

Editorial

Biomedical Research: Child health and nation's health

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In a recent study from the United Kingdom (UK) [1], the Royal College of Pediatrics and Child Health Commission on Child Health Research expressed concern regarding children's biomedical research in the UK. Apart from concerns regarding funding, the committee noted that clinical trainees in pediatrics were "poorly equipped with core research skills". "Little or no research experience" has also been noticed in most newly appointed consultant pediatricians. Conversely, Sudanese pediatricians are lucky that their pioneers clearly visualized the importance of biomedical research, and its positive impact on child's health, and the nation at large [2-5]. They acquired this through heritage from their teachers and mentors at the Faculty of Medicine, University of Khartoum (U of K), who achieved remarkably on research that made a difference in the life of people in Sudan and elsewhere [6-8]. The postgraduate training in pediatrics was started by the Faculty of Medicine, U of K in the 1970s and consisted of a thesis which should be submitted by the trainee as a pre-requisite required for qualifying to sit the final clinical examination. This gave the necessary research orientation and strength to generations of consultant pediatricians, and parts of several of these theses were published as original articles and reviews in the Sudanese journal of Pediatrics (SJP) and also in

high profile international journals.

The theme of the current SJP issue is on biomedical research, as reflected in articles depicting the current status of biomedical knowledge, or highlighting the history of biomedical research in Sudan. The Review Article depicts the role of radiological imaging in the management of disorders of sex development, which requires urgent and prompt medical, psychological and social management. The required imaging modalities include ultrasonography, genitography and magnetic resonance imaging (MRI).

The first original Article reveals the prevalence and risk factors of type 2 diabetes mellitus (DM) in Sudanese children and adolescents attending a pediatric and adolescent diabetic clinic in Khartoum. The study confirms that type 2 DM is an emerging health problem among Sudanese children and adolescents, mostly as a result of obesity. The second Original Article deals with type 1 DM. It outlines the precipitating factors, epidemiological parameters and clinical presentation of diabetic ketoacidosis in children admitted to the Pediatric Intensive Care Unit (PICU), King Fahed Hospital, Al-Baha, Saudi Arabia. In this cohort of 80 children, positive family history of diabetes was significant, infection was the most common precipitating factor, vomiting and abdominal

How to cite this:

Salih MAM, Satti SA, Swar MO. Biomedical research: Child health and nation's health. Sudan J Paediatr 2013; 13(2):6-9.

pain were the commonest presenting symptoms, whereas only 2.5% presented with coma.

The third Original Article studied the pattern of anthropometric measurements among term newborn infants in Khartoum State. The study, which included 263 term neonates, observed a difference in relation to Sudanese neonates anthropometric parameters compared to the World Health Organization multi growth reference standards (WHO-MGRS). The fourth original Article described the maternal and obstetric factors and identified causes of early neonatal deaths in a cohort of 100 pre-term infants born at Soba University Hospital, Khartoum State. Maternal infection, pregnancy induced hypertension and multiple pregnancy were the main obstetric risk factors. Respiratory distress syndrome was a prominent cause of morbidity and there was a significant association between RDS and early neonatal morbidity.

An interesting fifth Original Article addresses one of the leading causes of preventable morbidity and mortality in the World, and highlights cigarette smoking among medical students in the National Rabat University, Khartoum. The smoking rate was found to be 6.6% and 14.8% respectively, among students in the first and fifth years, less than what is observed in the Region or Worldwide. Most students started smoking in the high secondary school when they were adolescents, and most were influenced by a smoking parent.

The sixth Original Article highlighted the anticoagulant effect of fenugreek (*Trigonella foenum-graecum*) and demonstrated that fenugreek aqueous extract in different concentrations inhibits clot formation and increases prothrombin time. It's noteworthy that the seeds of fenugreek, which is cultured worldwide as a semi-arid crop, constitutes a common ingredient in the Indian subcontinent food and is used in many places to increase milk supply in lactating women [9]. Desiccated seeds of fenugreek have been recovered from the tomb of Tutankhamen [9]. In a study

by two of us (MAMS and SAS)[10] on attitudes and practices of breast feeding in Sudanese urban and rural communities, 63.6% of mothers used a traditional sweet porridge made of wheat four, milk, sugar and fenugreek seeds (called Helba in Arabic) as galactagogue. A novel study by the Department of Food Science and Technology, and Faculty of Medicine University of Gazira, Sudan, published in SJP [11], reported on the successful use of the same fenugreek porridge (Helba) as a weaning and therapeutic diet for malnourished children. The diet showed acceptability, tolerance, good growth rate and weight increase for the treated groups of malnourished children (1-3 year - old). Pregnancy related venous thromboembolism (VTE) is major cause of maternal morbidity and mortality, about half of which occurs in the postnatal period [12]. It could, therefore, be of great interest if the Authors will follow their study with a second one to explore the anticoagulant effect of fenugreek during postpartum period. The article is yet another reminder of the visionary thinking of the late Professor Tigani El Mahi [13] who drew attention, in his article on "Food customs and Cultural Taboos" to the danger of stranging people through the influence of "modernization" from their national diets which stood the test of time [14].

The first case Report describes to the first case of congenital cystic adenomatous malformation (CCAM) reported from Sudan. The affected baby presented early in the neonatal period with bilateral lung cyst and had favorable outcome despite being oxygen dependant for more than six weeks. The second Case Report describes Dandy- Walker malformation associated, in a 3-month-old infant, with neurocutaneous melanosis. Neurocutaneous melanosis is a rare, non-familial phacomatosis which has been reported to be associated with Dandy-Walker malformation in less than 20 cases worldwide.

Historic Perspective section includes a comprehensive and elegant account on Henry Solomon Wellcome,

the famous drug manufacturer. A philanthropist and a pioneer sponsor of medical research in Sudan, Henry Wellcome established and supplied the Wellcome Tropical Research Laboratories (WTRL) in Khartoum. The first Director of WTRL, Sir Andrew Balfour, was appointed in 1923 the first director of London School of Hygiene and Tropical Medicine [15]. Wellcome's welfare work had a significant impact on the local inhabitants of Jebel Moya in Central Sudan where he was directly involved in the planning and running of extensive archeological excavations. The article shows aerial photography pictures, one of his innovations. It also shows as Supplementary Maternal, two video clips showing "A day at Gebel Moya" filmed about a century ago!

The last portion of the current SJP issue is devoted to the late professor Mansoor Ali Haseeb who passed away on 29 September 1973, four decades ago. Professor Haseeb, as stated by Hoogstraal, "has been more intimately associated than any other living person with adding to Sudanese biomedical knowledge and sharing vast experience with younger generations of physicians and scientists." [6]. Harry Hoogstraal is a renowned American entomologist and parasitologist, who had been described as "the greatest authority on ticks and tickborn diseases who ever lived" [16]. The second Historic Perspective Article highlights the glaring career of Professor Mansoor Ali Haseeb (1910-1973), the first Sudanese Director of Stack Medical Research Laboratories, Khartoum (1952-1962), first Sudanese Professor of Microbiology and Parasitology, first Sudanese Dean of the Faculty of Medicine, U of K (1963-1969), and Chairman of the Sudan Medical Research Council (1973). Children in Sudan and elsewhere owe him tremendous thanks for his valuable research on vaccines, their production and implementation programs, most notably in combating small pox, rabies and epidemic meningitis. He was active in public life and became Mayor of Omdurman City. He was awarded, in 1973, the international Dr.

Shousha Foundation Prize and Medal by the WHO. The second Historic Perspective article reflects on the obituary ceremony in tribute to Professor Haseeb, organized by the medical Students Association of the Faculty of Medicine, U of K.

Regarding Republished Articles, the first is from the scholarly book of Prof. Haseeb "A Monograph on Biomedical Research in the Sudan" [6] and depicts an elegant outline of the history of medical research institutions in the Sudan. It also included a scholarly account on Kitchener School of Medicine (established in 1924), which later became the Faculty of Medicine, U of K in September 1951. The third Republished Article testifies to the dedication of Prof Haseeb to medical research. He meticulously and patiently gave an account of theses for higher degrees dealing with biomedical research in Sudan during a period over six decades (1909-1973). This includes theses done by Sudanese researchers in Sudan or abroad or those done by the expatriates on material from Sudan and submitted to European or North American Universities. More than ten of these are in UK and Ireland and included the University of Oxford, University of Cambridge, University of London and University of Edinburgh. North American universities included Iowa State University, University of Texas and University of Minnesota. The second Republished Article is on historical background and epidemiology of cerebrospinal meningitis written by Dr. Muna Hassabu, then a medical student at the Faculty of Medicine, U of K. The article was supervised by Professor Haseeb and formed part of a seminar proceeding on cerebrospinal meningitis organized by the Students Medical Association (SMA), Faculty of Medicine, U of K and published in the SMA journal Al Hakeem in 1974. The SMA used to organize yearly seminars on various medical issues and publish them as a proceeding in Al Hakeem. The seminar was attended by Lapeyssonie who coined the name of the "African Meningitis Belt" [17,18]. The Editors would

like here to sincerely thank Dr. Muna Hassabu and Dr. Hatim Mansour Ali Haseeb for granting permission to republish these articles. We are also grateful to Dr. Hatim M A Haseeb for the valuable material and photos he made available to us.

The last Republished Article is a poem (in Arabic) written by one of us (MAMS) as an elegy to the memory of Prof Haseeb. The poem was part of the obituary

ceremony to pay tribute, organized by SMA of the Faculty of Medicine, U of K. It was later published in the same issue of Al Hakeem [Al Hakeem 1974, Vol 9 (No 2): 62]. Established in the late 1950's, Al Hakeem (meaning wise person or doctor in Arabic) continued to publish original articles mainly by medical students, and shines as pioneering in its field worldwide.

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