Case Report

Above-Elbow Amputation and Death following Human Bite Mismanaged by Quacks: A Case Report and Review of Literature

Iyidobi EC, MB,BS; FWACS. Nwokocha AU, MB,BS; FWACS. Nwadinigwe CU, MB,BS; FWACS. Ugwoke KI, MB,BS.
Department of Orthopaedics and Traumatology, National Orthopaedic Hospital Enugu, Nigeria.

ABSTRACT

BACKGROUND: Human bite is a common injury sustained during a fight, love passion, self mutilation, cannibalism or vampirism[1]. Although widely reported as being more dangerous than animal bites, such complications as limb amputation from gangrene and eventually death is either uncommon or scarcely reported in our environment.

OBJECTIVE: To highlight the dangers of human bite as a potential cause of severe morbidity and mortality especially when poorly managed.

METHODOLOGY: A 30 year old Fulani herdsman with gangrene of the right hand, and distal forearm presenting in coma 10 days after sustaining human bite is presented and relevant related literature reviewed.

CASE REPORT: M.U. is a 30 year old Fulani herdsman who presented to us at the accident and emergency unit with 10 days history of human bite to the first web space of the right hand, 5 days history of gangrenous hand and distal foreman, and 2 days history of loss of consciousness. The injury was inflicted by a fellow herdsman during a fight. He then commenced treatment with a patent medicine dealer.

A few days later the hand became swollen with associated severe pains, serous discharge and subsequent darkish discoloration, frank pus exudates and loss of hand function. Two days prior to presentation, he lapsed into unconsciousness after complaining of severe weakness and fever.

Following his presentation, clinical examination and investigation, he was offered a below elbow guillotine amputation. However by the next day, he deteriorated with GCS of 5/15 and subsequently died after 24 hours of presentation.

CONCLUSION: Human bite can be a cause of severe morbidity and mortality. Treatment by quacks should be discouraged while early presentation, surgical debridement and delayed wound closure should be emphasized along with other surgical principles.

KEY WORDS: Human bite, gangrene, above-elbow amputation, death, quacks.

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INTRODUCTION

Human bite is a common cause of presentation in accident and emergency room with fight as the commonest aetiology. Sexual passion, cannibalism and self mutilation are other less common causes[2]. The face and hand are the common anatomic sites involved. When the hand is involved, knuckle or clenched fist injury is more frequent than wed space involvement[3]. If the patient presents early, adequate debridement, antibiotic administration and delayed wound closure ensure excellent prognosis. In our environment, presentation is usually late after intervention by quacks[4]. Being reportedly more dangerous than animal bites[3], this delay and initial poor management predisposes to early and rapid spread of infection leading to possible gangrene, septicaemia, and death. We present this case of gangrene and septicaemia leading to amputation and death from human bite presenting late after intervention by a " chemist"

CASE REPORT

M.U. is a 30 year old Fulani herdsman who presented to us at the accident and emergency unit with 10 days history of human bite to the first web space of the right hand, 5 days history of gangrenous hand and distal foreman, and 2 days history of loss of consciousness. The injury was inflicted by a fellow herdsman during a fight. He sustained no other injuries and was neither a known diabetic nor hypertensive. He subsequently presented to a chemist who sutured the wound and administered intramuscular injections and some oral drugs. A few days later the hand became swollen with associated severe pains, serous discharge and subsequent darkish discoloration, frank pus exudates and loss of hand function. Two days prior to presentation, he lapsed into unconsciousness after complaining of severe weakness and fever. He had no spasms or convulsions.

Clinical examination revealed a toxic looking, unconscious and restless young man with Glasgow coma scale of 8/15. He was pale, deeply jaundiced and dehydrated. Vital parameters at presentation were as follows: temperature: 36^0C, pulse: 120 beats min, regular and small volume, Blood pressure: 90/60mmHg. Respiratory rate was 28 cycles/minutes. The neck was supple and Kerning's sign was negative. There was wet gangrene of the right hand and distal 1/3 of the forearm with copious sero-purulent discharge. Crepitations were absent in the limb. The chest had wide spread crepitations. A diagnosis of wet gangrene of the right hand and distal forearm and septic shock was made

Investigations obtained included

Urgent PCV:-	**21%**
Random blood sugar:-	**168mg %**
Urinalysis	**Bilirubin 2 +, Blood +**
X Ray	**Nil fracture**

FBC,ESR- PCV-21%,WBC,T-20,400/, N-90%, L-10% Nil ESR >150,

Correspondence: Dr IYIDOBI EC, E-mail: toezigbo@yahoo.com

S/E/Ur/Cr ; Na 142mmol/dl, K 4.8mmol/dl, CL- 104mmol/dl, Ur - 326mg/dl, Cr 5.8mmol/dl.
RVS Indeterminate .
Blood culture yielded no growth.

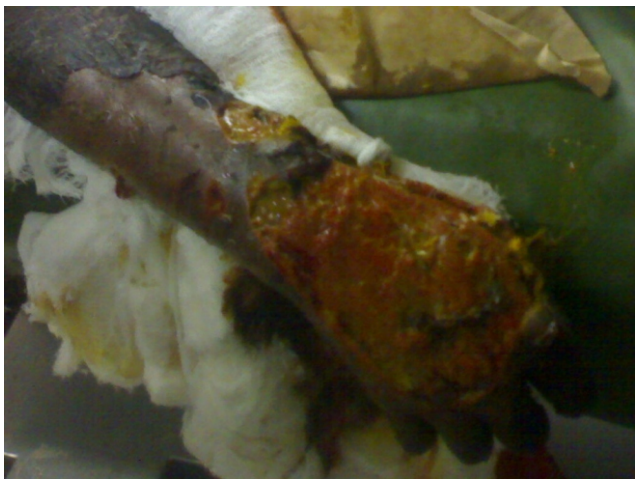

Figure 1: The gangrenous limb.

Resuscitation was with intravenous fluids, transfusion of 1 unit of whole blood, tetanus prophylaxis and parenteral ceftriaxone and flagyl. Urine output monitoring was instituted by urethral catheterization and continuous closed drainage. Informed consent for above elbow amputation was obtained from relatives and offered under general anaesthesia. Post operatively parenteral antibiotics and analgesic, were continued, two more units of blood were transfused and naso-gastric feeding commenced. Suction of oronasopharynx, oxygen administration and regular turning were done as necessary. By the next day, he deteriorated with GCS of 5/15 and subsequently died after 24 hours of presentation.

DISCUSSION

Human bite was fist described in medical literature by Hultgen in 1910[1]. Several reviews of different series thereafter have since confirmed it as a common cause of presentation to the accident and emergency room and in general practice[2]. Common causes include fight and passionate love bites. Less common aetiologies are vampirism, cannibalism and self mutilation. A case of the later in which the penile shaft and thumb of the victim were recovered from his colon at necropsy has been reported[6]. Penetrating injuries, laceration, avulsion and traumatic amputation of the lips, nipples ear, eyelids, and fingers represent the pattern of injury[7]

Hand injuries from human bite is usually sustained during a fight as seen in this patient. Web space injury is however uncommon unlike clenched fist injuries. Late presentation is a general feature as patients seek home remedies, help from quacks or are too embarrassed to present to hospital. The virulent nature of human bite and the early onset and rapid spread of infection stem from the wide range of bacterial flora resident and isolatable from the oral cavity[6] . These usually includes staphylococcus, streptococcus, gonococcus, anaerobic baccili, vincent's bacillus, spirochete, fussiform bacillus, spore forming organisms , Treponema pallidum etc.

Olaitan et al in Enugu and Tonta in Tasmania reported no serious face and hand infection from human bites even for those presenting late [8,3]. This is contrary to our experience with this patient. Co-morbid medical condition like diabetes mellitus is known to worsen the outcome of hand injuries from any cause and may lead to gangrene, septicaemia, amputation and death[9]. Our patient had moderate hyperglycaemia despite not being a known diabetic. The high RBS might have been part of metabolic response to sepsis[10]. HIV infection is another factor that usually lead to a downhill turn of events in patients with infections leading to fulminant sepsis and death[11]. The patient HIV status was indeterminate. He however died before confirmatory test was carried out.

Also noteworthy is the neutrophilic leucocytosis a parameter that is nearly consistently seen in acute inflammation and infection[12,13]. This was evident as demonstrated by the WBC and differential counts.

Amputation as a mode of treatment was the only option of eradicating the source of sepsis available in the circumstance in view of the limb being both dead and deadly.

CONCLUSION

This unfortunate herdsman underscores once again the importance of early presentation to the appropriate facility and expertise after sustaining trauma- mild or severe. This is in addition to demonstrating that human bite can be a cause of severe morbidity and even death. The continuous menace of quackery is also evident. There is no alternative to applying correct and comprehensive surgical principles when indicated. Surgical exploration, debridement and lavage, appropriate antibiotic administration, hand elevation and immobilization, delayed wound closure and early physiotherapy ensure rewarding outcome.

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REFERENCES

1. Al- Fallouji MAR, Post graduate surgery, the candidates guide second edition. London, Butterworth- Heinemann; 1998, 146-148.
2. Al- Fallouji MAR, Traumatic love bites, London, British Journal of Surgery, 1977,100-101
3. Talan DA, Vital sign; consequences; of Dog bites, cat bites and people bites, London; New England Journal of Medicine, Jan. 2009.
4. Eyichukwu GO, Iyidobi EC, Austin moore

hemiarthroplasty, the Enugu experience, Enugu, NJM, 2007.
5. Eke N. Genital self mutilation, there is no method in this madness; London, BJU International, 2000
6. Maurie K et al, pus in the hands and feet in Primary surgery (Non-Trauma). New York, Ox ford University Press 1990, 104-113.
7. Kenneth P.R, Bites & Stings in sabiston DC, Text book of surgery, The biology basis of mordian surgical practice . Philadelphia W.B.Saundas company 1986,289.
8. Olaitan PB et al, Management of Human bites of the face in Enugu, Nigeria, Makarere, African Health Science Journal, vol 17, No 1, 2007, 50-54.
9. Archibald LK, Gill GV, Abbas Z, Fatal Hand Sepsis in Tanzania Diabetic Patients. Atlanta, Diabetic Medicine, March 1997.
10. Badoe EA et al, The metabolic response to trauma in Principles and Practice of surgery in the tropic including pathology.
11. HIV
12. Alexander SW, Surgical infection and choice of antibiotics in sabiston DC Textbook of surgery, the Biological basis of modern surgical practice. Philadelphia W.B Saunders company 1986 256-283.
13. Hernandez S, while cells and lymph modes in Robbins SC, Cotran RS, Vinag K, Pathological basis of diseases, 3rd edition, W.B Saunders company, 1984, 655-656
14. Rains ATH, Ritchie HD, Bailey and Love's short practice of surgery, 9th Edition, London, H.K. Lewis and co. ltd. 1984,17-42.