E-Poster

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Foodborne Botulism and Lance-Adams Syndrome: A Case Report on Long-Term Rehabilitation

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

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BACKGROUND

Foodborne botulism is a rare neuroparalytic condition caused by Clostridium botulinum toxin, leading to flaccid paralysis, and potentially fatal respiratory failure. Cerebral hypoxia after cardiac arrest results from oxygen deprivation, causing severe neurological impairments. Lance-Adams Syndrome (LAS) is a rare post-hypoxic myoclonus encephalopathy, characterized by action-induced myoclonus, ataxia, and cognitive deficits.

CASE DESCRIPTION

A 40-year-old woman with no significant medical history, Portuguese emigrant living in Paris, developed acute vertigo, hypoacusis, dysarthria, ataxia, and vomiting. Within hours, she progressed to descending flaccid tetraplegia with dysautonomia, culminating in cardiac arrest. Botulinum toxin A was detected in stool and plasma, confirming foodborne botulism. After recovering from prolonged impaired consciousness, she developed severe, generalized, incapacitating appendicular and axial myoclonus, diagnosed as LAS. After three months in the ICU, she entered a rehabilitation program in a Rehabilitation Centre, facing multiple complications: diaphragmatic dysfunction with tracheostomy (recovering spontaneous breathing), dysphagia with gastrostomy (already removed), recurrent hip and shoulder osteomas, and fracture osteoporosis (three vertebral and one ankle fracture). Despite severe impairments, she gained some independence, using an electric wheelchair, transferring herself, and gait training on parallel walking bars.

Two years later, she presents with dysexecutive cognitive dysfunction and persistent generalized myoclonus. Though less frequent and intense, myoclonus remains disabling, limiting rehabilitation. She is partially dependent, using a manual wheelchair with assistance, requiring supervised transfers and hygiene support. She has been referred to Rehabilitation Centre for further rehabilitation and assistive device optimization.

DISCUSSION

This rare and severe case of foodborne botulism led to flaccid paralysis, respiratory failure, and autonomic dysfunction, progressing to cardiac arrest. It highlights critical care complications and cerebral hypoxia-related impairments, including cognitive deficits and myoclonus. LAS significantly impacted the patient's recovery, being highly disabling and limiting rehabilitation. Consequently, it underscores the need to early recognition, antiepileptic drugs, rehabilitation, and long-term neurological follow-up. Despite prolonged ICU stay and multiple complications, multidisciplinary rehabilitation contributed to partial functional recovery, emphasizing the need for long-term rehabilitation programs, assistive devices, and adaptive strategies. This case reinforces the importance of early diagnosis, food safety education, and prompt botulism treatment in reducing botulism-related morbidity.

CONCLUSION

This case highlights the significant functional impairment caused by a rare complication of foodborne botulism, resulting in LAS due to cerebral hypoxia. It also underscores the importance of multidisciplinary long-term rehabilitation programs to optimizing motor, cognitive, and functional recovery, promoting independence, and long-term prognosis.

Statement of Disclosures

None

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