Short Communication

The Sudanese American Medical Association visiting faculty program. An ambitious model for augmenting renal education in the Sudan

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Summary
The Sudanese American Medical Association (SAMA) is an organization from North America for Sudanese American health care professionals whose visiting faculty program (VFP) carries out renal educational activities. There was a significant growth in this program between December 2014 and 2015 with activities that included the Basic Renal Transplantation and Pathology Workshop, SAMA Renal Review and Update Course, and the First International Dialysis Conference. These activities comprised a total of 60.5 teaching hours of accredited education by the International Society of Nephrology (ISN), which cannot directly sponsor any educational activities in the Sudan at present due to the US Sanctions against Sudan. They were delivered by international faculty from the ISN, the International Society for Peritoneal Dialysis (ISPD), as well as local faculty. Beneficiaries were adult and pediatric renal practitioners at all levels including physicians, pharmacists, and nurses. This was achieved by a collaborative working model between SAMA, ISN, ISPD, Sudanese Nephrology Society (SNS), Sudan Medical Specialization Board (SMSB), Soba University Hospital, and Sadagat Charity Organization. The model involved divided responsibility of faculty recruitment and travel, activity organization, accreditation, and expense coverage. SAMA VFP is a promising intervention to augment renal education in the Sudan through its collaborative, sustainable, high quality, and cost effective model.

Keywords: Sudan, Nephrology, SAMA, ISN, SNS, ISPD

The Sudanese American Medical Association (SAMA) is an organization of Sudanese American health care professionals in North America. It was established in April 2008 as an independent, nonprofit, and non-political entity to establish scientific, educational and charitable initiatives. Since its inception, SAMA has been steadily growing both in the number of its members and programs. SAMA established the Visiting Faculty Program to exchange knowledge with colleagues and trainees in the Sudan. The program had progressively evolved from isolated teaching activities by SAMA members during their visits to Sudan to comprehensive longitudinal workshops and courses that are accredited by local and international bodies. A key constituent in this has been a robust partnership model with the following institutions: SNS, the SMSB, Soba University Hospital, and Sadagat Charity Organization. In this model, SAMA identifies and sponsors international faculty to visit Sudan, SNS, SMSB and Soba organize events, and Sadagat, assumes local expenses including receiving and hosting visiting teams in the Sudan. The ISN is the major global organization concerned with advancement of education, science and patient care in nephrology. The ISN closely collaborates with over 70 national and regional nephrology societies worldwide to achieve its goals. However, it is currently not permitted to sponsor or support any educational activities in the Sudan because of the sanctions imposed by the United States. In 1997, the US government imposed comprehensive economic, trade and financial sanctions against the Sudan \(^1\). In August 2014, the Office of Foreign Assets Control (OFAC) issued a general license authorizing certain academic and professional exchanges \(^2\). Unfortunately, in spite of the above positive changes, the ISN was still unable to sponsor visiting faculty to go to Sudan or to allocate funds for educational activities in Sudan or
whose beneficiaries are in Sudan. Faced by this kind of situation, SAMA stepped in to provide the necessary funding for the air travel of two faculty in December 2015, the Kidney Transplantation and Basic Pathology Workshop incurred a total cost of $4,446.56 and $2,040 for the First International Dialysis Conference. SAMA had established strong collaboration ties with the ISN to enable ISN-endorsed activities and faculty to come to Sudan. This was also a testament to the quality of provided continuous medical education. In this context the following three ISN-endorsed activities took place between December 2014 and December 2015.

**Kidney Transplantation and Pathology Basic Workshop**

In Sudan, enhancing kidney Transplantation is a priority. SAMA had executed this workshop in partnership with Soba University Hospital and Sadagat. It was endorsed by the ISN which had taken place during the period 6th-7th December 2014 (Saturday and Sunday) at the Doctors’ Union Hall in Nile Street in Khartoum. The goals were to inspire and empower staff involved in kidney diseases and transplantation in the Sudan. Specific objectives were raising awareness and providing education on aspects of renal transplantation and pathology, emphasizing the team-approach and forging connections for sustained training and research opportunities between the visiting and host individuals and institutions. The international visiting faculty were Mark Haas, professor of renal pathology at Cedars-Sinai Medical Center in Los Angeles, California, James Cooper, transplant nephrologists, Patrick Klem, transplant pharmacist and Susan Harris, transplant coordinator from the transplant center of University of Colorado in the USA. Additionally, US-trained Abubakr Imam, senior pediatric renal consultant from Hamad Medical Center in Qatar, had also covered aspects of pediatric renal transplantation.

SAMA identified and recruited the visiting team in collaboration with the ISN Renal Pathology Committee and covered the airline ticket expenses. Organization of local logistics was carried out by Soba University Hospital. The total number of registered attendees was 188; with a mixture of medical, pediatric, and surgical consultants, trainees, pharmacists and nurses. It was well attended by staff from the five transplant centers in Sudan. It involved 17 hours of medical education that was endorsed by the ISN. Exciting discussions by eager participants were made during the workshop regarding the protocols and practices of transplant in Sudan and how these could be optimized. Certificates of Attendance displaying the ISN, SAMA, Soba as well as Sadagat organization logos were handed out to participants. Attendees’ feedback was overall extremely positive. SAMA donated copies of the Handbook of Kidney Transplantation to each transplant center at the conclusion of the workshop, in addition to a copy of the Comprehensive Clinical Nephrology Textbook to renal fellows. Sadagat volunteers cared for the social program for the guests until their returning home. A final workshop report was submitted to the ISN.

**The Renal Review and Update Course**

The Sudan Medical Specialization Board established its Nephrology Subspecialty Council in July of 2010 to initiate a Renal Fellowship Program\(^3\). The Fellowship Board requires two years of supervised training with entry and exit examinations. The number of graduates thus far is 25 (23 adults and 2 pediatric nephrologists). Currently there are 20 enrolled trainees. A period of training outside Sudan was planned to be an integral part of this program for all fellows, but because of different reasons that could not be uniformly applied. SAMA has designed the Renal Review and Update Course in partnership with the SMSB and SNS to try to fill these training gaps by Sudanese nephrologists who trained and work outside the Sudan. The ISN had endorsed the course substantiating its high scientific and educational quality to benefit the renal community in the Sudan. It was promoted on the ISN Gateway’s Conference Calendar and
announced to ISN membership via the monthly e-Updates. It was designed on a comprehensive curriculum and delivered in two parts in 2015 (Figures 1 & 2).

**Fig 1: Renal Review and Update Course-I, July 2015**

![Number of Attendees by Profession](chart1.png)

**Fig 2: Renal Review and Update Course-II, December 2015**

![Number of Attendees by Profession](chart2.png)

The first part topics discussed included acid base, water, and electrolyte homeostasis, pregnancy and the kidney, in addition to oncology in a total of 11.5 hours. The course material was prepared and taught by Hatim Hassan, faculty from the University of Chicago, Illinois and Ashraf Madany Mohammed, Chief Nephrology Fellow at St Louis University Hospital in Missouri, USA. The second part reviewed resistant hypertension, acute kidney injury, chronic kidney disease, and glomerular diseases in a total of 18 continuous medical education hours. A special session on evidence-based nephrology and how to present an effective Journal Club was also presented to the trainees. Pediatric nephrology topics discussed were vesico-ureteral reflux, update on the management of nephrotic syndrome and acute kidney injury in children and neonates. The goal of this session was to enable attendees to describe the pathophysiology, presentation and management of the discussed clinical conditions in addition to review and interpret up-to-date literature relevant to clinical practice. Teaching faculty was Abubakr Imam, Elwaleed Elhassan, staff member of Wayne State University, Michigan, USA and a designated clinical Hypertension Specialist, and Arif Mutwali from Letterkenny and Sligo Hospitals in Ireland. The course was well attended by an extremely enthusiastic audience who had actively asked questions, participated, and was willing to stay longer to
cover more topics. Post test and evaluation forms were given to the participants to assess their gained knowledge; 92% of attendees passed the test. A certificate of attendance was given out to all registered attendees. Regarding the budget; there was no direct financial cost to SAMA for executing this course since its visiting faculty volunteered their air travel and time. The SMSB charged physicians a nominal fee to cover the venue rental, banner and course badges. This fee was waived for incapable attendees.

The First International Dialysis Conference

Acute kidney failure (AKI) is often preventable and treatable. The ISN has established global initiatives, namely; the Oby25 Initiative and Saving Young Lives Project to raise awareness about AKI and provide access to renal replacement therapy for patients with potentially reversible diseases. The ISN cannot sponsor educational activities in the Sudan due to the Office of Foreign Assets Control (OFAC) of the US Treasury sanctions. SAMA sponsored esteemed professors to deliver this Conference in Sudan in the context of the aforementioned ISN global initiatives. This activity was contributed to by the ISN, ISPD, and co-organized by the SNS, and Sadagat Charity Organization. The objectives were to raise awareness about AKI, its recognition and management, discuss chronic kidney disease (CKD), its manifestations and measures to halt its progression, in addition to review different lifesaving dialysis modalities and their optimal delivery in local and resource-poor settings. Another goal was to examine the growth of Sudan National Peritoneal Dialysis Program, and discuss strategies to strengthen it. International Faculty included Fredric Finkelstein from Yale University, USA. He is the Chair of the Continuing Medical Education Committee for the ISN and Co-Chair of its Dialysis Committee. Edwina Brown from the Imperial College London who heads the peritoneal dialysis program at Hammersmith Hospital in London, UK. Isaac Teitelbaum is director of the Home Dialysis Program at the University of Colorado School of Medicine in Aurora, Colorado and is the president-elect of ISPD. Elwaleed Elhassan, from Wayne State University in Michigan, USA, the past director of Ribat Peritoneal Dialysis Center and the current SAMA secretary general. Mohamed Babikir Abdelraheem, previously a faculty of the University of Khartoum, founder of Noura Center of Pediatric Nephrology at Soba University Hospital, who currently serves as a consultant at Aljalila Children's Hospital in Dubai. Sudan faculty included Hasan Abu Aisha, Chair and Founder of the Sudan National Peritoneal Dialysis Program and Babiker Kaballo President of the Sudanese Nephrology Society. Abubakr Abdalwahhab from Ibn Sina Hospital and Amin Banaga from the Academy Charity Teaching Hospital also contributed. Nizar Zufo, transplant and vascular surgeon from the University of Khartoum and Sara Elsir, a senior Nephrology Fellow at Soba University Hospital.

The Conference took place on December 12 and 13, 2015 at Corinthia Hotel in Khartoum. Registered attendees were 131. They included a majority of adult and pediatric consultant nephrologists, renal fellows, registrars and medical officers, as well as nurses working on Sudan Peritoneal Dialysis Program. Many practitioners from the Sudan States attended. The conference was significantly attended by renal leaders including Prof Abdelrahman Musa, the father of nephrology in Sudan, and key adult and pediatric nephrologists. It comprised 14 hours of didactic education endorsed by the ISN. There were exciting presentations from Nora Pediatric Renal Center in Soba University Hospital by Mohamed Abdelrahameem depicting their expertise with using peritoneal dialysis to treat AKI since the center’s inception in 2004. This was recently published in Peritoneal Dialysis International. It highlighted the value of meticulously recording database and the keen staff of the Center supported by strong connections with Nottingham University...
Hospital in the UK. There were remarkable presentations about the Sudan National Peritoneal Dialysis Program, the obstacles facing it and negatively impacting on its growth. Intense discussions took place, with invaluable insight from Fred Finkelstein into how to tackle those challenges based upon experience of other centers around the world. Excellent talks were given about etiology and recognition of AKI in Sudan by Abubakr Abdelwahab. An overview about using peritoneal dialysis to treat AKI as currently promoted by the 0by25 initiative was given by Fred Finkelstein, who along with Mohamed Abdelraheem and others, drafted the ISPD guidelines on this topic. The rationale of promoting peritoneal dialysis use is the low cost and clinical effectiveness that makes it ideal for poor-resource settings. Edwina Brown gave interesting talks about supportive therapy for advanced CKD and complications of access of hemodialysis as well as peritoneal dialysis. Isaac Teitelbaum gave excellent educational talks on the pathophysiology of AKI, principles and practice of peritoneal dialysis as well as continuous renal replacement therapies (CRRT) which were very well received by renal trainees. Nizar Zulfo’s presentation of experience with vascular access in Sudan, and guidance to nephrologists about timing and care of the access were extremely enlightening. This stresses the need for such multi-disciplinary meetings and how they could impact on patient care. Sara Elsir, a senior renal fellow, gave an overview of experience with peritoneal dialysis access types and insertion practices in Sudan. It was highly informative and well presented. Amin Banaga gave an intriguing talk about the causes of ESRD in Sudan based on a study he did that suggested hypertension and chronic glomerulonephritides as the leading causes. Babikir Kaballo gave an overview of the introduction of critical care nephrology and application of CRRT in the Sudan. There was a high level of enthusiasm and discussions about the current practice of renal replacement therapy in Sudan, and how resources could be directed to provide best utilization strategies.

In summary, SAMA in conjunction with its local partners was able to establish a collaborative, sustainable, high quality, and cost-effective model for augmenting renal education in the Sudan. Despite the inability of the ISN to sponsor any direct educational activities in the Sudan, due to the US sanctions restriction; it had contributed to and endorsed those educational initiatives. Future activities include the ongoing endorsed Renal Review and Update Course, which will be held on an annual basis. An important added benefit of the Dialysis Conference was reinforcing the acknowledgment of the ISN and Saving Young Lives Program of the Sudan National Peritoneal Dialysis Program. The Program will therefore be increasingly used as a training destination by ISN sponsorship for other African countries. Further valued ISN projects in the Sudan will be implemented once the sanctions are lifted.

Acknowledgement
The following individuals had significantly contributed to this work: Salaheldin Abusin, Mohamed Elamin Awad Yousef, Ihab Babiker Tarawa, Abubakr Abdelwahab, Babikir G Kaballo, and Fredrick Finkelstein.

References:

