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Post Partum Ptosis: Report of a Case at the Asokoro Hospital Abuja, North Central Nigeria.
Ptose Post-Partum : Rapport D'un Cas A L'hopital D'asokoro, Abuja, Centre-Nord Du Nigeria.

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ABSTRACT

Post-partum ptosis is a rare cause of acquired ptosis which is mostly unilateral and occurs due to changes in the levator aponeurosis resulting from hormonal, fluid accumulation, and stress changes in labor and delivery. Risk factors include multiple pregnancies, advanced maternal age, and high body mass index.

Presenting a 32-year-old businesswoman with drooping of the left upper eyelid which started 21 days after the delivery of her second child. There was no diplopia, deviation of eyes, variation during the day, or affection of daily living. No previous history. Her body mass index was 34.7 kg/m2 with a visual acuity of 6/5 and 6/4, intraocular pressures of 14 and 15 mmHg respectively. Normal extraocular eye movements. Her Margin Reflex distance 1, Margin Reflex distance 2, Upper lid excursion (levator function), and palpebral fissure height at presentation were 4,5,15and 9 mm in the right eye and 1, 5, 15, and 6 mm in the left eye. These measures started improving from the first month post-partum resolving at 1 year and 3 months post-presentation. Physicians should keep in view pregnancy-related ptosis as a rare cause of unilateral ptosis amongst women who recently gave birth.

Keywords: *post-partum, ptosis, unilateral*

ABSTRAIT

La ptose post-partum est une cause rare de ptose acquise qui est principalement unilatérale et se produit en raison de changements dans l'aponévrose du releveur résultant de changements hormonaux, d'accumulation de liquide et de stress du travail et de l'accouchement. Les facteurs de risque comprennent les grossesses multiples, l'âge maternel avancé et un indice de masse corporelle élevé.

Présentation d'une femme d'affaires de 32 ans avec un affaissement de la paupière supérieure gauche qui a commencé 21 jours après l'accouchement de son deuxième enfant. Il n'y avait pas de diplopie, de déviation des yeux, de variation au cours de la journée ou d'affection de la vie quotidienne. Pas d'antécédents. Son indice de masse corporelle était de 34,7 kg/m2 avec une acuité visuelle de 6/5 et 6/4, des pressions intraoculaires de 14 et 15 mmHg respectivement. Mouvements oculaires extraoculaires normaux. Sa distance réflexe de marge 1, sa distance réflexe de marge 2, son excursion de la paupière supérieure (fonction releveur) et la hauteur de la fissure palpébrale à la présentation étaient de 4, 5, 15 et 9 mm dans l'œil droit et de 1, 5, 15 et 6 mm dans l'œil gauche. Ces mesures ont commencé à s'améliorer à partir du premier mois post-partum résolu à 1 an et 3 mois après la présentation. Les médecins doivent garder à l'esprit que la ptose liée à la grossesse est une cause rare de ptose unilatérale chez les femmes qui ont récemment accouché

Mots-clés: *post-partum, grossesse, ptôse, unilatérale.*

INTRODUCTION

Ocular changes in pregnancy may include a wide spectrum of physiological and pathological conditions that have different presenting symptoms, and may or may not require treatment (1). Ptosis (drooping eyelids) is another uncommon pregnancy-related symptom and is believed to be caused by fluid retention and hormonal changes. These changes usually go away after the baby is born (1). The ocular changes are postulated to occur due to physiological responses to cope with the pregnancy and these physiological causes account for 15 % of pregnancy-related ptosis (2). Pre-existing ophthalmic disorders are known to be aggravated or to ameliorate during pregnancy although the changes are usually transient (3). The ptosis that occurs in pregnancy may be unilateral or bilateral and has been attributed to hormonal-induced weakening of the attachment of levator palpebrae aponeurosis (4,5).

We are reporting this case because of the rare manifestation. There has been a report of ptosis associated with pregnancy in Nigeria by Omoti et al (6), but this was a review of ocular changes in pregnancy, and specifics of the clinical manifestation, resolution, and management were not described. Ethical approval was obtained from Asokoro District Hospital, Abuja (FCTA/ HHSS/ HMB/ADH/202/24) and permission was sought from the patient to report the case.

CASE PRESENTATION

A 32-year-old businesswoman presented on account of drooping of the left upper eyelid of 1 month 2 weeks duration. Drooping of the upper left eyelid started 21 days after delivery, which was sudden, non-progressive, painless, and unilateral, there was no variation during the day. There is no history of eyelid swelling in the past, recurrent itching, redness, watering, foreign body sensation, photophobia, eyelid mass or tumor, double vision, deviation of the eyes, headache, projectile vomiting, difficulty in swallowing, change in voice or speech, difficulty in walking, numbness, weakness, lack of sweating in any part of the face.

There was no history of injections to the eyelid, chronic use of topical steroids, use of any other medication, or trauma to the eyelid, neck, or chest. There was no history of a decrease in near or distant vision, abnormal head posture or affectation of daily activity, contact lens wear or spectacles, ocular surgery, drug allergy, or family history of similar problems. She has had 2 deliveries. The first pregnancy was carried to term and spontaneous vertex delivery was attempted but due to fetal distress, delivery was converted to emergency cesarian section. There was no drooping of the eyelid after the first delivery. The index pregnancy was carried to term and delivery was through elective cesarian section on account of previous cesarian section. She had normal eyelids before the onset of symptoms as shown in Figure 1.

We examined a healthy-looking young lady, with a height of 1.78m, and weight of 110kg, and a Body Mass Index of 34.7 kg/m2. Examination findings of all systems were normal except the eye. Ocular examination revealed a visual acuity of 6/5 and 6/4, and intraocular pressures of 14 and 15 mmHg respectively. She had normal extraocular eye movement (Figure 2). Her Margin Reflex distance 1, Margin Reflex distance 2, Upper lid excursion (levator function), and palpebral fissure height at presentation was 4,5,15,9 mm in the right eye and 1, 5, 15, and 6 mm in the left eye (Figure 3). Bell's phenomenon, corneal sensation, blink frequency, fatigability, and cogan twitch sign were normal. All other ocular examinations were normal. Her full blood count was normal, her fasting blood sugar of 5.5 mmol/L, and her Brain CT scan was normal. One month after presentation, the Margin reflex distance 1 improved to 2mm and the Palpebral fissure height improved to 7mm in the left eye (Figure 4). The ptosis resolved at 1 year 3 months post-presentation with Margin Reflex distance 1, Margin Reflex distance 2, Upper lid excursion (levator function), and palpebral fissure height becoming 4,5,15 and 9mm (Figure 5).

DISCUSSION

Ptosis, the drooping of the eyelid, presents a notable but understudied, underreported, and poorly understood phenomenon following childbirth ( ). This condition typically manifests within hours to weeks postpartum, influenced by physiological changes important for fetal protection and maternal adaptation (8). During pregnancy, the body undergoes significant changes in all its systems. These physiological changes are necessary to protect the fetus, contribute to its development, and prepare the mother for childbirth. Ocular changes during pregnancy can be divided into physiological and pathological categories. Ptosis is one of the physiological ocular changes that occur due to the effects of fluid and hormones, especially the change in relaxin, oestrogen, and prolactin levels which can affect the levator palpebral muscles, aponeurosis, and tissues that support the eyelids leading to drooping and this may affect one eye or both eyes ( ). A review of available literature shows that ptosis can occur at any time (during pregnancy or puerperium) or type of pregnancy, (singleton or multiple) (8,9).

Physiological causes of ptosis associated with pregnancy are usually unilateral and temporary, patients are usually concerned about cosmesis and require no treatment as seen in our patient (1,2.3). The risk factors that have been found to be associated with pregnancy-related ptosis that was seen in the index patient were her body mass index of 34.7kg/m2 which was obese. There are other risk factors such as multiple pregnancy and advanced age (8) but these were not seen in our patient as this was her second pregnancy and she was 32 years old at the time.

There have been other reports of physiological ptosis associated with pregnancy such as a case of ptosis in a twin gestation at 27 weeks which was reported in a facility in Amsterdam (10). She had partial ptosis without any other signs of cranial nerve dysfunction, normal pupillary reactions, and full painless extraocular movements. Another similar case was reported in a 6-month pregnancy by Sanke et al (11). Chauhan S et al. also reported that 10 of out 92 women (10.9%) had ptosis in a cross-sectional review in India (12), although the eventual outcome of the ptosis was not reported.

Pathological changes related to pregnancy may manifest as new eye issues, alterations in existing eye conditions, and eye complications arising from systemic diseases (8,13). These are differentials of physiological causes of ptosis associated with pregnancy, hence thorough evaluation to rule out pathological causes cannot be overemphasized. Some such cases have also been reported to include a lady who presented with sudden diplopia and left eye ptosis at 34 weeks of gestation due to a physiological pituitary gland enlargement. Magnetic resonance imaging (MRI) demonstrated the pituitary enlargement compressing the optic chiasm and surrounding the left cavernous sinus and internal carotid artery causing the third nerve palsy. Despite treatment with bromocriptine, her symptoms did not regress during pregnancy possibly because it was not a prolactinoma as initially thought since prolactinoma is the commonest cause of pituitary enlargement in pregnancy, which would usually respond to aggressive dopamine therapy. Histology was not done since there was no surgical intervention for this patient to determine the actual cause. However, her symptoms dramatically resolved without any surgery at 5 months postpartum. A repeat MRI scan revealed a marked decrease in the size of the pituitary gland compared to antenatal MRI (14). The conclusion of her case was a non-functioning pituitary adenoma during pregnancy.

Although physiological enlargement of the pituitary gland is common during normal pregnancy, symptoms such as diplopia, blurred vision and headache resulting from physiologic pituitary enlargement are very rare (8,9,14). The index patient had a brain CT which was found to be normal and had no feature of physiological pituitary gland enlargement. There was also another case of unilateral ptosis reported by Nidamanuri et al, she presented at 26 weeks gestation with ptosis and it resolved after delivery but recurred during the second pregnancy. Neuroimaging confirmed cavernous sinus meningioma. This confirms the necessity of follow-up in all cases even with apparent resolution (15).

Other reported cases include myasthenia gravis, in which case the ptosis would fluctuate and with variable diplopia or a result of third nerve palsy, in which case the ptosis would be associated with ophthalmoplegia (16). Post-partum ipsilateral ptosis that is mild and associated with a small pupil may be indicative of an isolated Horner's syndrome that could be from the epidural anesthesia during labor but could also be from a more potentially fatal cause like a dissecting carotid aneurysm (17).

Management is usually multidisciplinary since other systemic pathologies may coexist. A comprehensive history, physical examination, and eyelid measurements will help in determining the cause, severity, and appropriate treatment modality for ptosis. Ancillary investigations may be required for diagnosis and management. These could range from clinical procedures such as ice tests, visual field, hematologic, electrophysiologic, and neuroimaging. Proper documentation including photography, and good communication with the patient to discuss treatment goals and expectations are important in management. Physiological causes of ptosis associated with pregnancy are usually self-limiting, do not require treatment, and often resolve following delivery (8,18) as seen in the case presented that resolved at 1 year 3 months post presentation. If ptosis persists after childbirth, it's important to schedule a thorough eye examination to confirm whether it's related to a serious ocular condition (8). For pathological causes treatment administered is determined by the cause, severity, and effect of ptosis on the patient's quality of life. Surgical management is rarely indicated during pregnancy.

In conclusion, we reported a case of physiological cause of pregnancy-related ptosis in a young, obese female. Physicians should keep in view pregnancy-related ptosis as a rare cause of unilateral ptosis amongst women who recently gave birth.

Figure 1: Eyelids before ptosis started.

Figure 2: Normal Extraocular muscle movement.

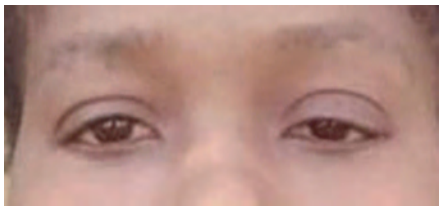

Figure 3: Eyelids at presentation

Figure 4: Eyelids at 1 Month post-presentation

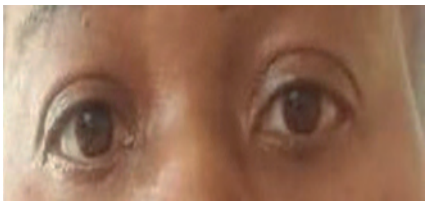

Figure 5: Eyelids at 1 year 3 months Post presentation

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