Spine Care in Sudan

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ABSTRACT

In this short manuscript, evolution and development of spine care in Sudan was reviewed.

KEYWORDS: Abusalih, Shaab hospital

INTRODUCTION

Sudan is a large African and Arab country. It is about two million square kilometers in area, and is surrounded by 6 African and Arab countries (Figure 1).

MEDICAL SERVICES in SUDAN

The modern medical services in the Sudan started with the Turkish occupation period of the Sudan (1821 - 1881 AD) with some European (French, German Italian, Hungarian) and Arab doctors.

Syrians, the Lebanese, Egyptians came with the invading army and settled in Khartoum. They were general practitioners as most of the doctors all over the world were at that time. Most of them left Sudan during the Mahadia Revolution period (1881–1898).

The invading English and Egyptian armies in 1898 came with their doctors, and Khartoum civil hospital was opened in 1902 followed by Omdurman civil hospital and many other hospitals in different regions of the Sudan.

The Kitchener medical school (as part of the Gordon Memorial College that was established in 1902) was opened in 1924 to graduate the first group of Sudanese doctors in 1928 (2, 4).

NEUROSURGICAL SERVICES in SUDAN

Proper Neurosurgical Practice was not known till early seventies last century, when Dr. Hussein Suleiman Abusalih came back to Sudan after completing his surgical and neurosurgical training in England and Egypt to be named the first Sudanese neurosurgeon (1, 3) (Figure 2).

Before that time, neurosurgical practice in Sudan was only nonspecialized and was shouldered by the general and orthopedic surgeons who used to treat minor
neurosurgical problems like head injuries and spinal compression by doing decompression for T.B spine and for disc prolapses.

Abusalih started proper neurosurgical practice in Sudan with a small unit in the Shaab hospital that was the nucleus of the recent department of the neurosurgery in Shaab hospital (Figure 3). In his unit, Dr Abusalih practiced all the major specialties of the modern neurosurgery from the pediatric neurosurgery to adult spinal and cranial problems. He was then joined by his college's Professor Ali Abdurrahman Bari and many others who specialized in neurosurgery in different parts of the world like England, Sweden, the former Soviet union, Egypt, USA, china and Holland.

The Sudan medical specialization board was established in 1995. The first neurosurgeons from the board were graduated in 2003, then in 2006 and in 2009. There are many residents now doing their neurosurgical training with the board.

Other Sudanese neurosurgeons came from outside the Sudan to practice in Sudan in the last ten years. The total number of practicing neurosurgeons in Sudan is now about twenty six neurosurgeons and all of them practice spinal care as a major part of their daily practice.

There are now six governmental centers in Sudan for neurosurgical and spine care, five of them in Khartoum and one in Medani, the second largest city in Sudan, and there also more than ten private centers.

Most of the countries surrounding Sudan except Egypt and Saudi Arabia are lacking spine care services so many patients from those countries came to the Sudan for spine care, increasing the load on spine care institutions.

ORTHOPEDIC SERVICES in SUDAN

Orthopedic services started a little earlier in Sudan, namely at early fifties (1952) when the first Sudanese surgeon who made his specialization in surgery at the Royal College of Surgeons of England, Dr Ibrahim Elmagraby, returned back to Sudan to practice in Khartoum hospital. He was followed by a number of colleges. The total number of orthopedic surgeons in Sudan now is about 113.

Most of the orthopedic surgeons in Sudan do not perform spinal procedures and those who do surgery perform only simple procedures like decompressive laminectomies. However, in the last ten years, three spinal orthopedic surgeons who are highly trained in different spinal approaches and instrumentations came to practice in Sudan. They solved the problems of the patients who need those services and were used to be treated outside Sudan in Egypt, Jordan, Saudi Arabia, England and Germany, but unfortunately all three of them settled in Khartoum and the remaining parts of Sudan are still deficient in spinal services and patients have to travel to Khartoum to receive these services.

Some locally trained neurosurgeons and orthopedic surgeons are trained by the above mentioned spinal surgeons, and some of them were sent to other countries to specialize as spinal surgeons.

TRADITIONAL ORTHOPEDIC THERAPISTS

The traditional orthopedic therapists are ordinary people who have no formal medical education, and some of them even have no general education. They got experience in treating different orthopedic and spinal

Figure 2: Professor Hussein Suleiman Abusalih the first Sudanese neurosurgeon.

Figure 3: The neurosurgical department at Shaab Hospital.
problems from their fathers or teachers, and they treat the spinal conditions with massage, traction, mobilization or immobilization, and cautery, but they do not do any spinal surgery. They are distributed all over the Sudan mainly in the peripheries but some of them practice in the center of Khartoum and earn the trust of the patients. Sometimes the patients trust them more than the doctors, as many patients think that spinal surgery means paraplegia but fortunately this old concept is now fading away with the good results of the spinal interventions performed with recent diagnostic and therapeutic facilities. Some of the traditional orthopedic therapists have sound experience and the trust of some doctors, but some of them are catastrophic as their field is invaded with some people with no expertise due to financial reasons.

**TYPES of the SPINE CARE SERVICES AVAILABLE to the PATIENTS in SUDAN**

The services available to spinal patients are mainly located in Khartoum and to some extent in the second town in Sudan, Medani, and include the following:

1- Diagnostic services including different types of plain X ray CT scans (three dimensional CT is also available), MRI, and radioisotopes scanning.

2- Spinal surgical services. The orthopedic spinal surgeons usually do anterior and posterior spinal instrumentation, while the neurosurgeons usually do the intraspinal procedures for lesions such as tumors, cysts, syringomyelia. Sometimes a team combining both orthopedic spinal surgeons and neurosurgeons performs a major procedure.

3- Physiotherapy and Rehabilitation services.

**SITUATION of the SPINE CARE in SUDAN NOW and FUTURE PROPOSAL**

The centers practicing spinal care services are mainly located in Khartoum, most the services are available to public except the spinal instrumentation services which are provided only in private bases there is only one center outside Khartoum in Medani Hospital.

As from previous notes, the basic services for caring about spinal patients are available in Sudan but are concentrated in Khartoum. The services need to be extended to the other states. For the time being, there is a need to establish four spinal care centers in the main regions as follows:

1- The central area (Gezera)

2- The western area (Darfur)

3- The Northern area (Dongola)

4- The Eastern area (Port Sudan)

These centers should be equipped with modern facilities and should have radiological services, radiotherapy services and physiotherapy services, rehabilitation and occupational therapy.

**SITUATION of OTHER SERVICES RELATED to SPINE CARE in SUDAN**

1- Radiological services

   Diagnostic services including different types of plain X ray CT scans (three dimensional CT is also available) and MRI, are available in most of the main states in Sudan.

2- Radiotherapy is available in the Khartoum and Gezera states.

3- Physiotherapy services, rehabilitation and occupational services are only available in Khartoum state.

**PROBLEMS HINDERING PROGRESS of SPINE CARE in SUDAN**

1- Training of the spinal care providers.

   Training of the spinal care providers should be provided mainly in three levels.

   a- short term training facilities for the practicing spinal surgeons whether neurosurgeons or orthopedic surgeons and for the other paramedical and the traditional therapists local or outside, and establishment of a national local training institution should be kept in mind.

   b- long term training facilities for the residents and junior doctors whether local or outside Sudan and to incorporate such training programs in the running local training bodies programs (Sudan medical specialization board orthopedics and neurosurgery programs)

2- Distribution of the services

   Redistribution of these services to cover as large are as possible of the Sudan is needed at least to cover the
major states of Sudan initially and then to move to peripheries.

3- Availability of the advanced technology

Awareness of the policy makers and public about the advances in the field

4- General media and health education should raise the awareness about the spinal care services’ importance, and the problems to be solved.

REFERENCES


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