

## The first Coronary Care Unit in Sudan Siddiq Ibrahim Khalil

Until the end of the eighties El Shaab Hospital was the only hospital in the country capable of receiving cardiac, pulmonary medicine and neurosurgery. It consisted of nine wards accommodating the above specialties. A well-equipped operating theatre and recovery room were stationed at the south east corner. By 1981 a cardiac catheter laboratory was installed. Patients who were referred from all provinces for cardiac care were seen at the referred outpatient where they would either be admitted to hospital for treatment or followed up at the outpatient clinics. There were basic equipment like ECG, chest X-ray facility and small laboratory for basic haematology and biochemistry investigations. 2D and M-mode echo equipment was supplied. Dr. Khalid Gharieb was the first to perform studies on that machine.

By the mid-eighties it became clear to all cardiologist and physicians in the country that the toll from coronary artery disease was increasing. Very ill patients with acute myocardial infarction were coming to hospital looking for help. Some of them were admitted at the recovery room of the operating theater where monitoring and oxygen supply were available.

**Keywords:** defibrillator, cardiac catheter.

**I**n 1983, the author was transferred from Khartoum North Hospital to Shaab Hospital to act as the Ministry of Health (MH) senior cardiologist. The staff of the cardiology department included Professor Siddiq A Ismaeel, Dr MS Abbasher and Dr K. Al Tayeb. Dr Hussien Abu Saleh was the hospital director. With the pressing need to accommodate the growing number of critically ill cardiac patients it became clear to all of us that some form of coronary care should be shaped.



Figure 1: the first CCU. The patient had just been defibrillated. See the defibrillator at the front.

A room, previously female nurse's room, was selected and subsequently converted to 2-bedded coronary care unit (CCU). We were

able to find two monitors and a defibrillator. Oxygen was supplied from mobile cylinders. Emergency drugs were procured from MH drug supply department. Many antiarrhythmic drugs were not available and were bought from abroad by special purchase order. The venue was thus ready.



Figure 2: the first CCU. The bedside monitor is mounted on the wall. The medical officer is Dr Mohamed Al Haj. Sister Naema was the CCU in Charge.

Well initiated doctors and sisters were selected and given crash course on CCU patients care, monitoring, defibrillation and resuscitation.

The scene was thus set and on 21/8/1985 the first patient was admitted.

The first CCU in Sudan was thus inaugurated (Fig 1, 2).

Early in 1986 the role of CCU and its success became apparent at the MH. By support from the WHO we were able to send 4 sisters to Jordan for training in coronary care at King Hussein Medical Center in Aman. Among this group is sister Kawther who is the present senior sister at El Shaab Hospital CCU. The rest of the group was immediately snatched by the gulf hospitals.

During the first year of coronary care we admitted 93 patients the majority had acute myocardial infarction, few were admitted with acute heart failure and the remaining were cases of arrhythmias. 93% of the admitted patients were professionals e.g. lawyers, doctors, engineers and company executives. 67% were from the capital and the remaining 33% were from rural localities. Despite the

difficulties we faced during the early days the mortality rate was 17%. This low mortality rate was a reward to the dedication and efforts of the treating staff who were proud to work in CCU.

By 1991 the CCU was extended to include more rooms and its bed capacity increased. More modern equipment was added. The CCU at El Shaab hospital presently has bed capacity of up to 12 beds including intermediate care. In 2008, 596 patients were admitted as acute cardiovascular emergencies with mortality of 7.7%. In 2009 the total admission was 584 with mortality falling to 6% (El Shaab hospital CCU data)

At present there are ten fully equipped and staffed coronary care units in Khartoum providing excellent care to the critically ill patient.