

The rheumatic heart valve disease (RHVD) seen in Sub-Saharan Africa is very different from what we are used to. In North America, Europe and a lot of Asia, RHVD has been successfully avoided by treating early episodes of strep throat. This delays or prevents the onset of any rheumatic impact on heart valves. In North America and Europe, we do not see significant valve destruction until the sixth or seventh decades of life. Furthermore, we see very few cases now over the last 20-25 years that reach the point of needing valve surgery. The differences in Sub-Saharan Africa will be outlined in this article.

In Sub-Saharan Africa, because most cases of strep throat go untreated, there is a significant incidence of rheumatic fever. As a result, there are still many cases of progression to rheumatic heart valve disease (RHVD). Estimates of rheumatic fever in strep throat patients are as high as 3%. Probably over 50% of rheumatic fever patients, however, go on to develop RHVD.

Even more intriguing and important is that the rheumatic process attacks heart valves very much more aggressively, at a significantly younger age than we have experienced in developed countries. So, unfortunately, that means heart valves are being destroyed by the process during pre-teen and teenage years of life. Children often go into heart failure before reaching adulthood. As yet, it is unclear why the rheumatic process is so much more aggressive there.

One of the key differences to this disease affecting valves early in life, though, is that the valves scar and thicken but have not had time to calcify. This is very important since scarred valves can be repaired and do not need to be replaced. In developed countries, where the patients present later in life with bad valves, calcium deposits in the valve are extensive and there is only the replacement option left. Repair is by far a better option for younger patients (more on this in future articles).

As we have gained experience repairing these valves, we naturally wanted to see how the repairs performed in terms of durability. During our 2011 mission, we brought back as many patients from the previous 2 missions as possible. What we found is that the rheumatic process can continue to erode the valves. Sometimes it does but sometimes it doesn't. One definite causal factor we identified in preventing progression was continued IM injections of penicillin. Some patients continued prophylactic IM penicillin and others did not, for a variety of reasons. There was definitely a need for continued prophylaxis identified.

Continued experience taking care of these young patients will undoubtedly allow us to improve our ability to treat this problem successfully. Again, however, there will never be anything better than prevention of RHVD altogether.