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Editorial

Impact of the National Program for Free Treatment on the burden of Heart Disease

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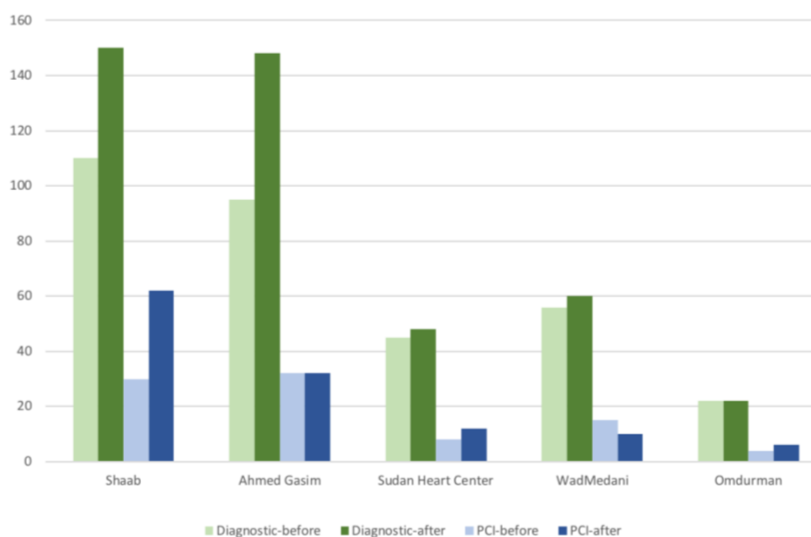

Table 1: average monthly output in all catheterization laboratories in Sudan, before the new free treatment program

Background:

The enormity of the burden of heart disease requiring intervention and surgery has been discussed in a previous SHJ editorial (1). In this article we attempt to shed light on the recent free intervention program launched by the government to mitigate the growing burden of heart disease in Sudan.

The prevalence rate of rheumatic heart disease (RHD) in Sudan is 20-30/1000, meaning that there are currently 600,000 patients who are affected by the disease. The situation is also more complicated as children account for nearly 40% of the total load of RHD and the prevalence in rural communities is as high as 60/1000 [2]. Most patients with RHD end up with heart failure or chronic valvular disease which requires percutaneous trans-mitral commissurotomy (PTMC) for single valve such as pliable mitral stenosis, or

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more complex surgery for single or multivalvular disease.

It is estimated that there are more than 300,000 patients with chronic valvular disease requiring surgery during the next five years (extrapolated from the present statistical data). In 2016, the total cases of patients with RHD who underwent valve replacement for single or multivalvular disease in both government and private hospitals were 786 and 98 received PTMC [3].

These figures reflect insignificant reduction of the disease burden and dictate a more focused and serious attention to be directed towards a disease that affects young people in the prime of their productive life. Regrettably surgery for RHD was not included the in the program of the free cardiac intervention.

Coronary heart disease (CHD) is emerging as a main cause of CVD and heart failure, reaching nearly 30 % of the total CVD in Sudan. During 2016, the available data from all the country showed that: 585 of patients underwent coronary artery bypass grafting (CABG), 1377 had percutaneous intervention (PCI) in the form of single or multiple stents and 4694 had diagnostic catheterization. In the area of pediatrics 245 had pediatric surgery and intervention [3]. This data is pooled from Ahmed Gasim, Al Shaab, Sudan Heart Center, Medani Heart Center, Mac Nimir center and the private heart units in Zaytouna, Mawada, Risala and Faisal Hospitals.

The figures show modest input in the face of the growing burden of CHD. With extrapolation of the given data this reduction may fall within the range of 2-5 % of the total load of the disease, as it presents in the main hospitals, and it is therefore reasonable to suggest that the reduction of load should fall to 20-30% within the next 2 years if the issue of CHD burden is taken seriously.

National Program of Government Supported Treatment (free treatment)

The new national program of free treatment for cases requiring special and expensive care was launched in Sudan in April 2018. The program had initially provided free medical treatment for patients with cancer, end-stage renal disease and pediatrics patient (less than 5 years). Early this year coronary heart disease was added to the list. Consequently, cardiologist started a

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new era of free interventional procedures and a patient previously billed 25,000 SDG, as cost of angiography, stent deployment catheter, die and other disposables, may now leave the hospital free of charge. Additionally, the program includes free insertion of cardiac pacemakers. Table 1 shows the average monthly output of diagnostic and PCI procedures done before and during the program. It can easily be discerned that as financial restraints were removed, more patients were dealt with especially in Al Shaab Hospital and consequently a better reduction of the burden of disease was achieved. The funding of this important program is provided by The Ministry of Finance; and the authority of the National Cardiothoracic Institute and Sudan Medical Supplies Department completed the final procurement formalities.

Recommendations:

Although the program is an appropriate step towards comprehensible solution, but some modifications and adjustments are vital to make it suitable for the present setting.

As the prevalence of coronary artery diseases continues to rise interventional services will be overwhelmed by the huge number of patients presenting with angina and the average seen in Table 1 has to be tripled or quadrupled in order to catch up with the number of cases awaiting PCI. Possible answers for this trilemma are; to increase the number of interventional cardiologists and supporting staff and maintain even distribution of service throughout Sudan. Catheterization laboratories outside Khartoum should be activated and should at least cater for patients in their geographical regions. Associated cardiac services e.g. cardiac emergency reception, CCU, ambulance service, cardiac emergency drugs should be provided, and supplies maintained efficiently.

Direct coronary angioplasty is cost effective and has better clinical outcome. This service should be provided in the main centers in Khartoum as it is less expensive than the present protocol of pharmaco-intervention presently adopted.

The problem of out-of-order Cath Labs should be addressed seriously and with predefined plan. This plan should have a biomedical branch with engineers well trained to deal with these machines.

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Their training should be part of the purchase contract and should start before the equipment is installed.

There are more than 300,000 patients with chronic valvular RHD, the majority of whom are from the poor and deprived class, requiring surgical treatment during the next five years. Unlike other patients in the free list, patients with chronic valvular disease are young, have less comorbidities and have better outcome after surgery. Consequently, it is imperative that RHD be placed a top priority among patients scheduled to benefit from the program. Sudan has pursued a leading course in the prevention of RHD and hopefully will do so in the surgical treatment of the disease.

Being more achievable, free Percutaneous Transmitral Commissurotomy (PTMC) should start as soon as possible. Doctors and operating staff should be encouraged to provide more space of time to accommodate more cases and accordingly be rewarded.

Groundwork is needed to make open heart surgery accessible to patients requiring valve prosthesis. Presently there are only 4 operating centers in the country and more well-equipped centers are badly needed. The new cardiac centers in Nyala, Obied and Merawi and those in Shendi and Atbara should be equipped to offer open heart surgery within the coming 6 months. Cardiac surgeons are presently few (10 in number) and overstretched in the face of a growing burden. Training of more surgeons should be planned and executed.

This article is intended to send a message to the authority of the National Cardiothoracic Institute and Federal Ministry of Health regarding the National Free Treatment Program and carries specific suggestions towards improvement and expansion. We do hope that our recommendations find listening ears and responding pair of hands.

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