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MAN IN BARREL SYNDROME LIKE SYMPTOMS DUE TO HYPOPLASTIC ARTERIES.

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ABSTRACT Man in Barrel Syndrome (MIBS), also known as Brachial Amyotrophic Diplegia, is a rare neurological disorder characterized by bilateral and symmetrical weakness and wasting of the upper extremities, resembling the appearance of a man trapped in a barrel. This article provides an in-depth review of the clinical features, diagnostic evaluation, etiology, and management of MIBS,along with a case scenario of similar symptoms. The aim is to increase awareness among healthcare professionals and facilitate early recognition and appropriate management of this unique syndrome.

KEYWORDS :

INTRODUCTION

Man in Barrel Syndrome is a rare neurological condition that presents a diagnostic challenge due to its distinct clinical features. This article aims to provide an overview of MIBS, including its clinical presentation, pathophysiology, diagnostic evaluation, and management options, to enhance understanding and improve patient care.(1)

Case 1

We present the case of a 52-year-old male, Mr. X, who presented with a progressive weakness of both upper limbs over the course of six months. He reported difficulties with overhead activities, such as reaching for objects on shelves or lifting heavy items. His lower limbs were spared, and he did not experience any sensory disturbances. Physical examination revealed symmetrical weakness in the shoulder girdle, upper arms, and forearms, giving a characteristic "man in barrel" appearance. There were no signs of lower limb weakness or other neurological deficits.

Case 2

A 50 year old female patient, a known diabetic and hypertensive ,Mrs.P presented with a complaint of sudden onset bilateral upper and lower limb weakness with sparing of her hands and feet.

EXAMINATION

Primary survey showed no abnormalities.
Physical examination revealed weakness at the hips,thighs and legs of the lower limb and shoulder,arm and forearm of the upper limbs.

She had difficulty in over head movements and difficulty in standing, similar to a man trapped in a barrel.

Neurological examination revealed loss of power in the proximal muscles of the upper and lower limb with no other neurological deficit.

	ARM		FOREARM		HAND		THIGH		LEG		FOOT	
	R	L	R	L	R	L	R	L	R	L	R	L
TONE	N	N	N	N	N	N	N	N	N	N	N	N
POWER	2	2	3	3	5	5	3	3	3	3	5	5
SENSATION	+	+	+	+	+	+	+	+	+	+	+	+

Plantars of both feet moved downwards.
(N indicates normal)

For investigating the cause, an MR ANGIO was done, which revelead hypoplasticity of the right vertebral artery.

Clinical Presentation

MIBS typically manifests as symmetric weakness and atrophy of the shoulder girdle, upper arms, and forearms, while sparing the lower limbs. Patients often report difficulties with activities requiring overhead movements and fine motor skills. The selective pattern of muscle involvement creates a characteristic appearance resembling a man trapped in a barrel, as seen in case1. Similar symptoms can be noted in patients with arterial hypoplasticity ,as seen in case2.

Etiology and Pathophysiology

The underlying etiology of MIBS remains unclear, and it is often considered an idiopathic condition. However, several factors have been associated with its development, including genetic predisposition, autoimmune disorders, viral infections, and paraneoplastic processes.(4) Some cases have been linked to focal cervical spinal cord lesions or peripheral neuropathy. Further research is needed to elucidate the precise mechanisms involved.

Diagnostic Evaluation

Diagnosing MIBS requires a comprehensive approach involving a detailed medical history, physical examination, and ancillary investigations. Electromyography (EMG) and nerve conduction studies play a crucial role in confirming the diagnosis, showing characteristic chronic denervation changes in the affected muscles. Imaging studies, such as magnetic resonance imaging (MRI) of the cervical spine, are important to rule out structural abnormalities or compressive lesions.(6)

Differential Diagnosis

It is essential to differentiate MIBS from other neuromuscular disorders presenting with upper limb weakness, such as amyotrophic lateral sclerosis (ALS), multifocal motor neuropathy (MMN), or hereditary motor and sensory neuropathies. The distinct clinical pattern, absence of upper motor neuron signs, and characteristic EMG findings help differentiate MIBS from these conditions.

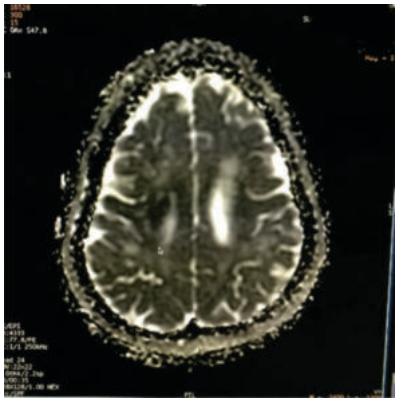
Management

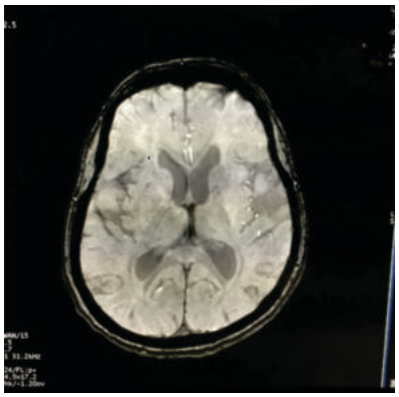
Currently, there is no specific cure for MIBS, and management primarily focuses on symptomatic relief and rehabilitation. Physical and occupational therapy play a crucial role in improving muscle strength, range of motion, and functional abilities. Assistive devices and adaptive strategies may be recommended to enhance independence and quality of life. Symptomatic medications, such as those targeting pain or spasticity, may be considered on an individual basis.

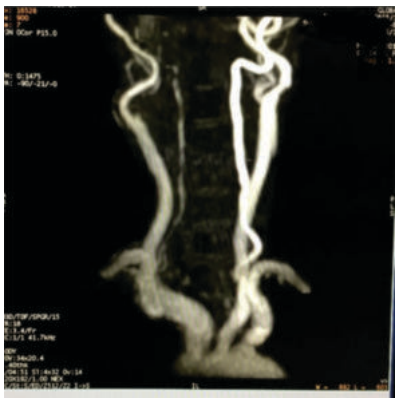
Prognosis and Future Directions: The long-term prognosis of MIBS varies among individuals, with some experiencing a gradual progression of weakness and disability, while others may remain stable. Further research is warranted to uncover the underlying pathophysiology and develop targeted therapies for MIBS.

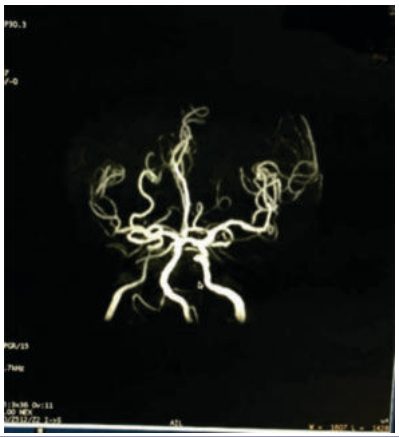
CONCLUSION

Man in Barrel Syndrome is a rare neurological disorder characterized by selective weakness and wasting of the upper extremities, presenting with a distinct clinical appearance. Early recognition and appropriate management are crucial for optimizing patient care and improving functional outcomes. This article highlights the clinical features, diagnostic evaluation, and management options for MIBS, aiming to increase awareness among healthcare professionals and promote further research to advance our understanding of this intriguing syndrome.









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