## Minimal orbicularis oculi myectomy for treatment of severe benign essential blepharospasm: a case report

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**Background:** Benign essential blepharospasm (BEB) is a type of dystonia that causes excessive involuntary spasms of the orbicularis oculi muscle.[1] The spasms can have a significant impact on the daily activities of patients by causing visual disturbance or functional blindness, anxiety and depression.[2] The most effective and commonly employed treatment option for BEB is the use of botulinum neurotoxin A.[2] Botulinum toxin, which is expensive and only provides temporary relief of symptoms, was unaffordable to our patient. The successful management of a case of severe BEB by minimal orbicularis oculi myectomy (MOOM) with lasting symptom relief is hereby reported.

**Case Presentation:** A 60-year-old woman presented to our center with the complaint of inability to open her eyes for 6 weeks due to spasm of her eyelids. This was preceded by a 7-month history of excessive blinking and increasing difficulty keeping her eyes open voluntarily and unusual sensitivity to light. The spasms were worse during the day and forced her to keep her eyelids closed for almost the entire day, with minimal relief at night. There was no associated twitching or spasm of any other part of her body. She was a known diabetic and hypertensive and on oral medication for their control.

On examination, the eyelids were tightly closed and the protractor muscles (orbicularis oculi, procerus and corrugator muscles) were spastic (Figure 1A). Attempts at manual opening of the eyelids were unsuccessful due to spasm of the eyelids. She was unable to keep her eyes open for visual acuity assessment, slit lamp examination and fundoscopy. Systemic evaluation and assessment by a neurologist revealed no other abnormality, and a diagnosis of severe benign essential blepharospasm was made.

Botulinum toxin A (BTA) injection was recommended to her. However, she was unable to afford the cost. Besides, it was not readily available in our locality. We decided to try bilateral MOOM surgery on her under local anesthesia. At surgery, after routine cleaning and draping, the eyelids were infiltrated with local anesthesia (2% lignocaine with 1:1000 adrenaline). The orbicularis muscle of the upper eyelid was exposed through a lid crease incision. A muscle strip, 8 mm wide, was excised starting from above the tarsus about 2 centimeters from the lateral canthal angle up to the superior


***Figure 1:*** *Photograph of patient (A) At presentation showing spastic closure of her eyelids (B) At 3 weeks follow up with eyelids voluntarily opened.*

orbital rim in a diagonal direction upward and laterally (Figure 2). The strip included the orbital, septal and distal part of the pretarsal

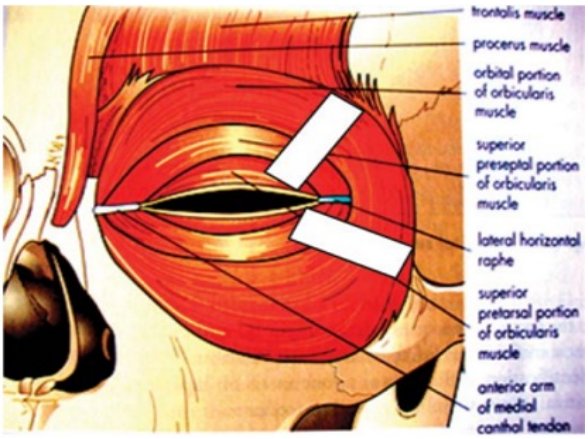


***Figure 2:*** *Diagram showing the principle of minimal orbicularis oculi myectomy.[3] Excision of a block strip of the muscle creates a large gap in the circularly running fibers, such that when the remaining fibers contract, the lid would not close forcibly because of a break in their continuity, hence, spasm is prevented.*

orbicularis muscle. Care was taken to leave the proximal half of the pretarsal muscle intact. The lower eyelid orbicularis muscle was exposed through a sub-ciliary skin incision and an 8 mm wide strip of orbicularis muscle was excised in a similar fashion to the upper eyelid. The same procedure was done on the contralateral eyelids. Incisions were closed with 5/0 Vicryl suture in an interrupted fashion. Pressure dressings were applied for 24 hours. She was prescribed prophylactic antibiotics and anti-inflammatory/analgesic medications.

On the first post-operative day, her blepharospasm had decreased. There was eyelid oedema and ecchymosis. She was prescribed topical methylcellulose eye drops 4 times daily. At 3 weeks follow-up, the blepharospasm had significantly diminished and as well as the eyelid oedema, and she was able to open and close her eyes voluntarily (Figure 1B). Her visual acuity was 6/12 in both eyes and 6/6 with a pinhole. She had sustained significant relief from symptoms at 14 months of follow-up. The patient's consent was obtained to publish this case report.

**Conclusion:** Minimal orbicularis oculi myectomy was effective in providing long-term significant relief of spasms. This may be a viable option for the treatment of BEB in low-income countries like Nigeria.

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## Clinical activity scores and quality of life in thyroid eye disease: a study among Nigerian patients

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