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Disclosing the Rare Cause of Paraplegia -A Case Report

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ABSTRACT

Paraplegia refers to the impairment or loss of motor, sensory and /or autonomic function in the thoracic, lumbar or sacral segments of spinal cord. Upper limb function is spared but the trunk , legs and pelvic organs may be involved. Paraplegia could be due uppermotor neuron lesions,or spinal causes or lower motorlesions. It may be due to any trauma or infectious cause,or immunoallergic or inflammatory or demyelinating disorder or toxic myelopathy, or vascular causes or metabolic/nutritional causes or tropical or due to any paraneoplastic syndromes or any drugs/physical agents.Paraplegia could be spastic or flaccid. Paraplegia is an emergency and needs immediate intervention.Proper evaluation of the cause of paraplegia is the key step in management and helps in reducing morbidity and even mortality.

I. CASE REPORT

A 23 year old male presented to our ER with complaints of weakness of bilateral lower limbs along with incontinence of bladder and bowel since a 4 days of presentation. The weakness initially started in right lower limb which progressed to left. No involvement of trunk muscles. He initially had imbalance while walking with frequent h/o falls which progressed to present weakness where patient is unable to walk and now presently unable to stand and sit. Patient also c/o stiffness of bilateral lowerlimbs. Patient has occasional involuntary movements.. asymmetrical and sudden in onset. Patient is able to perform all activities with uperlimbs and able to roll over bed. No h/o loss of sensations over lower limbs or upperlimbs and trunk.

Later he developed incontinence of bladder and bowel . he was able to feel the fullness of bladder but unable to hold(urgency) .no h/o hesitancy/interrupted stream of urine/incomplete bladder emptying/dribbling of urine.

He gives no history of trauma or any prior fever or any vaccination. He gives a 2 months history of pain abdomen, loss of appetite and significant weight loss. He also gives a history of appendicectomy 2 months ago. But patient had no relief following surgery. He then underwent a CECT abdomen outside which was supposedly showing some mass in the abdomen but no records were available.

On general examination the patient was conscious with vitals were in the normal range PR 80/min, BP 120/80 mm of Hg , 16 RR, bilateral air entry present with heart sounds S1S2 heard on auscultation.

CNS examination revealed increased tone in lower limbs with 1/5 power in lower limbs, with upgoing plantars with exaggerated deep tendon reflexes in lowerlimbs.. Power in both the upperlimbs was normal. Higher mental function was normal with no cranial nerve deficits, no cerebellar disturbances, with no signs of meningeal irritation and no deformities in skull and spine.

On abdominal examination , a large, solid, non tender mass was palpable involving the right hemiabdomen and the bladder appeared distended.

Bladder was catheterized and routine investigations sent and an ultrasound abdomen was done. All laboratory investigations turned normal and insignificant. USG abdomen revealed a large mass in the right side of abdomen which was displacing the right kidney anteriorly. This was found suspicious and an MRI abdomen was planned.

An MRI abdomen showed a well –defined round to oval lesion in the paraspinal region on

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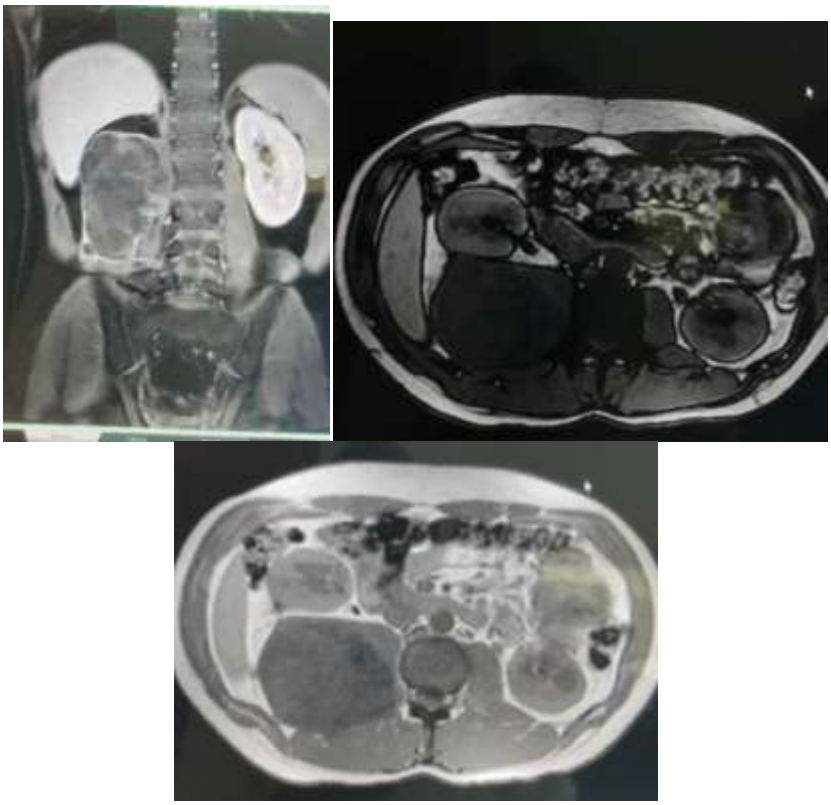
right side, extending from level L1 to L3. The iliacus muscle on the right side appears bulky with loss of fat planes with the lesion, likely arising from the iliacus and posterior abdominal wall muscles. The mass is displacing the right kidney anteriorly and with effaced fat planes with the posterior wall of kidney. It is displacing the right psoas muscle anteriorly with maintained fat planes with the muscle. The mass appears heterogeneously hypointense with areas of hyperintensity on T2W1 and heterogeneously hypo to isointense on T1W1. There are areas of peripheral diffusion restriction on DW1 with corresponding low ADC values with no significant blooming on GRE. It measures 10.8*5.8*8.3cm with surrounding fat stranding. There is no retroperitoneal lymphadenopathy. No signs of bowel obstruction or abnormal dilatation. Both kidneys are normal. Pancreas is normal.



A biopsy specimen of the large well defined retroperitoneal mass was sent for histopathological examination which revealed small round blue cell tumour. Thus a PET CT was planned which showed a large hypermetabolic lesion in the retroperitoneum extending from L1 to L3.. No lymphnodes were found to be hypermetabolic.

The grave prognosis was explained to the patient attendants and planned for palliative radiotherapy at our cancer institute in Warangal.

Patient received an external beam radiation therapy (EBRT) to a total dose of 30Gy/10#/ 2wks.

Patient later lost follow up .

II. DISCUSSION

Paraplegia refers to the impairment or loss of motor, sensory and /or autonomic function in the thoracic, lumbar or sacral segments of spinal cord. Upper limb function is spared but the trunk , legs and pelvic organs may be involved. Paraplegia could be due uppermotor neuron lesions,or spinal causes or lower motorlesions. It may be due to any trauma or infectious cause,or immunoallergic or inflammatory or demyelinating disorder or toxic myelopathy, or vascular causes or metabolic/nutritional causes or tropical or due to any paraneoplastic syndromes or any drugs/physical agents..Paraplegia here could be due compression externally or started to extend into the epidural space from a paravertebral origin. The initial manifestation could be inability to walk to complete paraplegia within hours or days.

Paraspinal tumours can occur from any structures around the spine, between the parietal fascia ventrally and the paraspinal muscle aponeurosis dorsally. Paraspinal tumors can invade

the epidural / intercostals spaces, mediastinum, pleura and retroperitoneum. It originates either from spine or paraspinal soft tissues. Parasinal soft tissue tumors can invade adjacent vertebra or rib.MRI is needed to assess the anatomical location of paraspinal lesions . Image -guided biopsy is required to determine the histological nature of the mass.

Small round blue cell tumours(SRBCTs) are a group of malignant tumors which appear small, round cells which stain blue under a microscope. They are found in various locations, including paranasal sinuses, lungs, lungs, and abdomen. They include a wide range of tumors including Neuroblastoma, Wilms tumour(nephroblastoma), Rhabdomyosarcoma, Non hodgkins lymphoma, Ewings tumors, medulloblastoma, retinoblastoma, small cell carcinoma,desmopastic small round cell tumour. They are difficult to diagnose due to lack of distinguishing features. The tumour in our case has rhabdoid morphology. There is no standard protocol for this aggressive disease. It depends on the of the behavioural pattern of the tumour. Inspite of their aggressive behavior the median survival ranges from 1-2 yrs and the 5- year survival rates range around 15%.

Our patient here presented with paraplegia due to this paraspinal round blue cell tumour arising likely from right iliacus muscle and causing compression over the lumbar segments of spinal cord. The tumor was not resectable and palliative radiotherapy was given. The patient later lost follow up.

III. CONCLUSION

We report a case of a 23 year male who developed insidious onset of weakness of bilateral lowerlimbs with bladder and bowel incontinence and evaluated to find a space occupying malignant lesion in the paraspinal region . It was found to be a small round cell blue tumour with grave prognosis. Due to its aggressive nature and very low median survival rate, it needs to be evaluated early only to reduce the morbidity.

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