ACTA SCIENTIFIC NEUROLOGY (ISSN: 2582-1121)

Volume 7 Issue 7 July 2024

Case Report

Demyelinating Polyneuropathy Associated with the Immediate Postpartum Period Case Presentation and Literature Review

Gramajo Santizo Jorge Otoniel[1]* and Gramajo Juárez Alejandra[2]

[1]Professors of Department of Neurosciences and Neurology, San Juan de Dios General Hospital, Guatemala

[2]Neuro immunology unit of the San Juan de Dios General Hospital, Guatemala

***Corresponding Author:** Gramajo Santizo Jorge Otoniel, Professors of Department of Neurosciences and Neurology, San Juan de Dios General Hospital, Guatemala. gramajoneurologia@gmail.com

DOI: 10.31080/ASNE.2024.07.0751

Received: February 29, 2024

Published: June 12, 2024

Abstract

Pregnancy entails physiological changes and these predispose to neurological pathologies, some of them very specific, changes in the neuroimmune system can predispose the pregnant patient to autoimmune pathologies. Guillain-Barré in pregnancy must be clinically differentiated from other pathologies for early diagnosis and early treatment, especially in the postpartum period or immediate cesarean section.

The aim of this article is to describe the clinical appearance of a patient with Guillain-Barré after cesarean section, whose manifestations occurred immediately after an anesthetic blockade, whose symptoms stabilized with the use of immunoglobulins. Avoiding all medico-legal repercussions.

Keywords: Guillain-Barré; Immediate Postpartum Cesarean Section; Immunoglobulins

Introduction

The diagnosis of Guillain-Barré during pregnancy is difficult, due to the fact that those who care for patients may not have the necessary expertise for an early diagnosis, during pregnancy the physiological changes of this can give multiple symptoms and be associated with a delay in diagnosis. Descriptions of cases of Guillain-Barre associated with pregnancy exist in the literature, generally during the gestation process, with progressive symptoms from days to weeks, these sensory and motor, some patients with descending symptoms and others ascending [1,2].

Even more difficult can be the diagnosis of Guillain-Barre Syndrome after immediate delivery or post-cesarean section, especially post-cesarean section.

Cesarean section involves an invasive procedure, an anesthesiologist, the respective surgeons and their assistants, the misfortune for obstetricians to have a pathology of this type, leads to medico-legal situations, a timely diagnosis in the context of medico-legal conditions is very helpful.

We present the case of an immediate post-cesarean section patient with an acute motor neurological deficit, with medium-legal consequences.

Materials and Methods

Given the history of acute inflammatory demyelinating polyneuropathy PIDA, it can occur in pregnant women. A case is presented, typical of our institution, the diagnostic suspicion, management and complementary studies. Then, using Pub Med, we proceed to investigate all the articles related to pregnancy and

Guillain-Barré, finding close to 65 case reports, analyzing those that are important for the case presented and making a description in relation to the case.

Case Reports

A 23-year-old GG underwent a cesarean section due to full-term pregnancy and cephalopelvic disproportion in March 2021, resulting in a healthy child at another hospital. After the anesthetic blockade, the weakness did not recover and sensory loss was associated. On neurological examination, the patient was conscious, with a 15-point Glasgow, no respiratory deficit, with bilateral ophthalmoplegia manifested by involvement of the III, IV, VI, fascicular facial paresis, sensory loss of branches of the facial V, bilateral deafness, paraplegia and arflexia in the lower limbs. Loss of painful sensation in the lower limbs, relaxation of urinary and anal sphincters.

The weakness progressed in the first week, when she was evaluated by a member of the neurology department, who recommended immunoglobulins at 400 mg/kilo day for 5 days. The weakness that had affected the muscles of the upper limbs to the anti-gravitational force, not progress, had dysphagia not progress, the disease stabilized. At first, the family filed a complaint against the medical-obstetrician group, but the disease stabilized and improved over the months. This was eventually dismissed.

Complementary magnetic resonance imaging studies of the brain and dorsal cord with and without gadolinium show no abnormalities. Cerebrospinal fluid analysis shows evidence of albumino-cytological dissociation, neuroconduction study with findings compatible with acute demiliinizing motor neuropathy. Somatosensory evoked potentials with absence of PESS at the medullary level, with right hemispheric cortical response, with decreased amplitudes, suggesting acquired demyelinating lesion. Auditory evoked potentials with bilateral sensorineural hearing loss.

Discussion

Guillain-Barré has an incidence of 0.75 to 2 per 100,000 in both the general population and pregnancy [3]. It is associated with vaccination, viral infections, bacterial infections, there are several reports during pregnancy and postpartum after COVID-19 infection. In 2021, Jao Jarro Garcia reports a 22-year-old patient who was tested for COVID-19 and GBS, giving her treatment with immunoglobulins. Our case is much more serious, with multiple cranial neuropathy, paretic-predominant quadriparesis in the lower limbs, our patient denied having had infection days or weeks before, but as part of the pandemic protocol in 2021, every patient who was admitted to a surgical procedure was subjected to a PCR-COVID-19 swab which was negative at that time, weeks before it is not known [4]. When acute inflammatory demyelinating polyradiculoneuropathy (PIDA) occurs in pregnancy, it occurs in tbut de same thing also seems to happen in chronic inflammatory demylinating polyneuropathy (PIDC). According to McCombe., *et al.* in 1987, the follow-up of a group of patients with IPDC included 16 women of childbearing age, 9 of whom became pregnant and had a relapse of IPDC in the third trimester and immediately in the postpartum period [5]. What should be taken into consideration with this patient, the possibility of a relapse in the future, and consider a PIDC. Another important aspect in the review is the existence of a relationship in the study by Gu., *et al.* among previous diarrhea (1), which may be very indicative of the axonal variant of polyneuropathy, AMAN [8]. Our patient has no history of diarrhea, and the studies 2 to 3 weeks later are indicative of a demyelinating pathology.

The literature shows reports of GBS associated with pregnancy at any time during pregnancy, and postpartum at the following 2 to 3 weeks [5]. Our case was immediate, after the surgical procedure, the cesarean section. The latter produced clinical confusion, which pathology we are dealing with. Although there is a description of GBS and myelitis, it is only one case in the literature, so at the time it could be justified to have studies such as in our case of spinal cord magnetic resonance imaging, with and without contrast [9].

Conclusions

The early diagnosis of GBS during pregnancy and childbirth helps the obstetrics group so that the family or the patient does not have emotional interference with them, avoiding a false ideology about their medical condition, a timely treatment also stabilizes the disease, preventing its progression. In the majority of patients with GBS during pregnancy, immunoglobulins is one of the indicated treatments, mortality does not exceed 3%, and only 10% have residual disability [6,7].

In our case, the use of immunoglobulins early, before confirmation with functional and CSF studies, stopped the

progression of the disease, evidencing an improvement in disability in the following months. That probably limited the family's lawsuit.

Our case was presented immediately after the cesarean section, this could have led to medical confusion or thought of a neuroimmune overlap syndrome.

Conflict of Interest

The authors have no conflict of interest.

Bibliography

1. Pacheco LD., *et al*. "Guillain-Barré syndrome in pregnancy". *Obstetrics and Gynecology* 128 (2016): 1105-1110.
2. Gonzalez-Obando JD., *et al*. "Guillain-Barré syndrome in pregnancy". *Revue Neurologique* 72 (2021): 63-65.
3. Rapper AH. "The Gillen-Baer síndrome". *Journal of Medicinal* 326.17 (1992): 1130-1136.
4. Garcia JJ., *et al*. "Intravenous immunoglobulin in COVID-19 associated Guillain-Barre Syndrome in pregnancy". *BMJ Case Reports* 14.5 (2021): e242365.
5. McCombe PA., *et al*. "Chronic inflammatory demyelinating polyradiculopathy associated with pregnancy". *Annals of Neurology* 21.1 (1987): 102-104.
6. Victor M and Ropper A. "Chapter 46 "Diseases of the Peripheral Nerves". In: Wonsiewicz MJ, Medina MP, Navrozov M, editors. Principles of Neurology, 7th edition, New York: McGraw-Hill (2001): 1380-1388.
7. Nelson LH and Mclean WT. "Managemente of LLandry-Guillain-Barré syndrome in pregnancy". *Obstetrics and Gynecology* (1985): 65-125S.
8. Gu YW., *et al*. "Risk factors for endogenous endophthalmitis secondary to Klebsiella pneumoniae liver abscess". *Zhonghua Yi Xue Za Chi* 99.18 (2019): 1401-1405.
9. Stoian A., *et al*. "Guillain-Barré and Acute Transverse Myelitis Overlap Syndrome Following Obstetric Surgery". *Indian Journal of Critical Care Medicine* 6.1 (2020): 74-79.