

Rheumatic fever weakening South Africa's youth

Rheumatic fever can affect children from the age of six up to early adulthood (18 to 21 years) and in most people presents as nothing more than a sore throat, fever and stiff joints. This is being highlighted in Rheumatic Fever and Rheumatic Heart Disease (RHD) Week (4 to 10 August 2015).



© Puwadol Jaturawutthichai – 123RF.com

Children at risk for heart disease

In March this year, doctors told Zena Klaas she had a 50/50 chance of "waking up" after an operation. Her family was scared, but the 20-year old admits that she just wanted the pain to stop. Complications from rheumatic heart disease (RHD) led to the development of an aneurysm (an excessive, balloon-like, swelling of the wall of a blood vessel) in one of the major blood vessels in the abdomen, causing the Gugulethu learner excruciating pain.

As most people suffering from rheumatic heart disease, Zena did not realise she had it until it was almost too late. Even the health care workers she had recently consulted, not suspecting heart disease in such a young girl, at first did not realise what was wrong with her. If she had not taken part in a study earlier the year screening specifically for RHD, doctors might not have figured it out in time.

"I volunteered for the study, to be honest, to get out of class, but also because I was curious about heart scans and all of that," she admits. "Lucky me, because that's where they saw I had a problem with my heart."

Dr Philip Herbst, a senior lecturer and cardiologist at Stellenbosch University (SU) and Tygerberg Hospital, contacted the

school principal to arrange a follow-up for a group of scholars believed to have RHD based on the results of a screening study recently done at Tygerberg Hospital. Herbst was informed that one of the learners on the list had not been to school for some weeks because she was ill at home. An arrangement was immediately made to evaluate Zena at Tygerberg Hospital the next day.

Herbst explains that the damage caused by RHD can make the heart's valves vulnerable to infection. This is exactly what happened to Zena, who had developed such a valve infection (called infective endocarditis). The infection also caused a localised weakening in the blood vessel in her intestine, leading to the aneurysm that nearly cost her her life. The aneurysm was successfully operated on and the heart valve infection treated. After a two-month stay in hospital, she is now recovering at home.

Seen as 'flu' rather than streptococcal infection

A common throat infection, caused by specific streptococcal bacteria (group A streptococcus), leads to rheumatic fever in people genetically predisposed to it. In this group - which makes up around 5% of any population - the antibodies released by the body to fight the streptococcal infection can also attack a person's heart tissue, often damaging the heart's mitral valve (and to a lesser degree the other valves). This can then lead to either narrowing of the valve (mitral stenosis) or cause leakage (mitral incompetence) in the long term.

Rheumatic fever is an acute infection, while rheumatic heart disease (RHD) is the chronic condition resulting from the valve damage caused by rheumatic fever.

International health bodies estimate that about a million children in sub-Saharan Africa could be affected by RHD, and in South Africa, although there is little in the way of formal statistics available, it is believed that as many as 30 children per 1000 may be affected in certain high-risk areas.

"Many of the symptoms are similar to that of the flu and more than 95% of people never realise they have had rheumatic fever," says Herbst.

"The disease follows the economic gradient and the poorer communities, with more overcrowding and difficult living conditions, are worst affected. In South Africa, with its drastic socioeconomic differences, one might find a high prevalence in certain lower-income areas, but not a single case in a high-income area just up the road. Looking at prevalence figures may therefore be a very local affair and difficult to generalise to a population as a whole."

Rheumatic fever itself is not actually infectious, but streptococcal throat infection - which develops into rheumatic fever in susceptible individuals - is transmitted through the air or contact with an infected person. The more bouts of rheumatic fever a child experiences, the higher the risk that the child will develop RHD.

Complications occur from a young age

"In Africa, complications from RHD tend to develop at a much younger age than in the developed world and we suspect it is because people suffer more recurrences of rheumatic fever. That is why we have to identify the children who have had it even once before and treat them with prophylactic antibiotics to prevent recurrences," says Herbst.

RHD (narrowing or leakage of the mitral heart valve) can present in a variety of ways. The first signs of disease may be breathlessness from heart failure, or individuals affected may develop a blood clot in the heart that could lead to a stroke.

"We also see a lot of young women in their 20s or 30s presenting with serious complications during pregnancy. Their hearts, damaged by bouts of rheumatic fever in childhood, cannot cope with the demands of pregnancy and they end up in the emergency room. It is an important cause of maternal deaths."

Sunheart, a joint initiative between SU's Faculty of Medicine and Health Sciences and Tygerberg Hospital, is conducting a

large screening program for RHD (called Echo in Africa) in children from Khayelitsha and Ravensmead - two underserved communities in Cape Town. The main goal of the research component of the project is to search for the best way to screen large groups of children for RHD. In addition, this research will help establish the prevalence of RHD in these areas.

"There is an important humanitarian outcome to the project as we are also reaching out to the individual children in these communities to identify heart problems and offer follow-up treatment where necessary," concludes Herbst.

For more, visit: <https://www.bizcommunity.com>