Couching in pediatric patients in Nigeria: Report of a medical socioeconomic dilemma in a developing country

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Abstract:
Couching in Nigeria is a well-documented treatment for cataracts among adult population, especially in the northern part of the country. Couching option among the pediatric age group is extremely rare, and its evolvement may be a pointer to deteriorating eye care in the country.

Keywords:
Couching, Nigeria eye care, pediatric cataract

Introduction
Couching is defined as the dislocation of the cataractous lens posteriorly into the vitreous cavity by applying a sharp or blunt object to the pars plana region in an attempt to rupture the zonules.[1-3]

Couching among the elderly may not sound surprising; however, when seen in pediatrics may give a bad impression about our overall eye care program as a country and maybe a pointer to the fact that we all need to do more to improve eye care. This is a case presentation of two children who had couching done.

Case Reports
Case 1
A 5-year-old male child who lived about 85 km from our hospital was brought in as a result of poor vision and the presence of whitish speck in both eyes noticed 2 years before the presentation. The parents noticed that the child had difficulty in navigating through unfamiliar terrain. The whitish speck in the eyes increased significantly, which was accompanied with worsening of vision. There was associated bilateral jerky nystagmus and abnormal eye deviation. Examination findings revealed a child with a visual acuity of light perception bilaterally, bilateral reactive pupils, and visually significant lens opacity. Intraocular pressures were 10 mmHg and 13 mmHg in the right eye (RE) and left eye (LE), respectively. A preoperative ocular scan ruled out associated vitreous or retinal abnormalities.

He was assessed, and a diagnosis of bilateral congenital cataract with severe amblyopia was made and booked for surgery. The child did not have the planned right eye cataract surgery with an intraocular lens implantation until 1 year after the child’s first presentation on account of finance. At 2-month follow-up visit, eyeglasses were prescribed but not picked up.

He rather defaulted to represent 2 years later, with a visual acuity of 3/60 in RE and light perception in LE with poor light
projection. The left lens had been couched; the LE pupil was sluggishly reactive with the presence of a whitish opacification of the visual axis behind the iris. It turned out that the cataractous lens were within the vitreous cavity, with severely disorganized fibrotic retina.

There is a positive family history of congenital cataract in the father and one of the siblings [Figure 1]. The child’s father had cataract surgery done at childhood with a significant impairment in vision.

The child’s father was intensively counseled on the deleterious effect of couching and child’s visual prognosis.

The child had since returned to school following the surgery.

The sibling had since undergone cataract surgery in both eyes at our hospital through sponsorship and has had a significant improvement in vision and quality of life.

**Case 2**

A 6-year-old male child was referred to our facility from a neighboring state with a 3-month history of poor vision in both eyes. The child’s mother denied any history of trauma, but while seeking care, the child’s uncle alone took the child to an herbalist whose identity could not be ascertain by the informant. The poor visual outcome resulted in major family schism. Examination revealed a visual acuity of no light perception in RE and 6/60 in the LE. The RE globe was phthisical with an opaque and vascularized cornea [Figure 2] most likely from a complicated couching, whereas the LE had a clear cornea, quiet anterior chamber, jet black sluggishly reactive pupil with a cataractous lens floating within the vitreous cavity, as shown in the fundus photograph [Figure 3], and on B-mode ultrasound scan [Figure 4] and a flat retina.

**Discussion**

The current cataract surgical rate and output are not keeping pace with the need in the country. This has allowed couchers to remain popular in the communities to fill up the vacuum created as all patients with a visual impairment from cataract will make effort to have a better vision by whatever way possible and available. Even with the activities of couchers, up to 85% of cataract blind patients are still untreated.\(^3\)

**The people**

Recent studies have reported a high incidence of couching in poor rural communities in the far north-western part of the country.\(^3\)
of the country.[1,4] The national blindness and visual impairment survey revealed that 42.7% of the 583 eyes that had undergone a procedure for cataract has had couching done and 73% of these eyes were blind.[6]

Several studies have reported couching in adults, which is not surprising as most cataract cases are age related in etiology.[1,2,5] However, couching in children is very rare. An uneventful cataract surgery in a child could lead to postoperative vigorous inflammation which is a concern to a lot of pediatric cataract surgeons. The possibility of retina injury as in the first case, whole globe injury from severe uveitis, and or endophthalmitis as in the second case that may follow couching with accompanied posterior segment pathology that will occur in these children are a major challenge. Visual loss from couching may follow blunt ocular injury from the process, severe intraocular inflammation, especially when the lens capsule has been breached or elevated intraocular pressure. These may, in turn, result in corneal opacity or decompensation, secondary glaucoma, retinal detachment, couching maculopathy, and ptosis bulbi.[6]

This previously uncommon practice in children is a reason for paradigm change in the detection and accessibility to care and follow-up for child eye care to tackle the impact of parental ignorance and economic difficulties on the hapless children who have the conditions of avoidable blindness. Can this be a justifiable reason why both eye cataract surgeries should be done at the same sitting for children at risk (i.e., indigent patients and patients with illiterate parents residing far from the hospital) as in Case 1? A treaty released after a United Nations Children’s Fund convention stated that “children are not just objects who belong to their parents and for whom decisions are made or adults in training but rather, they are human beings and individuals with their own rights”[7] for which the best decision must be made on their behalf. Despite this commitment, millions of Nigerian children still continue to suffer violations of their rights as a significant number are still being denied adequate education, comprehensive healthcare, and nutrition.[7] In the two cases presented, the family members tried seeking for eye care but this was wrongfully done and has resulted in an irreversible visual loss in the children.

Even though it is evident that cataract surgery with intraocular lens implantation is the mainstay as cataract management is concerned, a significant percentage of our population still prefer to have their eyesouched. The factors highlighted by studies aiding the acceptance of couching in our community in this millennium age include poor accessibility, poverty, ignorance, fast procedure performed in patient’s familiar environment, absence of hospital bureaucracy, and the fact that patients can pay in kind and installment.[1,2,8] Tafida and Gilbert reported that couchers are responsive and add spirituality or mysticism to the process which increases acceptability by the patients.[6]

A study by Ademola-Popoola and Owoeye in our institution in 2004 reported couching in nine eyes of six adult patients who subsequently had a poor vision from glaucoma, panuveitis, and optic atrophy.[2] Thereafter, cases of couching significantly reduced in our facility. This may be attributed to the increase in awareness among the populace and first-hand evidence of improved vision following cataract surgery in individuals who have been previously blind from cataracts in their communities. It may also be due to the poor outcome among community members who have had couching done. It is a well-documented fact that couching results in several ocular morbidities which ends up resulting in irreversible visual loss.[2]

The practice
Couching is a profession among people in the northern part of Nigeria. It is passed down from one generation to the other within the family with the conscious effort not to reveal the tricks in the procedure to outsiders. This is the reason why it is hard to find any coucher giving details of the procedure. However, Tafida and Gilbert following an interview with a coucher revealed that most will commence the procedure by making ablation and or praying giving a spiritual element to the process which aids patient’s calmness and trust.[8] This is done while the patient is in a sitting or supine position. Thereafter, an unknown medication is instilled into the fornix to “solidify” the cataract. A sharp instrument is then used to hit the globe temporal to the limbus as this location contains very few blood vessels. He uses prayer to “secure/aid” hemostasis for those who bled from the procedure, even though we know that bleeding will stop spontaneous with time.[8] Some will thereafter prescribe topical medications to their victims. For a child to undergo such a procedure, some concoction might have been administered for sedation or hypnosis. The child in Case 1 was taken to the venue by the uncle and grandmother after discussing with the father over the phone, whereas the child in Case 2 was led by the uncle who could not give details of the procedure. It is important to note that these two cases had the consent of not only the parents but also of the other family members.

The pay
In most government-owned eye care centers across the country, the direct cost for cataract surgery for an adult ranges between N30, 000($100) and N 50, 000($150). However, for a child, it costs about N 80,000($250) to have cataract surgery done in one eye. The indirect cost for caregivers from transportation and man-hour loss for coming to the city are even more, especially for most
rural dwellers whose income is subsistence. This is one of the major challenges to uptake of cataract surgery in children. The need for general anesthesia, sometimes anterior vitrectomy and extensive postoperative care from managing inflammation, frequent refractions, amblyopia, and detection of glaucoma, and secondary opacification of visual axis make the procedure challenging and expensive.

Not many families in our population living in rural Nigeria can afford to fund this procedure. The first procedure of the child (in Case 1) in question was supported by a fellow colleague (a surgeon) who is from the same village as the child. While the surgery of the sibling was also funded by a sponsor. The unfortunate scenario is that the couchers would have been paid the meager saving of the family, other extended family members might contribute in different ways, including payment in kind (which the government set up does not accept) to offset the bill since they could participate more actively if the procedure is carried out in their homes.

The economic and psychosocial impact of childhood blindness is huge, considering the long blind year, it was found that seven out of blind beggars have been blind from childhood, eight out ten of them have never had eye examination, and seven out of ten street beggars beg on account of being blind.[9] In addition, for every blind child that survives to beg in adulthood, there are two other children who alternate as guides to the blind person and whose potentials are not realized.[10]

How many of such children do we have begging on the streets or in schools for the blind who do not have access to an influential person who is willing to foot their medical bills?

**Pointers**

Couching has always been reported in adults and very rare in children. Its evolution in children may be an indication of a deteriorating eye care delivery in the country with our increasing population, failure of primary healthcare, neglect of children in community eye health plans, the inadequate number of pediatric ophthalmologist/general ophthalmologist/other eye care worker per million population (considering the increasing Nigerian population), the uneven distribution of the limited eye care worker with high concentration in the urban areas, poor implementation of regulations that allowed quacks to thrive even in government-owned hospitals, resulting in poor outcome of cataract surgery making the community to lose confidence in comprehensive eye care delivery, the poor development of our primary healthcare system, and attitude of the limited health worker to work. Could this be a manifestation of increasing poverty, ignorance, and deteriorating educational system in our villages or increasing confidence among the couchers to respond to the needs of the children? The need for a paradigm shift in community eye health to specifically target children is, therefore, imperative.

**Paradigm**

Healthcare is the responsibility of the government to create policies such as the Kwara Childhood Sight Protection Law[10] and ensure implementation that will safeguard the future of children. Government everywhere should adhere strictly to the treaty from the convention on the right of a child.

Eye care units should be deliberate in incorporating couchers into the mainstream of eye care through training of the couchers to deliver safe services in the community; they can be trained to serve as cataract finders, and provide incentives to them for all cases of cataract referred to the hospital for proper assessment and surgery.

In addition, the primary health-care system should be resuscitated and provided with necessary capacity in terms of workforce development and basic equipment for functionality as they are closest to the people such that cases of eye disorders can be referred through a well-established and defined referral channel for specialist care. Immunization and well-baby clinics should also be strengthened to accommodate the eye screening of children. This will go a long way in identifying the eye diseases early and aid timely intervention.

There should be training and retraining of eye care workers as this will go a long way in improving cataract surgery outcome which will, in turn, increase the confidence of the community on the eye facility.

Community leaders, elders, family heads, and representatives must be carried along on the magnitude of the problem as they are in the best position to enforce regulations barring the activities of the couchers in the rural community. The principle of the global action plan “in which nobody is needlessly visually impaired where those with unavoidable vision loss can achieve their full potential and where there is universal access to comprehensive eye care services”[11] must be abided to and no child should be denied access to care in hospitals.

Public awareness messages through the media (via television, radio, and print media) must always be created on the consequences of couching and focus must be directed to providing accessible and affordable high-quality cataract surgery services in rural Nigeria.
in an expanded, routine, and sustainable way. It is high time our government and nongovernmental organization come to the aid of these vulnerable children.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the forms, the patients’ parents and other family members have given their consent for their images and other clinical information to be reported in the journal. They understand that their names and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest
The authors declare that there are no conflicts of interests of this article.

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