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Blepharoptosis in Ibadan, Nigeria

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Summary

Objective

To look into the cases of blepharoptosis in our environment as well as find out the causes and effects of the ptosis.

Design

Prospective clinic study and prospective cluster sampling method of school children.

Setting

University College Hospital, Ibadan and 3 schools in Ibadan, Nigeria.

Subject

Over a 5 year period, all patients who presented with blepharoptosis at the University College Hospital were recruited for the study. During the same period, a school survey was also done to find out the prevalence of blepharoptosis among school children.

Results

Twenty five cases of blepharoptosis were found during the 5 year period. Fifty two percent of the patients were found to be less than 16 years of age while only 8% were over 50 years of age. There was a 1:1 male to female ratio with majority of them (68%) having only one eye affected. The most common cause of blepharoptosis was found to be congenital, accounting for 56% of the patients. The prevalence in the school survey was found to be 1.2% higher than the incidence of 0.5% found in the eye clinic.

Conclusion

Blepharoptosis is not an uncommon ocular problem. A detailed assessment of the cause, amount of ptosis and levator functions helps to determine the most appropriate surgical technique which would give the best functional and cosmetic result

Keywords: *Blepharoptosis, Eye lid anatomy, Nigeria*

Résumé

Objectif

Étudier les cas des blépharoptoses dans notre milieu en même temps nous renseigner sur les causes et les effets des ptoses.

Grandes Lignes

Étude clinique en perspectif et méthode de sondage aréolaire des écoliers en perspectif.

Cadre

Collège Hospitalo Universitaire, Ibadan, et 3 écoles à Ibadan, Nigeria.

Patients

Au cours d'une durée de 5 ans tous les patients atteints de la blépharoptose au collège hospitalo universitaire ont été recrutés pour cet étude. Pendant la même période, on a mené un sondage de l'école afin de nous renseigner sur la fréquence de la blépharoptose chez les écoliers.

Résultats

Vingt cinq cas des blépharoptoses ont été recensés pendant la durée de cinq ans. On a constaté que cinquante deux pourcentage des patients étaient âgés de moins de 16 ans tandis que 8% seulement étaient âgés de plus de 50 ans. Il y a la proportion 1: 1 homme et femme avec la plus grande partie d'entre eux soit 68% ayant seulement un oeil affecté. La cause la plus courante de la blépharoptose est notée d'être congénitale ce qui constitue 56 pour cent des patients. D'après le sondage de l'école, la fréquence était notée d'être 1,2% plus élevé que l'incidence de 0,5% recensée dans le centre ophtalmologique.

Conclusion

La blépharoptose est un problème oculaire assez fréquent. Une évaluation détaillée de la cause, la somme de la ptose et des fonctions du levateur pourraient aider à déterminer la technique chirurgicale la plus convenable qui donnerait le plus fonctionnel et cosmétique.

Introduction

Blepharoptosis is a relatively common eyelid disease but no data is available on the defect in Nigerians. Symptomatically there is a cosmetic problem¹ evidenced not only by an asymmetry, but also by the fact that the pendant lid is inert and smooth, since usually the pull of the levator muscle is lost. If the condition is marked to the extent of coverage of the pupillary area, vision becomes obscured. In children under the age of 5 years, this could lead to amblyopia,^{2,3} a condition in which there is decreased visual acuity in the eye with no organic cause.

When bilateral or when an only good eye is affected, compensation is evidenced by over reaction of the frontalis and corrugator muscles arching up the brow and throwing the forehead into horizontal folds laterally and vertical furrows close to the midline, with an eventual tilting backwards of the head resulting. There is an accompanying reduction in the upper visual field due to obscuration by the eyelid, giving a pseudo-contraction of the upper visual field.

Repair of ptosis requires proper classification and an accurate measurement of the degree of ptosis, as well as levator function.⁴ This study was therefore initiated to look into cases of blepharoptosis in our environment, the causes and effect of the ptosis.

Materials and methods

All new ptotic patients examined at the University College Hospital Eye Clinic were recruited over a 5 year period, January 1992 - December 1996. A protocol was devised to obtain the following parameters - age, sex, eye(s) involved, interpalpebral distance, degree of ptosis, levator palpebral superioris function, cause of ptosis, visual acuity and other associated problems. For unilateral ptosis the degree of ptosis was measured with a ruler as the difference in the vertical fissure of both eyes through the center of the pupil, but when bilateral, the amount of cornea covered by the upper eyelid minus 2mm was used (2mm of cornea is normally covered by the upper eyelid).

During the same period, a school survey was carried out to find out the prevalence of ptosis among school children under the age of 16 years. Three primary and secondary schools were chosen because of their proximity to the University and all pupils in arm A of each class were examined for blepharoptosis, as this was the most constant arm in all the schools. Each arm had a student population of between 40 and 50 students.

Results

In the 5 year period of January 1992 - December 1996, 25 cases of blepharoptosis presented and were examined at the eye clinic of this tertiary institution, out of 5,250 new cases, i.e. 0.5% of the total number of new cases.

There were 12 females and 13 males, a male : female ratio of 1: 1. Unilateral ptosis accounted for 17 cases (68% of all eyes), 9 right and 8 left eyes while bilateral ptosis accounted for 8 cases (16 eyes) making a total of 33 eyes.

The age range was between 3 months and 57 years (Figure 1) with 13 patients (52%) being under 16 years and only 2 patients

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(85) were over 50 years. Mild ptosis 2mm or less was found in 14 eyes, moderate ptosis of 3mm was found in 5 eyes and severe ptosis of more than 4mm was found in 14 eyes. Table 1 shows the causes of blepharoptosis. One of the 2 patients with mechanical ptosis had allergic conjunctivitis with giant papillae and the other had fat herniation into the upper eyelid. Other associated medical and ocular problems included cranial nerve III, IV or VI palsy (7 patients), refractive error (myopia in 2 patient), congenital glaucoma (1 patient) epiphora (1 patient) and allergic conjunctivitis (2 patients - one caused the ptosis, the other was an incidental finding in a congenital ptosis).

Table 1 Causes of blepharoptosis

Causes of blepharoptosis	Number of Patients
Congenital	14
Myaesthesia Gravis	4
Traumatic	4
Mechanical	2
Marcus -Gunn jaw winking	1

Five out of the 7 patient with cranial nerve palsies had III CN palsy. They were aged 8 months, 6, 36 44 and 56 years. The 8 months old child was secondary to birth trauma and the others had myaesthesia gravis (2 patients) and head injury (2 patients).

Table 2 Cranial nerve palsies

Age	CN palsy	Cause
8months	III, VI	Birth trauma
3 years	II, VI	Head injury
6 years	III	Myaesthesia gravis
36years	III, IV	Myaethepia gravis
43 years	VI, VII	Myaesthesia gravis
44years	III	Head injury
56years	II, III, VI	Head injury

Table 2 shows the patients with cranial nerve palsies. Visual acuity was good in most of the cases as 22 eyes had a vision of 6/9 or better, 3 eyes had 6/12 - 6/18, and 1 patient had no perception of light (NPL), secondary to trauma. Nine other eyes could not be measured accurately for vision as they were all under 2 years of

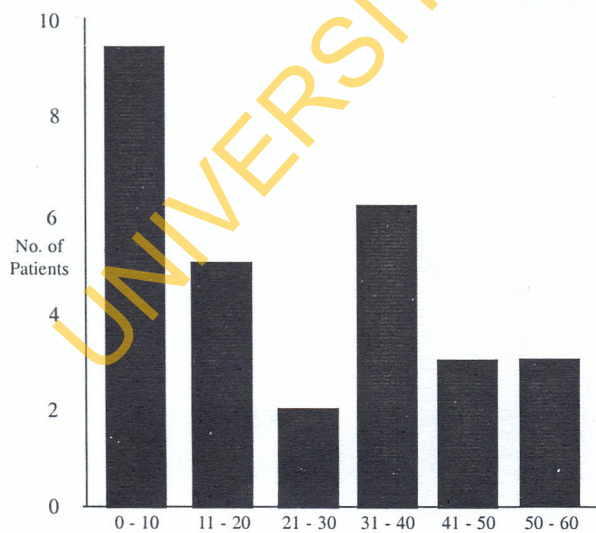


Fig. 1 Age distribution of 25 patients with Blepharoptosis

age. The 3 eyes with 6/12 - 6/18 all had myopia (2 were due to congenital glaucoma and the third eye had amblyopia caused by the myopia and severe ptosis).

In the school survey, 759 children were examined and 9 were found to have mild ptosis, a prevalence of 1.2%. The age range

was 9 - 16 years. There were 6 males and 3 females, a male : female ratio of 2: 1.

Discussion

The muscles of the eyelid are the protractors (orbicularis) and the retractors (levator palpebrae superioris). Ptosis of the upper eyelids is due to neurogenic or myogenic loss of the retractors. The levator complex is a complete muscle, consisting of an elongated striated muscle, which terminates by dividing into an anterior and posterior lamella.

Congenital ptosis has a developmental anomaly of the levator muscle, and striated muscle fibers are either sparse or absent.^{5,6,7} Acquired ptosis is frequently caused by dehiscence of the aponeurosis and muscle. Dehiscence is the most common finding with thinning of the muscle and replacement with fragile connective tissue. Disinsertion occurs usually in trauma, and the tendon follows the orbital septum back toward the roof of the orbit.^{5,7}

Normal upper eyelid position is usually considered to be 2mm below the superior limbus i.e. the upper eyelid cover 2mm of superior cornea. According to Beard's classification^{8,9} mild to serve ptosis refers to lids that are droopy below this level (2 - 3mm: mild, 3 - 4mm: moderate and greater than 4mm: severe).

In general, mild ptosis is accompanied by good levator function (8mm or greater); moderate ptosis has fair levator function (5 to 7mm); severe ptosis has poor levator function (less than 4mm).^{8,9} In this study 18 eyes (55%) had good levator function which best responds to simple ptosis surgery like the Fassenella Servat procedure.¹⁰ Fifty two percent of patients (13 patients) were under 16 years of age as congenital ptosis usually presents in childhood. Above the age of 16 years, most patients would have either had surgery for the abnormality or accepted the cosmetic appearance of a mild ptosis.

Only one of our patients presented with congenital ptosis above 16 years of age, a 30 - year old man with bilateral congenital ptosis who wanted to improve his cosmetic appearance.

There was no sex predilection in the new cases in clinic, with a 1: 1 male to female ratio. The incidence of ptosis in the eye clinic was found to be 0.5% whereas a prevalence of 1.2% was found among school children although the eye patients include both young and old.

In conclusion, blepharoptosis is not an uncommon ocular problem in Nigeria. A detailed assessment of the cause, amount of ptosis and levator function would help in the further management of these patients.

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