAPHY:
Right vertebral artery
Right common carotid artery
Left common carotid artery
Left vertebral artery
Right internal jugular vein

Left internal jugular vein
Superior sagittal sinus
Right subclavian vein
Left subclavian vein

For the venous catheterization portions of this examination, Townes and oblique lateral views of the venous circulation performed through the arterial catheter.

DIAGNOSTIC ANGIOGRAM
Right femoral vein:
Antegrade filling of the iliac venous system is grossly unremarkable. The venous sheath is in adequate position.

Right femoral artery angiography:
The visualized iliofemoral vasculature is unremarkable in appearance. The arterial sheath is in adequate position.

Right vertebral artery:
The V1, V2, V3, and V4 segments of the right vertebral artery, including the right PICA, are unremarkable. The right posterior cerebral artery P1 segment is congenitally hypoplastic. The basilar

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artery and its branches are otherwise unremarkable, as well as the

capillary and venous phases of the posterior fossa.

Right common carotid artery:
The right common carotid artery and the right carotid bifurcation are unremarkable without stenosis by NASCET criteria. The visualized right external carotid artery branches are unremarkable without evidence for a vascular malformation/fistula. The right anterior cerebral artery A1 segment is mildly hypoplastic The distal right ICA, the ophthalmic artery, the right ACA and MCA are unremarkable. The capillary and venous phases of the right hemisphere are otherwise unremarkable.

Left common carotid artery:
The left common carotid artery and the left carotid bifurcation are unremarkable without stenosis by NASCET criteria. The visualized left external carotid artery branches are unremarkable without evidence for a vascular malformation/fistula. The distal left ICA, the ophthalmic artery, the left ACA and MCA are unremarkable. The capillary and venous phases of the left hemisphere are unremarkable.

Left vertebral artery:
The V1, V2, V3, and V4 segments of the left vertebral artery, including the left PICA, are unremarkable. The basilar artery and its branches are unremarkable, as well as the capillary and venous phases of the posterior fossa.

Superior sagittal sinus, bilateral internal jugular, and bilateral subclavian venography:
The superior sagittal sinus is normal in caliber. There is a prominent arachnoid granulation in the left transverse sinus. There is no focal intracranial venous stenosis. The jugular veins demonstrate a codominant appearance. There is mild narrowing of the proximal right internal jugular vein in the expected location of the styloid process and stylohyoid ligament. There is somewhat diminutive caliber to the right subclavian vein when compared to the left side with some stagnation of contrast when injecting the proximal right subclavian vein adjacent to the prior clavicular injury. There is no high-grade subclavian stenosis. The central venous system is widely patent.

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INTERVENTIONAL PROCEDURE:

Under direct fluoroscopic visualization, the guide catheter was advanced over the Glidewire into the right internal jugular vein to the level of the skull base.

Under roadmap guidance, a the microcatheter was advanced over a microwire across the right sigmoid and transverse sinuses, torcula, left transverse and sigmoid sinuses, and into the distal left internal jugular vein. The subclavian veins were then selected individually on both sides. Venous pressures were obtained as follows:

Pressures (mmHg)

Left internal jugular vein (distal) 11
Left internal jugular vein (mid) 11
Left internal jugular vein (proximal) 12

Right internal jugular vein (proximal) 14
Right internal jugular vein (mid) 11
Right internal jugular vein (distal) 11
SVC 11
Right atrium 10
Left sigmoid sinus 13
Left transverse sinus (distal) 13
Left transverse sinus (mid) 13
Left transverse sinus (proximal) 14
Torcula 14
Right transverse sinus (proximal) 14

Right transverse sinus (mid) 14
Right transverse sinus (distal) 14
Right sigmoid sinus 14
Left subclavian vein (proximal) 12
Left subclavian vein (mid) 12
Left subclavian vein (distal) 12
Left brachiocephalic vein 11
Right subclavian vein (proximal) 12
Right subclavian vein (mid) 13
Right subclavian vein (distal) 12
Right brachiocephalic vein 11

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A gradient of approximately 3 mmHg was obtained at the level of the proximal right internal jugular vein.

All catheters were removed from the patient.

Disposition:

After completion of the study, the femoral venous and arterial sheaths were removed and hemostasis was obtained with manual compression and 2 5 French mynx closure devices. The procedure was well tolerated and no early complications were observed.

IMPRESSION:

1. No arterial abnormalities identified.
2. Mild narrowing of the proximal right internal jugular vein with a 3 mmHg pressure gradient.
3. Diminutive caliber of the right subclavian vein without underlying pressure gradient.

** Electronically Signed by Ian Kaminsky MD on 01/27/2023 at 1309 **
Reported and signed by: Ian Kaminsky MD

CC: Nicolle L NP Schraeder

TECHNOLOGIST: Douglas South RTR ; Elaine Benavidez RTR; ...
TRANSCRIBED DATE/Time: 01/27/2023 1309 BY: DR.KAMIA
EXAM COMPLETE DATE/TIME: 01/27/2023 1144 D/TM:01/27/2023 (1312)

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