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AN UNUSUAL CASE OF MYASTHENIA GRAVIS IN PREGNANCY-A CASE REPORT

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ABSTRACT Myasthenia Gravis (MG) is a neuromuscular disorder of insufficient neuromuscular transmission leading to progressive paresis. MG commonly affects women twice as often as men (1). The effects of pregnancy on the severity of MG are variable. We report an 26year old G3P1L1A1 at 38 weeks with Myasthenia Gravis in pregnancy ,its management and its outcome.

CONCLUSION: The key to successful outcome during pregnancy in women with Myasthenia Gravis need a multidisciplinary care.

KEYWORDS : Pregnancy, Pyridostigmine , Acetylcholine antibodies.

1.INTRODUCTION:

Myasthenia gravis (MG) is an autoimmune disorder of neuro muscular transmission caused by auto antibodies against nicotinic Acetylcholine receptor or other postsynaptic antigens such as muscle specific kinase or low density lipoprotein receptor related protein-4 which leads to insufficient nerve impulse transmission to striated muscle fibres [(1)]. Predominantly affecting females of reproductive age group in 2nd and 3rd decade with a prevalence of 1 in 10000 [(2)].

Antibodies of IgG isotype is detected in 80 to 90% of general Myasthenia Gravis . In 50 to 70 % of individuals it is ocular MG . In maternal MG both mother and child may develop symptoms with varying degree of weakness . Seronegative Myasthenia Gravis is caused by Humoral factors. 40% of patients with seronegative MG have IgG antibodies against the muscle specific kinase (MuSK) which does not occur in patients with Seropositive Myasthenia Gravis .

2.CASE REPORT:

We report the case of a twenty six years old Gravida3 Para1 Live1 Abortion1 at 38 weeks of gestation with previous normal vaginal delivery with Myasthenia Gravis referred to us for further management who came with lower abdominal pain and burning micturition.

PAST OBSTETRIC HISTORY :

1st pregnancy : It was a term Normal Vaginal Delivery (NVD) , a boy baby , birthweight : 2.4 kgs , now 5 years, alive and healthy .

2nd pregnancy : Spontaneous miscarriage at 5 weeks of gestation.

Present pregnancy:

Patient presented at 38 weeks of gestation referred from with history of Myasthenia Gravis . Patient had a history of generalized weakness with mild drooping of left eyelid since 1 year with diagnosis of Myasthenia Gravis and was on irregular treatment. Patient underwent routine antenatal investigations and antibodies to ACH receptor was found to have mildly elevated levels. She was started on tablet Pyridostigmine (Gravitor). Antenatal fetal surveillance was done and patient was monitored closely.

Patient went into spontaneous labor and delivered a healthy girl baby by outlet forceps and birth weight 2.7 kgs with good APGAR scores. The neonate did not show any signs of muscular weakness. Breast feeding was initiated and baby was observed in NICU up to 48 hours with no evidence of neonatal Myasthenia Gravis. Mother was observed closely in postpartum period and it was uneventful.

As patient was not willing for sterilisation, she was counseled for appropriate temporary contraception.Patient was stable in the postpartum period and discharged after a week.

INVESTIGATION:

CBC	
TC	5900
DC -N/E/B/L/M	41/1/0/56/2
HB	11.2
Ab TO Ach RECEPTOR	MILDLY ELEVATED
PLATELETS	2.4

3.DISCUSSION:

The course of MG in pregnancy and its outcome is unpredictable. Worsening of symptoms are generally seen more in first trimester and in the first month of postpartum [3]. The clinical course of Myasthenia in first pregnancy does not predict the course of subsequent pregnancy [4].

Incidence of preterm delivery is increased in women with Myasthenia Gravis . Maternal mortality risk is inversely co related with duration of disease, being highest in the 1st year and the lowest, 7 years after the onset of the disease. The incidence of spontaneous abortion and growth restriction is not increased . Preterm delivery rates are increased in patients with Myasthenia with the incidence being between 13-41%.([1,5].

Pregnant women with Myasthenia Gravis should be closely observed throughout the pregnancy by a Neurologist and an Obstetrician. Serial ultrasound is done in order to detect fetal akinesia, manifesting as reduction of fetal movements and motion, as well as hydramnios [6].

Hypoventilation is a risk for patients with Myasthenia Gravis as pregnancy leads to aggravation of respiratory complications, as the diaphragm movement is lmited due to the enlargement of uterus. A patient with MG should be educated to avoid unnecessary physical activities to diminish fatigue. Before planning for pregnancy, there should be a better decision regarding the medical management of MG throughout pregnancy, explaining the risks, and fetomaternal outcomes. Medical advice will be based on severity of MG [7,8].

Thymectomy has been recommended treatment of MG as a primary modality for disease control. Acteylcholine esterase inhibitor can be safely used in pregnant patients. A very few cases of fetal malformations with severe neonatal MG with microcephaly have been described High dose of steroid increases the risk of Premature Rupture of Membranes (PROM.

Azathioprine is not recommended in pregnancy due to myelosu ppression.[9]. Plasmapheresis has been safely accomplished throughout pregnancy when a short term benefit is achieved . Due to the removal of hormones via plasmapheresis , there is an increased risk of prematurity . Vaginal birth should be preferred as a mode of delivery because the uterus is not affected by the autoantibodies as it does not consist of striated muscle fibres [10]. In second stage of labour, striated muscle fibres are involved, a vacuum extraction or forceps delivery might be

necessary. C-section should only be performed in case of obstetric indication. Epidural anaesthesia is preferred, narcotic analgesia and muscle relaxants are to be avoided Neonatal MG has been seen in 10-20% of neonates of women with MG. Generally neuromuscular symptoms in neonate manifests within 12-48hrs after birth. Cases such as pulmonary hypoplasia, arthrogryposis congenita have been reported. Patients with MG should be informed that even if the clinical state throughout the pregnancy regarding the Myasthenia is stable, fetal complications can occur.

Breastfeeding is not contraindicated in women with Myasthenia, even though serum antibodies versus acetylcholine receptors might reach the new-born via breast milk, so neonatal MG might be enchanced[10].

Corticosteroids and pyridostygmine have shown very minimal transfer through the breast milk. Breastfeeding is contraindicated in women who are taking mycophenolate mofetil, cyclophosphamide, methotrexate, azathioprine and cyclosporin.

Photo reproduced with consent of the patient

4. CONCLUSION:

Myasthenia Gravis associated with pregnancy is a disease with an unpredictable course. Severe, life threatening complications might occur especially due to generalized weakness, in particular respiratory insufficiency endangering the mother as well the fetus. As the disease predominantly affects women of reproductive age, it is important to be aware of this condition and interdisciplinary diagnostic and therapeutic management must be the goal for a successful outcome.

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