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Case Report

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Stroke in a 26 months old boy

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Background

As part of the polio eradication effort, there is the need to intensify surveillance on Acute Flaccid Paralysis (AFP) for early identification of probable cases. Acute flaccid or floppy paralysis is defined as any case of new onset of hypotonic weakness in a child aged less than 15 years of age. This includes possible illness due to Guillian-Barré syndrome, transverse myelitis, traumatic neuritis, viral infections caused by other enteroviruses, toxins and tumours. Isolated facial paralysis is not included. In the early stages of the disease, polio may be difficult to differentiate from other forms of AFP. Therefore, to ensure that no case of polio goes undetected, surveillance targets a symptom (AFP) rather than a specific disease (e.g. polio).[1]

It is during this routine AFP surveillance that health staff in Yilo Krobo Municipal came across a child of about two years with acute onset of paralysis in the limbs from Boti community. This was reported to the Municipal level which sparked the interest of the Municipal Health Management team and a team was sent to the community to investigate the case.

Case presentation

Presentation was that of a male child aged 26 months with paralysis of right arm and leg. Parents of the child were peasant farmers and lived in one of the deprived areas within the Municipality. Prior to the onset of the paralysis, the child had fever but no history of convulsions, trauma or accident and the date of onset of the paralysis was 8th November 2013. The child was seen by the health staff on 13th November 2013. The child had received seven doses of Oral Polio vaccine, three of them being routine and four during National Polio Immunization Campaigns. Examination revealed normal muscle volume of the affected limbs with normal reflexes and floppy paralysis. Aside from these the child looked well. Stool specimen for AFP was taken and sent to the laboratory and the child was monitored.

Follow up after results

The stool result came out as negative for AFP and the child was asked to be brought to the Municipal Polyclinic after two weeks and further examination by the Municipal Director of health services revealed that the limbs were still paralysed and this time the paralysis was spastic and painful revealing the development of contractures. Other laboratory test like sickling was done which came out as positive and Hb electrophoresis done revealed that the child had Sickle Cell Disease with the genotype as SS. The child was put on treatment including haematenics and physiotherapy. He recovered and has gained strength in the limbs. He now stand and walk.

Discussion

This condition is clearly right hemiplegia from cerebrovascular accident (stroke) secondary to the sickle cell disease. Cook[2] first reported a case of a Negro boy aged 7 years who expired following sudden loss of consciousness. The autopsy showed subarachnoid haemorrhage associated with cerebral softening. Arena[3] also observed four Negro boys aged 4, 5, 6 and 10 years who had sickle cell anaemia and showed neurological symptoms and signs. Sickle Cell Anaemia can affect any organ in the body. Strokes or cerebrovascular accident affect 5-10% of the paediatric population who had sickle cell disease and, in addition, there may be MRI changes of silent stroke in up to 20% of the affected population before the age of 20 years. These children may experience cognitive problems or difficulties with psychological adjustment.[4] This neurological condition due to sickle cell anaemia has been observed in pediatric cases but rare in a child as young as 26 months. Communities need to be made aware of the existence of such conditions to prevent maltreatment and stigmatization of such children and provide the necessary care to them.

Conclusion

Cases of stroke or cerebrovascular accident can occur in young children with sickle cell anaemia and our surveillance system should be able to pick these children especially in remote and deprived communities and give them the health care and needed psychosocial support.

Acknowledgements

None.

Conflict of interest

None.

References

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