Ptosis Surgery in a Developing Country: Experience from a Tertiary Hospital

Oluyemi Fasina[1] and Valerie N. Abiola[2]

[1]Department of Ophthalmology, University College Hospital/University of Ibadan, Ibadan, Nigeria.
[2]Department of Ophthalmology, University College Hospital, Ibadan.
***Corresponding author:** O. Fasina,*
Email: yemifash2000@yahoo.com

Introduction: Blepharoptosis, usually abbreviated as ptosis, refers to vertical narrowing of the palpebral fissure from an abnormally low-lying upper eyelid in the primary position of gaze. Ptosis may be congenital or acquired, progressive or stable, constant or intermittent, unilateral or bilateral, isolated or associated with other pathologies,[1] and patients usually present with visual complaints and/or cosmetic reasons. Ptosis can be classified as neurogenic, myogenic, aponeurotic or mechanical.[2] Studies on surgical management of ptosis are few in Nigeria,[3] hence, this study aimed to evaluate the profile of patients who had surgery for ptosis correction at a tertiary health facility, south-western Nigeria, the different surgical procedures carried out, and the outcome of these procedures.

Methods: Medical records of all patients who had surgery for ptosis correction over an eight-year period were retrospectively reviewed. Information retrieved included the patients' socio-demographics, detailed ocular examination, main indications for ptosis surgery, type of surgery performed, outcome of the surgery, and surgical complications.

Results: Thirty patients had surgical correction for ptosis between November 2008 and October 2016 in our facility, of whom 17 (56.7%) were males, and an average age at presentation of 11 years (IQR 35.8 years). The left eye was affected in 11 (36.7%) patients and bilateral involvement in 11 (36.7%) patients. Eleven (36.7%) patients had congenital ptosis and10 (33.3%) patients had mechanical ptosis with all patients presenting with severe ptosis (Margin Reflex Distance-1, -2.3 SD 1.6 mm). Table. Indications for surgical intervention was primarily functional in 28 (93.3%) patients and 2 (6.7%) patients were operated for cosmetic reasons only. Figure. Twenty-four patients (80%) had tarsofrontal sling surgery- 19 (63.4%) with Silicon rod, 5 (16.6%) with Ethibond® suture, while 6 (20%) patients had levator aponeurosis reattachment. Surgical outcome was satisfactory in 19 (63.4%) patients at primary repair while 10 (33.3%) patients had secondary readjustment procedure and 1 (3.3%) patient had a repeat surgery.

Discussion: Ptosis surgery constituted less than 1% of the ophthalmic procedures carried out in our facility during the study period. The few published reports[3,4,5] on ptosis in the country suggest that ptosis is not perceived as a major reason for ocular surgery in this environment. Surgery is however, indicated and accepted in severe ptosis causing significant visual impairment or cosmetic embarrassment.[6] The high number of children in the study could be attributed to the risk of amblyopia which might have motivated the caregivers to accept early surgical correction,[7] Noteworthy is that all our patients had severe ptosis and poor levator palpebral superioris action which explains why tarsofrontal sling surgery was the preferred surgical procedure in more than three-quarters of them.[8]

Conclusion: In conclusion, the main indication for ptosis correction in our region is functional, and mostly, patients with severe ptosis had surgical intervention. Satisfactory outcome was obtained in a majority of the patients with few operative complications.

A Pre-operative picture of a young boy with right congenital ptosis
B Picture of the young boy with right congenital ptosis post tarsofrontal sling surgery
C Pre-operative picture of a middle-aged woman with right complete ptosis from trauma to the levator palpebral superioris

Table 1: Classification and palpebral measurements of patients with ptosis

Classification of ptosis	Number (%)	Palpebral measurements	Pre-operative value	Post-operative value
Congenital	11 (36.7)	Palpebral fissure height	3.7 ± 2.4mm	8.5 ±1.8mm
Mechanical*	10 (33.3)			
Aponeurotic	6 (20)	Levator palpebral superioris action	4.8 ± 4.0mm	Not measured
Myogenic	2 (6.7)			
Neurogenic**	1 (3.3)	Margin reflex distance-1	-2.3 ± 1.6mm	+2.4 ± 0.9mm
Total	30 (100)			

**Mechanical- trauma 6, post-eyelid surgery 4; **Neurogenic- post-craniotomy for intracranial space occupying lesion*

Figure Legend

D Picture of the middle-aged woman with right complete ptosis from trauma to the levator palpebral superioris post tarsofrontal sling surgery

E Pre-operative picture of an elderly man with bilateral severe aponeurotic ptosis

F Picture of the elderly man with bilateral severe aponeurotic ptosis post aponeurotic reattachment procedure

G Pre-operative picture of a young lady with left complete ptosis following eyelid tumor removal

H Picture of the young lady with left complete ptosis following eyelid tumor removal post tarsofrontal sling surgery

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