

Stroke in a Patient with Cancrum Oris; A Case Report

*EFUNKOYA AA, *SULEIMAN AR,
*BAKO YH, **ADETULA IA

*Department of Oral and Maxillofacial
Surgery, Aminu Kano Teaching
Hospital, Kano

**Department of Preventive Dentistry,
Aminu Kano Teaching Hospital, Kano

Correspondence

Dr. Yusuf H, Bako
Department of Oral and Maxillofacial
Surgery
Aminu Kano Teaching Hospital,
Kano
Email: bako_yusuf@yahoo.com

Citation: Efunkoya AA, Suleiman AR, Bako YH, Adetula IA (2024). Stroke in a patient with cancrum oris; A case report. Nig J Med Dent Educ; 6(1):c6-c8.

INTRODUCTION

Pediatric stroke, though uncommon, has been attributed to a wide range of causes, including vasculopathies, infections, cardiac causes, and coagulopathies. The possibility of Noma leading to stroke has not been reported. We intend to report a case of stroke in a Noma patient at the Aminu Kano Teaching Hospital, Kano.

MATERIALS AND METHODS

A narrative description of a paediatric patient who developed stroke while being managed for Noma in our centre is being presented.

RESULTS

A 4year old female child was brought by her parents with a month history of wound on the face involving the right cheek up to the right infraorbital region, the whole of the upper lip up to the right nasal ala, and right part lower lip. The wound is large measuring about 8cm by 10cm covered with a dark coloured necrotic tissue and associated with foul smelling odour (Figure 1).

There was a preceding history of fever, generalized body skin rashes and diarrhea of two weeks duration. She was lethargic, pale, and emaciated weighing 7kg

and has a mid-upper arm circumference of 11cm depicting severe malnutrition.

Baseline laboratory investigations done reveal severe anaemia with a Haemoglobin of 1.4g/dL, the white blood cell count is $3 \times 10^3 / \mu\text{L}$ and the platelets count was $100 \times 10^3 / \mu\text{L}$. Her genotype was AA and serum electrolytes were within normal limits. Assessment of Noma and septicemia was made and multidisciplinary team management was instituted by the Maxillofacial surgeons, Padiatricians, Nutritionists and Social Welfare workers where Intravenous antibiotics, Blood transfusion, local wound debridement and Nutritional support with F-75 milk were commenced.

On second day of admission, she developed multifocal seizures followed by brief loss of consciousness and global hypotonia with muscle power of zero on all limbs. A diagnosis of stroke in a Noma patient with background severe malnutrition was made with sepsis and bacterial meningitis as probable causes. Management continued and after a week she developed generalized hypertonia and hyperreflexia (Figure 2) where the physiotherapists join the managing team for musculoskeletal rehabilitation.



Figure 1: The picture of the lesion at presentation.

DISCUSSION

Paediatric stroke is a rare with incidence of about 2.5-13 per 100,000 per year. It could manifest in several ways such as lethargy, seizures, vomiting, or focal neurologic deficit commonly hemiplegia, apnea spells or hypotonia. Several risk factors have been attributed to the aetiology of stroke in children some of which include vasculopathies, infections, cardiac causes, and coagulopathies. In the reported case, sepsis from the Noma which is an infectious disease that affects the orofacial region has been identified as a probable cause.

Orofacial infections are sources for cardiovascular thrombosis which can lead to stroke in Paediatrics. Additionally, infectious conditions can lead to bacterial meningitis and consequently result to local vasculitis and thrombosis. Stroke in paediatrics is also associated with multitude of problems ranging from feeding, disability related issues, hygiene, etc. Thus a multidisciplinary approach is needed to address the myriad of problems.

Noma is a public health scourge of economically disadvantaged children particularly in sub-Saharan Africa. The World Health Organisation (WHO) estimates that an annual total of 500 000 cases of noma occur worldwide. Poverty is the most important risk factor for noma, with chronic malnutrition, very poor environmental sanitation, poor oral health, unsafe water supply, close residential proximity to livestock and increased exposure to viral and bacterial infections the major predisposing factors. These risk factors are all present in this patient.

When Noma disease combines with stroke in a child it is often associated with substantial long-term burden on families since the child may live with the disability for a very long time.

The early detection of Noma is of paramount importance so that prompt intervention with local wound debridement, appropriate antibiotics and nutritional rehabilitation can prevent development of devastating sequelae.



Figure 2: Hypertonic state of the patient

CONCLUSION

This report suggests the need for closer evaluation of more Noma patients presenting with symptoms of stroke. Paediatric stroke has high rate of morbidity and mortality given the occurrence at a younger age and therefore, a longer duration of disability. It is therefore important to detect cases early and institute prompt appropriate intervention.

REFERENCES

- Coupland AP, Thapar A, Qureshi MI, Jenkins H, Davies AH (2017). The definition of stroke. *J R Soc Med*;110(1):9-12.
- Feller L, Khammissa RAG, Altini M, Lemmer J (2019). Noma (cancrum oris): An unresolved global challenge. *Periodontol 2000*; 80(1):189-199.
- Riela AR, Roach ES (1993). Etiology of stroke in children. *J Child Neurol*, 8:201-20.
- Tsze DS, Valente JH (2011). Pediatric stroke: a review. *Emerg Med Int*; 734506.
- Falkler WA Jr, Enwonwu CO, Idigbe EO (1999). Microbiological understandings and mysteries of noma (cancrum oris). *Oral Dis.*; 5:150-155.