International Journal of Engineering Science Invention Research & Development; Vol. 12, Issue 2, August 2025
www.ijesird.com, E-ISSN: 2349-6185

The Role of Family-Oriented Primary Care in Managing Sickle Cell Disease and Its Psychosocial Burden: A Case Series from Nigeria

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***Abstract*— This case series describes the holistic family-centered management of a 12-year-old male with Sickle Cell Anaemia (SCA) presenting with vaso-occlusive crisis, his emotionally strained mother, and hypertensive grandmother. The family benefited from integrated care led by a Family Physician, including home visits, psychosocial support, health education, and follow-up. The child improved clinically; his mother's stress- related musculoskeletal complaints and the grandmother's poor adherence to antihypertensives were also addressed. The coordinated approach improved outcomes and patient satisfaction, demonstrating the importance of family medicine in managing chronic illnesses like SCA. This case highlights the value of biopsychosocial care, preventive interventions, and community-based practice in low-resource settings.**

***Keywords*— Adolescents: Family-Centered Care: Holistic Medicine: Nigeria: Sickle Cell Anaemia**

I. INTRODUCTION

Sickle Cell Anaemia (SCA) is a prevalent genetic disorder in Nigeria, affecting approximately 3% of the population and significantly impairing physical and emotional health. Adolescents with SCA experience poorer health-related quality of life (HRQoL) compared to their healthy peers, particularly in domains of physical functioning, pain, vitality, and social roles, often compounded by stigma (Adeyemo et al., 2015). The psychosocial burdens faced by adolescents include career limitations, emotional disturbances, and learning difficulties—varying significantly by age and education level (Adegboyega, 2021). Family- centered care, especially in primary care settings, provides continuity, psychosocial support, and coordination that can positively influence outcomes. However, few reports in Nigerian settings describe integrated family-focused management across multiple family generations. This report presents the coordinated care of a paediatric SCA patient, his caregiver mother, and hypertensive grandmother, highlighting how Family Medicine principles address medical, emotional, and social needs holistically.

II. CASE PRESENTATION

A. Index Case:

D.O., a 12-year-old male known SCA patient, presented with fever and throbbing bilateral lower limb bone pain of three days' duration. He had poor adherence to follow-up and malaria prophylaxis. Examination revealed fever, pallor, and mild icterus. He was diagnosed with malaria and vaso-occlusive crisis. Treatment included antimalarials, analgesics, fluids, and nutritional supplements. He improved over three days and was discharged with preventive and supportive care.

B. Mother (S.O.):

S.O., a 39-year-old housewife and mother of D.O., presented with a one-month history of lower back pain. She admitted to sleeping on the floor, lifting her children, and being emotionally stressed over her son's condition. Examination and lumbosacral radiograph were normal. Diagnosis was muscular strain. Management included education, analgesics, muscle relaxant, and lifestyle modification. Her symptoms improved significantly.

C. Grandmother (S.M.):

S.M., a 62-year-old trader and maternal grandmother, presented for a check-up. She was a known hypertensive but was non-compliant due to stress from D.O.'s illness. Examination showed elevated blood pressure and thickened arterial walls. Investigations showed no end-organ damage. She was reinitiated on antihypertensives and given lifestyle advice. Follow-up showed improved blood pressure and medication adherence.

A home visit revealed good housing conditions, mosquito nets, and family cooperation. The youngest child was tested and confirmed to have AS genotype. The family was also counselled on family planning.

III. DISCUSSION

This case series illustrates the core principles of Family Medicine: access to care, continuity, comprehensiveness, coordination, and family orientation. The biopsychosocial model was applied through integrated care that addressed medical, emotional, and social needs of three generations.

SCD, being an autosomal recessive disorder, often causes significant psychosocial stress for affected families. Nigerian adolescents with SCA often endure substantial stigma and emotional distress, which markedly lowers QoL, especially following hospital admissions or complications (Adeyemo et al., 2015). Psychosocial studies in Ekiti State report that adolescents with SCA commonly face occupational and social limitations, emotional upset, and behavioural challenges, which are modulated by age and educational level (Adegboyega, 2021).

Involving caregivers in education and counselling supports disease understanding and improves adherence. Evidence shows that caregiver distress and financial burden frequently disrupt family dynamics and caregiving ability (Adegoke & Kuteyi, 2012). Addressing caregiver stress as happened for the mother and grandmother in this case can reduce musculoskeletal complaints, improve medication adherence, and restore functional capacities.

A home visit enabled richer insight into environmental and social factors impacting patient care, consistent with literature showing that family engagement enhances trust, facilitates health literacy, and encourages preventive behaviors (Adegboyega, 2021). This inclusive biopsychosocial model strengthens coping, resilience, and satisfaction in chronic disease management and aligns with global recommendations for SCA care in resource-limited settings.

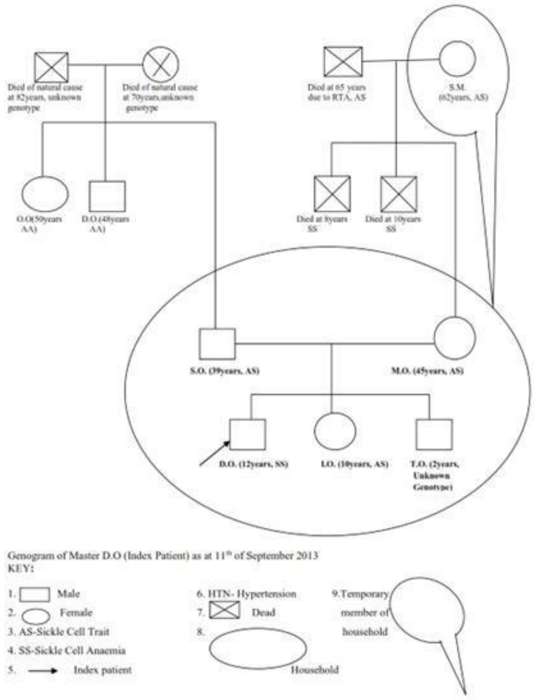

Fig. 1 Genogram of Master DO (Index Patient)

IV. CONCLUSIONS

Family Physicians are uniquely positioned to manage chronic illnesses in a holistic and integrated manner. This case demonstrates how family- oriented primary care can mitigate the clinical and psychosocial burden of SCD, empower caregivers, and foster better health outcomes.

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