

## **Surgical Outcome of a challenging Big Angle Strabismus in a Child**

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**Abstract:** Strabismus is an ocular misalignment. It may lead to amblyopia and impair cosmesis of patients. The management can be optical or surgical. The surgical option is sometimes challenging, since more than one surgical intervention may be needed. The case presented here was operated successfully despite the big angle of deviation.

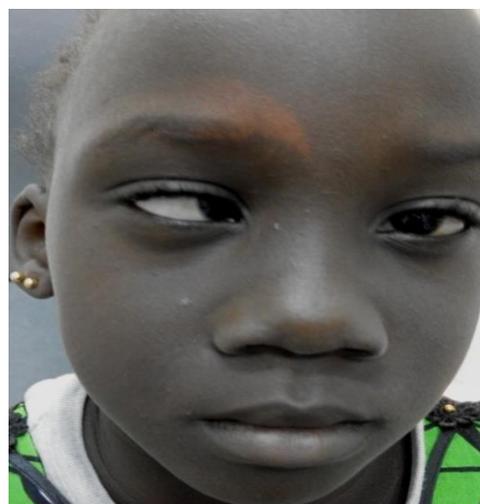
**Keywords:** surgical outcome, big angle, strabismus

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### **INTRODUCTION**

Strabismus is the medical term for an eye condition commonly called by various names: Squint, eye turns, crossed eyes, wall-eyes, wandering eyes, swivel eyes, goggle eyes and deviating eyes [1]. It is the most common embryogenic factor and approximately 40% of children with manifest strabismus have amblyopia [2]. The prevalence of strabismus worldwide is reported to vary from 1.3% to 5.7% of all children [3]. While studies in African children showed a prevalence of between 0.5% and 4.4%, [3, 4] its prevalence in other parts of the world varies between 0.9% and 7.4%. In Khartoum, Taha and al. in a study about horizontal strabismus found that exotropia was the predominant type with 2.2%, while esotropia was 0.4% [4]. Management of strabismus includes correction of refractive errors, management of any co-existing amblyopia, and surgery of one or more extra ocular muscles to re-align the eyes. The benefits of surgical correction include elimination of diplopia, restoration of binocular single vision, and improvement of cosmesis and psychosocial status [5]. Surgical or optical therapy is necessary in many patients with strabismus [6] like in the current patient who had a big angle of deviation and was mocked by her schoolmates.

6/12 in the right eye (with +3.00  $\delta$ ) and 6/9 in the left eye (with +2.00  $\delta$ ). Ocular motility was normal both eyes. The angle measured by the orthoptist was 55  $\Delta$  with fixating left eye. We performed a bilateral medial rectus recession of 6.5 mm and the eyes became orthophoric.



**Fig.1a: Photograph of the child before**

### **CASE REPORT**

A 6-year-old female child brought by her mother for misalignment of the eyes since birth. She was the 4<sup>th</sup> child of 5 siblings all healthy according to her mother. Nothing wrong was found in her medical history. Her mother assumed that she was viewed with disdain by her classmates because of the squint. Findings on ocular examination were: obvious exotropia both eyes. Best corrected visual acuity was



**Fig.1b:Photograph of the child one day after surgery**

## DISCUSSION

The case of infantile esotropia presented here is challenging, since the angle of deviation was big, in addition there was hyperopia and cosmetic issue. The parents were eagerly expecting a good alignment of the eyes. There are many classifications of strabismus [7]; according to the age of onset, we have infantile strabismus documented prior to the age of 6 months; and acquired strabismus documented after 6 months. According to fixation/laterality, we have monocular strabismus (definite preference for fixation with one eye) and alternation strabismus (spontaneous alternation of fixation from one eye to the other).

Infantile strabismus seems to be prevalent; as concluded by some authors like Akpe in Nigeria who found in his study that infantile esotropia was the most common form of esotropia (41.6%). The degree of esotropia seen was 7 Δ in 2 cases, 15 Δ in 2 cases, 30 Δ in 5 cases and 45 Δ in 2 cases. Large angle of deviation are  $\geq 30\Delta$ ; [8]. The deviation of 55 Δ in our patient is much greater than those found by Akpe in his patients.

The manifest misalignment of the eyes often results in deficient binocular depth perception and even amblyopia. Besides these functional effects, there are psychological distresses because of strabismus, such as depression and anxiety, impaired self-esteem and self-confidence, unsatisfied interpersonal relationships and social prejudice [9]. Our patient already had impaired self-esteem due to the scoffing attitude of her classmates; in addition, she was amblyopic.

The number of children receiving surgical correction of their strabismus appears to be declining. A reduction of 42% in surgical episodes in the under 14 age group was reported in one region of England and a

58% decrease in episodes of paediatric squint surgery in Scotland as a whole and a 59% decrease in the area of Tayside, respectively [10]. To have good alignment in squint surgery is a challenging issue. Hedge et al. in India obtained 50% of good alignment in their study [5].

## CONCLUSION

Strabismus is an embryogenic and may involve disfiguring misalignment of the eyes. The surgical management is sometimes very tough. Patients or their parents need to be sensitized about the possible recurrence or residual angles with their subsequent surgery.

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