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GANGRENE WITH FINGERS AUTO-AMPUTATION IN A TRADITIONAL BONE SETTERS' MISMANAGED ERB PALSY- A CASE STUDY

ESEZOBOR, E. E[1]., DAWODU, S. O[2]., ABIKOYE, F. O[3]., AWE[1], O. O., INEGBEDION, C. E[1]

DEPARTMENTS OF [1]SURGERY AND [2]PAEDIATRICS, IRRUA SPECIALIST TEACHING HOSPITAL, IRRUA, EDO STATE, NIGERIA.
[3]DEPARTMENT OF BURNS AND PLASTIC SURGERY, NATIONAL ORTHOPAEDIC HOSPITAL, LAGOS, NIGERIA.

ABSTRACT

Volkmann Ischaemic contracture from traditional bone setters is a common complication that present to the orthopaedic surgeons from mismanagement of long bone fractures. In this case, a 17 month old child presented to the plastic surgery unit with gangrene of the left hand following a traditional bone setter misdiagnosing Erb Palsy for a fracture. The father's level of education could not help in decision making despite the doctor counselling the parent at birth. This trend calls for better strategy to educate the people on healthcare issues, improve their confident in the orthodox healthcare system and create some level of training for the traditional bone setters.

INTRODUCTION

The menace of the traditional bonesetters had been described by many authors in orthopaedic practice. This is worse in sub-Saharan Africa where poverty and ignorance contribute to the poor outcome of most of the disease condition. The fact that 85% of the orthopaedic patient would have presented to the traditional bone setters before seeking the orthodox medical practitioners help[1] speaks volume of the trust that the populace have for the tradition bone setter. This has boosted their confidence in venturing into other conditions patient might have after trauma[2]. However, there is hardly any emphasis on the complications arising from their venture into managing soft tissue injuries being misdiagnosed as fracture. Erbs-Duchenne[3] palsy which is a nerve injury usually arising from birth trauma is one of them. The arm hangs limply by the side with the forearm pronated and the palm facing backwards, like a porter hinting for a tip[4]. The tradition bone setters assume this to be a fracture or dislocation and apply their usual right splint, massage and

scarification which can result in complications similar to those seen by the orthopaedic surgeons in the case fractures.

CASE REPORT

M.D is a 17 month old male child who resides with his parents in Ekpoma.

He presented with six weeks history of ulcer on the left distal forearm and hand and a week history of loss of all the finger of the left hand.

His problem started after he was taken to the traditional bone setter (TBS) by his parents on account of an inward rotation of the left upper limb with a clenched hand since birth which was ignored.

The lower half of the left forearm was said to have been tied over some bamboo sticks with a bandage by the TBS. Child was said to have cried all through the night with subsequent swelling and formation of blisters by the next morning. He was taken to a private hospital where the bandage was removed and was placed on intravenous infusion, analgesic and antibiotic. The wound was dressed daily.

After a week on admission, all the fingers were noticed to be gangrenous and parent were counselled for disarticulation of the digit which they refused. Child was subsequently discharged against medical advice after two weeks on admission and was taken home where he had hot compress and self medications.

They opted to present at Irrua Specialist Teaching Hospital when the digit were noticed to be falling off with subsequent discharge from the stump.

Child is a product of uneventful nine month gestation delivered by caesarean section in a private hospital. Developmental history was said to have been up to date except for the child's inability to use the left upper limb. He is well immunized for age.

He is the only child in a monogamous family setting; father is a graduate while mother has secondary level of education.

At presentation, we found a fully conscious child in no obvious distress, not febrile but pale, anicteric and well dehydrated. Pulse was 126 beat/minute and respiratory rate was 28 cycle/minute.

Essential finding was in the left upper extremity with absence of all digits from the level of the metarcarpophalangeal joint. There was an ulcer extending from the middle third of the forearm involving the whole hand. The edge is slopy and the floor is covered with slough and offensive purulent discharge. The radial pulse was palpable and there were significant palpable left axillary lymphadenopathy.

A diagnosis of Volkmann Ischaemic injury with autoamputation of the digits of the left hand secondary to mismanaged Erb's palsy was made.

Investigation revealed a PCV of 17% and WBC of 5, 700/mm3 (differentials-N-43%, L–36% and E-02%) with Anisocytosis +++, microcytosis ++ and Poikilocytosis +++. Platelet count was 386,000/nm^3 and genotype was AA. Wound culture yielded Staphylococcus aureus sensitive to gentimycin and X-Ray revealed absence of all the phalanges.

Patient was given antibiotic and antitetanus prophylaxis. He had blood transfusion and wound was cared for with serial mechanical debridement, sufratulle and topical antibiotic dressing. He had split thickness skin grafting on the 11th day of admission (see figure 1 and 2) and was subsequently discharged home after 4 weeks of admission.

Patient has since been lost to follow up.

DISCUSSION

Erb palsy in neonate majorly result from birth trauma.[5] Historic obstetric teachings have stated that brachial plexus injuries result from excessive traction and flexion exerted on the infant's neck during delivery, thereby causing injury to the cervical nerve roots from the spinal cord. In contrast, many recent reports have suggested that a significant proportion of brachial plexus injuries may be in utero phenomena[6,7]. The good news is that more than 90% of these injuries will resolve by 1 year of life, with only a 5% to 8% rate of persistent nerve injury.[8]. In this case, the parent affirmed to have been counselled by the doctors and the nursing staff on the good prognosis with physical therapy. However, the societal pressure to consult the traditional bone setters was claimed to have been much for them to handle.

This case clearly exposes the advantage the TBS has in terms of publicity. They are popular in our rural and urban areas majorly because of their unregulated access to the media whereas the orthodox medical practitioners are regulated. This might account for why the educated father was cajoled despite the counseling. Also, these traditional bone setters collect their fee in piece meal which is very convenience for the poor populace. In an environment like ours where ignorance, culture and traditional beliefs of the society have been found to be responsible for TBS patronage and the consequential exploitation[9], it will therefore be of interest to create awareness on the possibilities that abound in orthodox practice.

Also of great concern is the misdiagnosis of soft tissue injuries involving muscle and nerve as fractures. Their method of managing this condition exposes their total ignorance about the disease. It is important to let the TBS be aware of their limitation in making diagnosis and proper treatment through proper education[10].

Intervention can either be in form of educating their potential clients or to educate the traditional caregivers. Since basic education is now free in Nigeria, effort should be made to making health education accessible to the pupil in schools. The primary health personnel who have access to the grassroots populace should also be awakened to their responsibility of educating to the possibilities in orthodox practice. The idea of creating an interface between the orthodox medical practitioners and the traditional medical practitioners might be a practicable way to solve this menace. The orthodox medical practitioners need to derive a new strategy to engage the traditional bone setter meaningfully for the ultimate benefit of the populace. There is a good place for the bone setters to be educated properly in order to eliminate or reduce the occurrence of these complications[11]. In southern Ethiopia, instructional courses to bone setters led to significant reduction of gangrenous limbs and amputation within two years[12]. Since the majority trust them despite their high complication rate, proper education in terms of diagnosis, treatment and complication may make them be conscious of their limitation and consequently bow to superior practice.

As long as the quality of healthcare a helpless child gets depend on the economy of the parent, complication from the traditional bone setter will continue to abound. At least, access to quality healthcare should be free for children below the age of twelve.

One of the strong reasons the traditional bone setters practice continues to thrive despite high complication rate is that while the orthodox practice in Nigeria is regulated and as such there is disciplinary action against any medical doctor found wanting of mismanaging a patient, the traditional medical practitioners go unpunished in the event of same crime because of their unregulated practice. Therefore, it is pertinent that the government should find a way to regulate the practice of the traditional bone setter so as to salvage the limbs of our future generation.

CONCLUSION

This case has no doubt outlined the cost of the unchecked traditional bone setter's practices and the cost of low health information among the citizenry. Effort must be made to educate these traditional bone setters about the diseases they treat. Since so many people in our environment still trust them, we need to start putting this fact to a positive use as it was outlined in the Southern Ethiopian studies. Organized training will go a long way to reduce their complications. Lastly, effort needs to be intensified at improving our health information dissemination system. Patient level of

education may not automatically translate to patient level of health awareness Continuous health education at all level will save the nation this kind of embarrassment

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Figure 3:
Grafted residual part of the hand post compartment syndrome (Dorsal view)

Figure 4:
Grafted residual part of the hand post compartment syndrome (volar view)