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Syndactyly released on a 5-week child at home with razor blade by mother - Case report

Ogunlusi JD[1], Kadiri AI[1], Ajibola DB[1], Oluwadiya KS[1], Olasinde AA[2]

[1]Department of Surgery, Ekiti State University, Ado-Ekiti, Nigeria.
[2] Department of Orthopaedics, Federal Medical Centre, Owo. Nigeria

Corresponding Author's E-mail: gbemidare@yahoo.com

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Abstract

A 5-week old male infant brought into the Children Accident and Emergency of our hospital with a three-day history of bleeding from left index and middle fingers and fever of one-day duration. Mother used a new razor blade to separate fused index and middle digits which she noticed 4 days after the birth of child. Nil ante natal care and delivery was at a Christian mission home. Examination revealed an acutely ill child, pale, tachycardic with oedematous left hand with wounds on adjacent surfaces between the left index and middle fingers. Mother brought the very sock child to hospital twice and twice she declined admission because of for lack of fund.

This was a system failure which led to the mother having no ante natal care, delivering at non hospital setting, no competent examination of the baby at birth and inadequate treatment for a sick child.

We are recommending that all pregnant mothers should have access to routine free or affordable ante natal care and governments should provide free treatment for such children of indigent mothers to avoid this type induced complications.

Key words: Syndactyly, mother, release, razor blade

Introduction

Syndactyly is a cutaneous and/or bony digital malformation with possible webbing of adjacent fingers or toes and uni- or bilateral occurrence.[1] It is caused by failure, during the sixth to eighth weeks of intrauterine life, of the usual longitudinal interdigital necrosis that normally separates the fingers.[2] The majorities of syndactylies occur isolated with unknown cause. Factors that may have affected intrauterine environment, such as exposure to teratogenic agents, virus infections or other diseases in early pregnancy, are postulated as possible causal hypotheses.[2] Sporadic case as in the index case may not have any family history but positive family history of syndactyl occurs in 10-40% of cases. [2,3,4]

It is the most common congenital malformation of the limbs with incidence of 1 in 2000-2500 live births.[5,6] Males are more commonly affected than females and it is commoner in Caucasians. The proportionate involvement of the digits is as follows: middle/ring fingers (50%), ring/little fingers 30%, middle/index fingers-15% and thumb/index fingers-5% .[2]It may occur as an isolated entity or a component of more than 300 syndromic anomalies[7].It could be classified as simple (only interposing soft tissue), complex (fusion of adjacent phalanges or abnormal bones). It could also be classified into complete and incomplete (based on fusion of fingers to the tips), the index patient has a simple and incomplete syndactyly and treatment is surgical. Literature review did not yield a similar case of release of syndactyly at home by the mother and that is the reason for reporting this case.

Case Presentation

A 5week old male infant brought into the Children Accident and Emergency department of Ekiti State University Teaching Hospital, Ado-Ekiti with a three day history of bleeding from index and middle fingers of the left hand. Bleeding started three days prior to presentation when mother used a new razor blade to separate fused index and middle digits which she had noticed after birth of the child. This was done without analgesia. Mid way through the procedure, she noticed uncontrollable bleeding from the digits and excessive cries from the child, forcing her to terminate the procedure abruptly; she immediately applied strips of cloth as dressings with slightly reduced the bleeding. She did not give the child any medication locally or orally after the procedure. Presentation at the paediatric Accident and Emergency Room was primarily due to the high grade fever noticed three days after the procedure not because of the wounds on the fingers. There

was no such deformity in the other limbs or any family history of such. Pregnancy was uneventful but there was no ante natal care. Delivery was at a Christian mission home where deformity was not noticed however mother observed the anomaly 4 days after delivery on getting home but sought no medical care. She felt it is something that she could treat by herself. There was no evidence suggestive of post-partum/ puerperal psychosis. Family support was poor; the father of the child was not supportive either financially or physically in the hospital. The child is the first and only child of the monogamous couple. The mother is a primary school drop-out and a petty trader.

Exanimation revealed an irritable child who was pale and febrile with a temperature of 38^{o}C, heart rate of 180 beats/minute and respiratory rate was 34/minute.

The left hand was blood stained. Both the index and middle fingers were grossly edematous with raw wounds on adjacent surfaces of the fingers extending from the base of the fingers to distal interphalangeal joints (DIP) joint, nil active bleeding (Figs 1a&b). There was no dressing on the wounds. The nail fold and nail of the index finger were absent, but the other digits were grossly normal. Other systems, head, chest, abdomen, anus and other limbs were also normal.

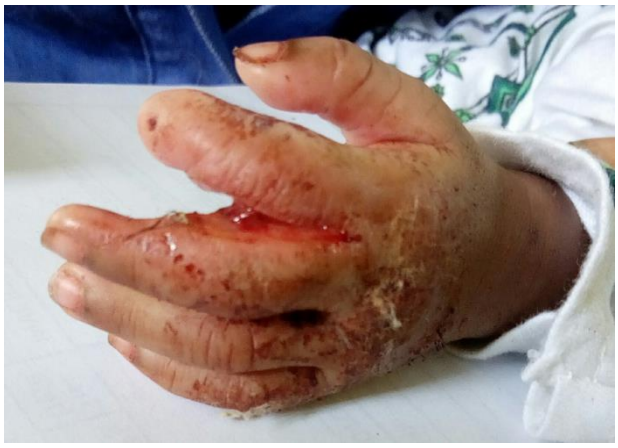

Fig 1 a

In the Emergency Room, the wound was dressed with sofratulle between the digits and tetanus toxoid prophylaxis was given. He was to be admitted and transfused with 150mls of packed cells blood because the Packed Cell Volume was 24%. Mother could not afford antibiotics and the following the investigations: Complete Blood Count, plain radiograph of the hand, Microscopy Culture and Sensitivity. She subsequently declined admission and took her child home against medical advice. The child was brought to the hospital three days later, febrile, tachycardic, paler and bleeding from the wound with purulent discharge. The plan was to admit the child but mother declined again for lack of fund and the child was lost to follow-up.

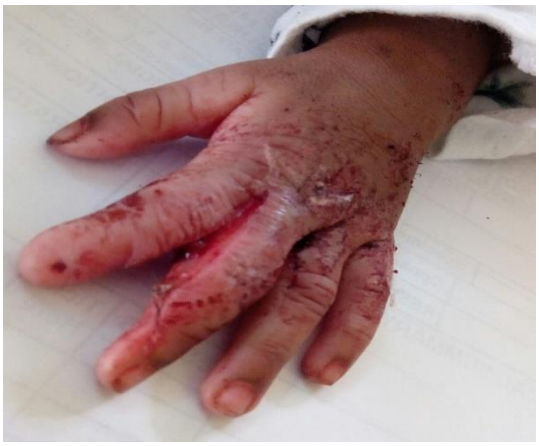

Fig 1b

Fig.1 a & b: Oedematous left hand of a 5 week old boy showing the released syndactly between the left index and middle fingers

Discussion

Surgical syndactyly repairs are usually performed between 12 and 18 months of age to minimize scar contracture (operating too early) and deviation of the joints (operating too late) and the purpose of treatment is to enhance hand function.[8,9] In the case presentation, the release was done by the mother at home when the child was barely one month. Asepsis could not have been maintained, this would have accounted for the infection of the wound and feature of septicemia in the child at presentation.

The pregnancy was termed and uneventful but there was no ante natal care. It has been advised that when a child with syndactyly is seen, it must be remembered that other simultaneous malformations can occur due to chronological proximity to the intrauterine development of the hand[2]. The child was seen and thoroughly examined by a doctor/ paediatrician at 5 weeks for the first time but fortunately, he had no associated pathology that would have required medical attention. The syndactyly was a simple and incomplete. Earlier review of this child, especially at birth and examination would have made it possible for early diagnosis to be made and explained to the mother. This would have addressed her concern and possible questions from her would have been answered.[9] Interaction with the mother would have made it possible to inform her that the syndactyly is a simple type that would require a simple surgery that needed to be planned and carried out when the child would have been between the age of 12- 18 months. This interaction and explanation would have prevented the mother from carrying out the procedure and thereby avoiding the avoidable complications like

bleeding, anemia and infection that the child developed. Twice the mother declined admission of her child because the poor petty trader could not afford the hospital bill and the child was in poorer clinical state during the last visit. The present state of the child could not be provided because of the lost in follow up.

This case report showed a system failure that led to the mother having proper ante natal care, delivering at non- hospital setting and having no competent examination of the baby at birth by a physician. If examination at birth had been done, the syndactyly would have been detected, and the management plan explained to the mother. This might have led to the avoidance of the procedure done by the mother and the associated complications seen in the sick child.

Recommendation: A paradigm shift in the care of pregnant mothers is needed in the country to improve the care of pregnant women and children and to prevent complications similar to this. All pregnant mothers should have access to routine free or affordable ante natal care. At birth, every child should be thoroughly examined to detect any anomaly and the parents should be advised accordingly. Similarly, a situation where a very sick child is left at the mercies of an indigent mother is unacceptable and governments should provide free treatment for such children.

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