



**RARE CASE OF QUADRIPARESIS WITH RT HORNER'S SYNDROME DUE TO
CERVICAL SPINE DURAL ARTERIO-VEINUS FISTULA**

¹*Dr. Motwakil Imam Awadelkareim Imam and ²Dr. Sara Azhary

¹Consultant Physician Assistant Professor of Medicine Shendi University Sudan, Elmek nimer University Hospital.

²Consultant Physician.

*Corresponding Author: Dr. Motwakil Imam Awadelkareim Imam

Consultant Physician Assistant Professor of Medicine Shendi University Sudan, Elmek nimer University Hospital.

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ABSTRACT

cervical spine dural arterio-venous fistula account for approximately 70% of all vascular spinal malformations, 5–10/million/year in the general population, The disease seems to be under diagnosed, symptomatic in elderly men, 5 times more often than women, mean age at the time of diagnosis 55–60 years, Patients younger than 30 years of age less than 1% of patients, no patient younger than 20 years of age. We report a 19 years old Sudanese female, student, single presented to us with sudden onset of neck pain, was concomitant with onset of sudden right sided weakness with numbness, associated with urine retention firstly then she became incontinent of urine, with mild low grade fever, no convulsion or loss of consciousness and no faecal incontinence associated with quadriplegia with Rt Horner's syndrome, cervical MRIs revealed spinal epidural hematoma in posterior cervical spine C1–C7, and CT-spinal angiogram, revealed cervical spine dural arterio-venous fistula. This case revealed that cervical spine dural arterio-venous fistula caused quadriplegia with Rt Horner's syndrome

KEYWORDS: Cervical spine dural arterio-venous fistula, quadriplegia, and Horner's syndrome.

INTRODUCTION

Cervical spine dural arterio-venous fistula is a rare cause of quadriplegia with Horner's syndrome, with unknown Etiology cervical spine dural arterio-venous fistula account for approximately 70% of all vascular spinal malformations, 5–10/million/year in the general population, The disease seems to be under diagnosed, symptomatic in elderly men, 5 times more often than women, mean age at the time of diagnosis 55–60 years, Patients younger than 30 years of age less than 1% of patients, no patient younger than 20 years of age. We report a young Sudanese female present with quadriplegia and Rt Horner's syndrome, diagnosed as having cervical spine dural arterio-venous fistula depend on cervical MRIs and CT-spinal angiogram

CASE REPORT

A 19 yrs old Sudanese female, student, single presented to us with sudden onset of neck pain while she was lying in bed. The pain was sharp in nature involving the posterior part of her neck, occipital and upper back. It was aggravated by neck and chest movements, there were no relieving factors. There was concomitant onset of sudden right sided weakness with numbness, associated with urine retention firstly then she became incontinent of urine, with mild low grade fever, no

convulsion or loss of consciousness and no faecal incontinence. No symptom/s related to cranial nerve. This presentation was not preceded by head trauma. On Examination: not pale, not jaundiced or cyanoses, PR : 85b/m BP: 120/80 RR :20b/m, CNS examination Higher functions intact Rt sided mild ptosis and miosis, anhidrosis {affect the face only}, no enophthalmos, Neck examination there was tenderness in upper part of neck and no neck stiffness. Cranial nerves examinations were normal including fundus examination.

Upper & Lower limbs

	Rt UL	Rt LL	Lt UL	Lt LL
Inspection	arm flexed at elbow	normal	normal	normal
Tone	hypotonia	Hypotonia	normal	normal
Reflexes	Hypo-reflexes	Hypo-reflexes	normal	normal
Power	1	3	3	4
Sensation	Hyposthesia in C5,C6	normal	normal	normal
planter	=	↓	=	↓

CVS, Chest, Abdomen examinations were normal.

Investigation: Urine analysis: Normal, CBC Normal, Bleeding profile: Normal, LFT: Normal, B. Urea S. Creatinine, CXR, ECG normal, Echocardiography,

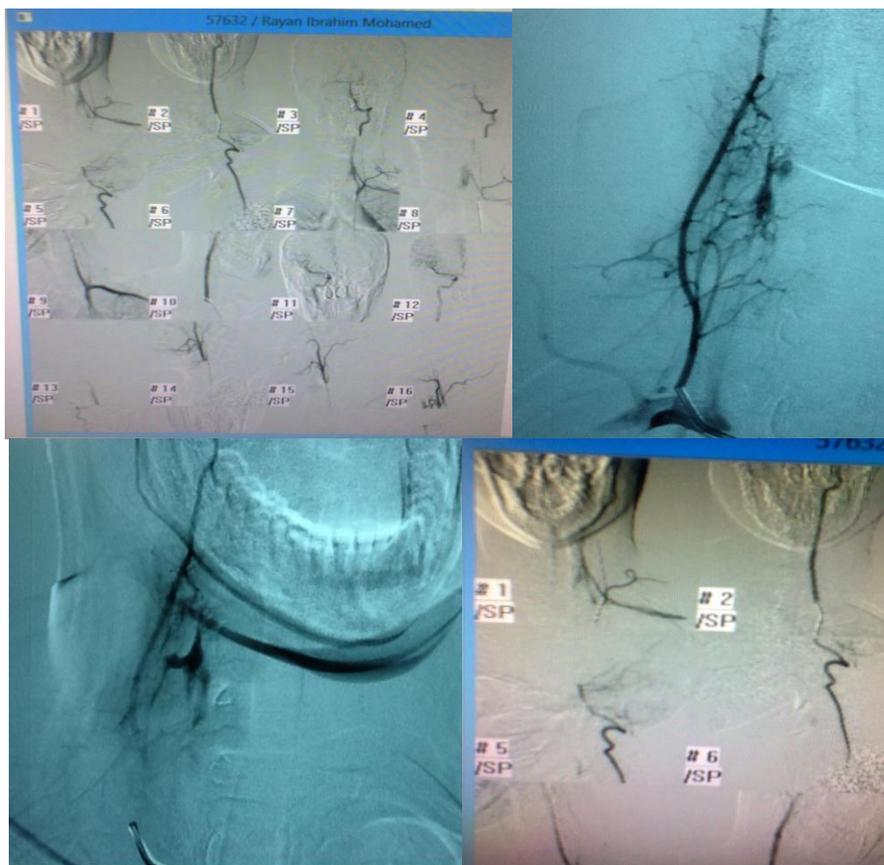
normal Abdominal Ultrasound normal, Carotid Doppler Ultrasound normal, Cervical MRIs Revealed : spinal epidural hematoma in posterior cervical spine C1-C7, figure.^[1]



Figure.^[1]



CT-spinal angiogram: Revealed: cervical spine dural arterio-venous fistula figure.^[2]

Figure.^[2]

DISCUSSION

The spinal cord is supplied by descending branches of the vertebral arteries _ segmental arteries_ radicular arteries _one anterior spinal artery and two posterior spinal arteries. The Venous drainage have a distribution similar to that of the arteries ,the spinal veins have no valves, and blood passes directly into the systemic venous system. Classification for spinal vascular lesions consisting of 3 categories: Neoplasm, Aneurysms, and Arteriovenous lesions, which includes SDAVFs. Etiology is not known; feeding radiculomeningeal artery enters the dura mater of the spinal cord at the dural root sleeve and forms a fistula with a radicular vein. The resistance to venous outflow results in chronic venous hypertension/stagnation leading to chronic medullary ischemia. Spinal cord biopsy: extensive vascular sclerosis and gliosis of the white matter, degenerating axons. The aim of treatment in cervical spine dural arterio-venous fistula is to occlude the shunting zone. 2 options: surgical occlusion of the intradural vein that received the blood from the shunt zone or endovascular therapy using a liquid embolic agent after super selective catheterization. The Prognosis dependent on the duration of symptoms before treatment, and the pretreatment disability, two thirds of all patients have a regression of their motor symptoms, one third show an improvement of their sensory disturbances, Impotence and sphincter disturbances are seldom reversible, pain may persist, a deterioration of symptoms after initial improvement

should raise the awareness of re canalization of the shunt or a secondary shunt.

Differential Diagnosis: Trauma, like C. spinal haematoma. Vascular causes, AV malformation, aneurysms, and spinal infarction. Inflammatory: C. Transverse myelitis, spinal epidural abscess. Primary or secondary spinal cord neoplasm. Inherited and degenerative myelopathies, and nutritional/toxic causes.

CONCLUSION

This case reveal that cervical spine dural arterio-venous fistula it can cause quadriplegia with Horner's syndrome and it diagnosed with MRI imaging and CT-spinal angiogram is best use for both definitive diagnosis and therapeutic purpose. This case illustrate that cervical spine dural arterio-venous fistula is one of causes of quadriplegia and Horner's syndrome.

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