

# WORLD CONGRESS ON RHEUMATIC HEART DISEASE

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**Title:** VALVE SURGERY IN THE FIGHT AGAINST RHEUMATIC HEART DISEASE (RHD) IN NIGERIA: IS VICTORY IN SIGHT?

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**Background & Aims:** Our center in Nigeria, where rheumatic valvular heart disease (VHD) is endemic, is a central government tertiary hospital. The environment has predisposing conditions for rheumatic fever and RHD, as well as weak healthcare system. Surgery is among the options of treatment provided to the patients. Before 1974 all patients that required open heart surgery died without help. We review heart valve surgery at our center to show that it has improved the health status of victims of RHD. We evaluate our experience, knowing that rheumatic valve diseases have varied and complex lesions.

**Methods:** At the NCTCE, only a small number of the patients with damaged heart valves from RHD had been treated surgically since 1974. This is because access to open heart surgery (OHS) is highly limited because of enormous challenges. As a major referral center, many patients with cardiovascular diseases visit it. In this descriptive retrospective review study, all the patients that underwent heart valve surgery because of rheumatic VHD from 1974 to 2003 and from 2013 to 2022 were included.

The demography of the patients, geography of the diseased valves and the types of treatment offered, as well as challenges and outcomes were reviewed using the data retrieved from the hospital data base. The utilization of heart valve prosthesis was based on best clinical practices and on the prevailing indications for the procedure. Data were analyzed with straight forward statistical method of percentages.

**Results:** The study has two phases, 1974 -2003 and 2013-2022, separated by a period of inactivity, from 2004 to 2012, because of movement to the permanent site among other challenges. During the cumulative period, 137 heart valves affected by RHD were managed in 123 patients; 73 females (53.3%) and 50 males (46.7%). The median age group was 20-30 years. Of the 137 heart valves, 108 (78.8%) were mitral while 29 (21.2%) were aortic. Prosthetic valve replacements were 133 (97.1%) while repairs were 4 (2.9%).

Different makes of prosthetic heart valve were used at different times, starting with the high profile ball and cage mechanical valve and later with low profile single blade and double blade mechanical valves. Bioprosthetic heart valves came into play in the second phase and were used for the elderly and child bearing age patients because of the inherent complications in the use of warfarin in that age group. One patient who received mechanical valve, however, was able to deliver a term life baby through caesarian operation.

Challenges included managing warfarin complication of bleeding in 25 (18.2%) outpatients as well as the inadequate experience of the local team in managing 4 (2.9%) aortic valves complicated by ascending aortic aneurysm. The overall outcome was good but the burden of the disease is worsened by poverty and ignorance. Fly in cardiac missions played a major role in the second phase, which also recorded a better outcome in terms of patient survival and skills transfer to locals.

**Conclusions:** OHS has brought relief to patients with rheumatic VHD. The fight against RHD in Nigeria remains overwhelming in that poverty and ignorance predispose to RHD, subsequent late presentation and inability to afford OHS. Inadequate and inconsistent government support continue to hamper the development of the needed infrastructure and highly skilled manpower. Victory in the fight against RHD without outside help is not in sight here. Beyond periodic fly-in missions, a deliberate, time-bound objectives of skills-transfer, training and re-training, continuing mentoring and support of the home team are required to achieve the desired victory.