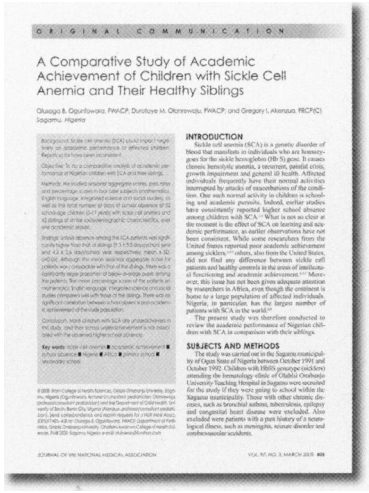
*The opinions expressed here are not necessarily the opinions of the National Medical Association.*



ORIGINAL COMMUNICATION

A Comparative Study of Academic Achievement of Children with Sickle Cell Anemia and Their Healthy Siblings

## Sickle Cell Anemia and Academic Achievement in Africa

Much of the current information on the effect of sickle cell anemia (SCA) on cognitive function and academic performance is based on American data. How applicable this data is to a Nigerian or African setting is difficult to assess.

Therefore, the article by Ogunfowora, et al. (*J Natl Med Assoc.* 2005;97:405–408) is timely and contributes to our understanding of the effect of SCA on academic performance in African children with SCA by showing that there was no significant correlation between school absence and academic under achievement, even though school absence was significantly higher in children with SCA, and more children with SCA were under achievers in their study population.[1]

This raises two questions: firstly, what other factors apart from absenteeism may contribute to the underachievement of children with SCA observed in this study?

Secondly, are the results of their study representative of all SCA patients in the general population in Nigeria or Africa?

Intuitively, it is logical to presume that frequent school absences in children with SCA (due to sickling crises, hospitalizations, etc.) would interrupt affected children's academic lives and contribute negatively to academic achievement. However, there is limited evidence in support of this, and the authors rightly point out in their paper that previous reports on this subject have been inconsistent.[1]

It is likely that other factors aside from school absenteeism acting independently or in combination influence the observed underachievement of children with SCA in this study. Neuroimaging studies, which used magnetic resonance imaging (MRI) and transcranial Doppler ultrasound (TCD), have provided physical evidence for the association of focal neurological pathology with reduced cognitive function in SCA.[2,3]

Focal cerebral damage localized to the frontal lobe was demonstrated in 93% of children with overt stroke and silent cerebral infarcts in one study.[2] TCD also showed that SCA patients with abnormal cerebral blood flow velocity performed poorly on measures of verbal intelligence and executive function.[3]

Thus, the effect of overt stroke and silent cerebral infarcts on neurocognitive performance is well described in American SCA patients, and this has been corroborated by multicenter studies in the United States.[4] This is not the case in Africa.

The incidence of overt stroke and silent cerebral infarcts in SCA varies in different parts of the world.[5,6] Nigerian patients with SCA do not commonly present with stroke.[6] However, the incidence or prevalence of silent cerebral infarcts has never been documented. This possibility should be explored.

Further studies documenting the incidence and prevalence of silent cerebral infarcts and its relationship with academic achievement among indigenous African SCA patients as well as other studies trying to identify other contributory factors are needed to improve our understanding of cause and effect and how these factors interact.

### REFERENCES

1. Ogunfowora OB, Olanrewaju DM, Akenzua GI. A comparative study of academic achievement of children with sickle cell anemia and their healthy siblings. *J Natl Med Assoc.* 2005; 97:405-408.

2. Brown RT, Davis PC, Lambert R, et al. Neurocognitive functioning and magnetic resonance imaging in children with sickle cell disease. *J Pediatr Psychol.* 2000; 25:503-513.

3. Kral MC, Brown RT, Nietert PJ, et al. Transcranial Doppler ultrasonography and neurocognitive functioning in children with sickle cell disease. *Pediatrics.* 2003;112:324-331.

4. Wang W, Enol L, Gallagher D, et al. Neuropsychologic performance in school-aged children with sickle cell disease: a report from the cooperative study of sickle cell disease. *J Pediatr.* 2001;139:391-397.

5. Adekile AD, Yacoub F, Gupta R, et al. Silent brain infarcts are rare in Kuwaiti children with sickle cell disease and high Hb F. *Am J Hematol.* 2002;70:228-231.

6. Akinyanju OO. A profile of sickle cell disease in Nigeria. *Ann NY Acad Sci.*1989;565:126-136. ■

*Ayokunle T. Abegunde, MBBS, DTM&H, MSc*
*40 Hutchins Road*
*Thamesmead Central*
*SE 28 8SA, London, U.K.*
*abegs@mailcity.com*

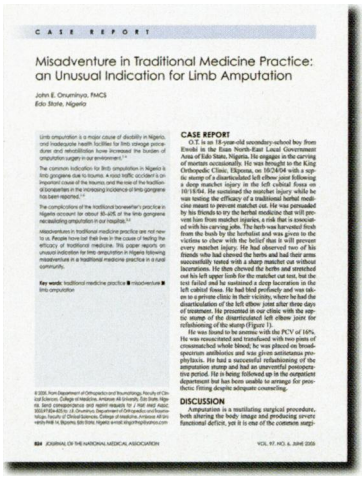
## Legitimacy for Traditional Healers?

We appreciate the concern of Dr. Onuminya towards misadventures in traditional medicine (*J Natl Med Assoc.* 2005;97:824–825). Although most reports of traditional healers originate from African countries, the impact of traditional healers is probably more widespread and felt in all developing countries. In a country

like India, it is estimated that there are about 70,000 traditional healers and bone-setters, and they treat 60% of all trauma.[1] Little or nothing is known of how well these patients do, unless failures/complications make them report to health centers.

Traditional healers and bone-setters will continue to exist. With their rigid unscientific methods (e.g., use of herbs to prevent matchet injury, etc.) and without knowledge of anatomic physiology, complications are bound to occur. Education plays a key role in guiding them—what they can do and cannot do. They should be urged to adopt the fine example of Chinese traditional healers, where complicated cases are referred to orthopedic experts in equipped centers. Shah reported encouraging results from an effort of bridging the gap between the orthodox and unorthodox medical practitioners in Nepal.[2] More recently, a similar attempt by Eshete also yielded fruitful results.

The teaching interaction with traditional healers may not necessarily be one-sided. Several of these healers are experienced and have sound knowledge of regional resources. Citing one example, the Puttur bandage—a type of forearm bandaging practiced in South India—is considered superior to the normal "cuff and collar sling" used by orthopedic surgeons.[4] This bandage supports the arm at the wrist and angle of thumb and palm, preventing wrist drop.[4]


CASE REPORT

Misadventure in Traditional Medicine Practice: an Unusual Indication for Limb Amputation

John E. Onuminya, FWCS
Edo State, Nigeria

CASE REPORT

DISCUSSION

Integrating the services of traditional bone-setters in primary healthcare requires a strong political commitment as well. They should be motivated and permitted to attend as orthopedic assistants in primary trauma departments of district hospitals.[5] A particular village can be adopted for an academic session by a teaching medical institute as a part of rural health scheme providing education and addressing the health problems of that particular region. This should be supplemented by legislation regulating these traditional practices so as to limit them to what is considered safe.

## REFERENCES


1. Church J. Regional news. *World Orthopaedic Concern Newsletter.* January 1998. Issue No. 74.

2. Shah RK. Comments. *Trop Doct.* 1992;22:121.

3. M Eshete. The prevention of traditional bone setter's gangrene. *J Bone Joint Surg.* 2005;87-B: 102-103.

4. Shankar D. Traditional bone setting. http://planningcommission.nic.in/reports/sereport/ser/seeds/seed_helth.pdf. Accessed 08/16/05.

5. Onuminya JE, Obekpa PO, Ihezue CH, et al. Major amputations in Nigeria: a plea to educate traditional bonesetters. *Trop Doct.* 2000; 30:133-135. ■



*Anil Agarwal, MS*
*Research Associate*
*University College of Medical Sciences and GTB Hospital*
*Delhi, India*
*rachna_anila@yahoo.co.in*

*Rachna Agarwal, MD*
*Specialist*
*ECHS Polyclinic*
*Noida, U.P., India*


## Critical Tests Missing from July Case Report and Diagnosis of Primary Lymphedema Tarda

Dear Sir,

I compliment the authors on the article of primary lymphedema tarda in an 88-year-old African male, published in the July 2005 issue (*J Natl Med Assoc.* 2005;97:1031–1035.) Clearly, we do not have enough experts in the field of lymphology, and any attention to this topic is welcomed. I respectfully disagree on the diagnosis of lymphedema in this case. It is very unusual to find lymphedema involving one arm and in this age group and without any previous clinical signs or symptoms. Most striking was the absence of the lymphoscintigraphic findings in this article. If one is diagnosing by elimination process and the key finding is the specific study—in this case, the lymphoscintigraphy—then show us the findings. The article only mentions that "no discernible lymphatic tracts were present in the left upper extremity." What about the axillary lymph nodes, extravasation of the tracer, comparison of the right arm and other findings? Were they present? Please let us have the follow-up on this patient.


CASE REPORT

Primary Lymphedema Tarda in an 88-Year-Old African-American Male

BACKGROUND

CASE PRESENTATION

*Sincerely,*


*Emily Iker-d'Harnoncourt, MD*
*Director of the Lymphedema Center*
*2021 Santa Monica Blvd.*
*Santa Monica, CA 90404*
*iker@lymphedemacenter.com*