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LETTERS TO THE EDITOR

Collet-Sicard syndrome secondary to viral infection with influenza A (H1N1)☆

Síndrome de Collet-Sicard secundario a infección por virus de la influenza A (H1N1)

Dear Editor:

Influenza A (H1N1) virus is a winter seasonal virus that usually causes respiratory symptoms and rarely neurological symptoms in Western countries.[1] We present the case of a 29-year-old patient with Smith-Lemli-Opitz syndrome who developed Collet-Sicard syndrome (CSS) secondary to influenza A (H1N1) virus infection.

The patient visited the emergency department due to a one-month history of influenza with dyspnoea; examination revealed double pneumonia with severe respiratory insufficiency. The patient was admitted to the intensive care unit and underwent intubation and tracheostomy. Once oral intake was established, the patient presented mixed dysphagia, with food passing through the tracheostomy cannula. Once stabilised, he was transferred to a ward bed.

During the neurological examination, the patient was conscious and oriented, presented dysphagia for solid foods and liquids, paresis of the right side of the tongue without fasciculations, right-sided drooping of the soft palate, decreased gag reflex, deep voice (through the tracheostomy cannula), inability to lift the right shoulder, and difficulty lifting the left shoulder, and weakness of both sternocleidomastoid muscles. The rest of the neurological examination detected no abnormalities. Blood and autoimmunity test results were also normal. Expression of C reactive protein by alveolar macrophages was positive for influenza A (H1N1) virus. Cerebrospinal fluid (CSF) and plasma serology tests for human immunodeficiency virus, herpes simplex virus (type 1 and 2), varicella-zoster virus, Epstein-Barr virus, enterovirus, syphilis, *Brucella*, and *Borrelia* showed negative results. Biochemical analysis, cytology, and CSF cultures yielded normal results. CSF was negative for antiganglioside antibodies. Brain MRI scan and skull base CT scan yielded normal results. Gastroscopy showed normal results. Barium oesophagogram revealed passage of contrast to the respiratory tract. Fibreoptic nasendoscopy revealed vocal cord paresis in abduction and vocal fold paralysis. We therefore established a diagnosis of CSS secondary to influenza A (H1N1) virus infection.

The patient started treatment with oseltamivir at 140 mg/day and methylprednisolone at a dose of 1 mg/kg/day for 5 days, which was subsequently decreased. At 5 months, we observed a slight recovery of swallowing function and decreased deviation of the right side of the tongue; muscular tone of the trapezius and sternocleidomastoid muscles improved.

Influenza A is an acute infectious disease of the respiratory tracts. It is an important public healthcare issue due to its high incidence and morbidity rate. It is associated with neurological complications, especially in the paediatric population, although predisposing factors are still unknown.[1] Neurological complications are more prevalent in patients with influenza A virus infection than in those with common influenza. Neurological involvement due to influenza A (H1N1) virus is extremely rare in our setting, although it may be very severe, even causing death.[2] The main neurological complications include myelitis, encephalitis lethargica, acute necrotising encephalitis, motor axonal neuropathy, postencephalitic parkinsonism, myositis, myalgia, aphasia, ataxia, Guillain-Barré syndrome, Reye syndrome, and vestibular neuritis.[2—7]

We found no published reports of multiple lower cranial nerve palsy (CSS) secondary to influenza A (H1N1) virus infection.

CSS is a rare syndrome consisting in the paralysis of 4 cranial nerves (the ninth, tenth, eleventh, and twelfth nerves). This results in paralysis of the vocal cords, soft palate, and trapezius and sternocleidomastoid muscles, loss of taste in the posterior third of the tongue, and anaesthesia of the larynx, pharynx, and soft palate. The main causes are tumours, trauma, vascular lesions, vasculitis, infections, and iatrogenesis. All may affect the jugular foramen and hypoglossal canal.[8,9] In this case, the most striking finding is that the syndrome was secondary to an influenza A virus infection.

Furthermore, CSS co-presented with Smith-Lemli-Opitz syndrome, a very infrequent disease which may have played a fundamental role in symptom onset. This syndrome is an autosomal recessive condition caused by deficient 7-dehydrocholesterol reductase activity, leading to a reduced plasma cholesterol level with accumulation of 7-dehydrocholesterol and 8-

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dehydrocholesterol resulting in a cytotoxic effect that leads to anomalies, intellectual disability, and neurological alterations.[10,11]

In conclusion, we underscore the importance of clinical suspicion of influenza A (H1N1) virus as the aetiology of neurological symptoms coexisting with influenza-like or respiratory infection symptoms, once other diagnostic possibilities have been ruled out. In our case, we assume that the progression of influenza A, affecting multiple lower cranial nerves, may have been promoted by the Smith-Lemli-Opitz syndrome due to its interference in myelin metabolism. This may have increased susceptibility to neurological damage and inhibited myelin repair.

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Mutation of the *MMADHC* gene in adult-onset cobalamin D deficiency: a report of 2 potentially treatable cases☆

Mutación del gen *MMADHC* de la cobalamina D con comienzo en el adulto: a propósito de 2 casos potencialmente tratables

Dear Editor:

Methylmalonic acidaemia with homocystinuria is an infrequent inborn error of vitamin B_{12} (cobalamin) metabolism. It is caused by defects in the synthesis of the coenzymes adenosylcobalamin (AdoCbl) and methylcobalamin (MeCbl), leading to decreased activity of the corresponding enzymes methylmalonyl-CoA mutase (MUT;609058) and 5-methyltetrahydrofolate-homocysteine methyltransferase, also known as methionine synthase (MTR;156570). Four complementation classes of cobalamin defects (cblC, cblD, cblF, and cblJ, caused by mutations in the corresponding genes) are responsible for methylmalonic acidaemia with homocystinuria. Methylmalonic acidaemia with homocystinuria type cblD is caused by mutations in the *MMADHC* gene (2q23.2), following an autosomal recessive inheritance pattern. We present 2 cases.

Patient 1 is an 18-year-old woman of Roma origin. The patient had no relevant medical history and did not follow a specific diet, and was admitted due to fever of 38.5 °c, sudden-onset confusional symptoms, disorientation in time and space, incoherent but non-dysarthric speech, and psychomotor delay. She displayed a good level of consciousness; she was alert, disoriented, anxious, and irritable but not aggressive. The patient presented no headache or meningeal signs. A blood test, biochemical test, total protein test, immunoglobulins, autoimmunity study, serological test, and tests for thyroid hormone levels, ferritin, vitamin B_{12}, and folic acid all yielded normal results. Results of a head CT scan and lumbar puncture were normal (negative microbiological study).

The internal medicine department prescribed empirical treatment with aciclovir, which achieved favourable

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