MedicalXpress

New tools to help prevent the burden of rheumatic heart disease amongst children

May 7 2014

Two new studies presented at the World Heart Federation's World Congress of Cardiology (WCC) today show the importance of collecting comprehensive patient information nationally and providing timely access to health services in tackling one of the world's most neglected and easily prevented diseases in children, rheumatic heart disease (RHD).

RHD, a chronic heart condition caused by acute rheumatic fever (ARF), is the most common acquired heart disease amongst children in developing countries and affects over 15 million people.i RHD is not only a neglected disease, it is also easily prevented and controlled; acute rheumatic fever can mostly be avoided by treating acute throat infections caused by group A streptococcus (GAS) with a simple, short course of antibiotics.i For those who have had rheumatic fever, monthly injections of long-acting penicillin can prevent recurrent attacks of rheumatic fever which can lead to further heart valve damage.

On the same day a unique new handbook to support the development of RHD control programmes is launched, new research puts a spotlight on the steps two countries are taking to better manage RHD and improve the lives of thousands of children at risk of developing the condition.

New Zealand: a country tackling RHD head on

The New Zealand government has put a priority target in place to reduce

rheumatic fever by two thirds by 2017 and is investing in education and prevention work in at-risk communities in New Zealand's North Island, working together with partners to find innovative solutions. As part of these solutions, improvements to the surveillance system to support programme planning and monitoring have been introduced and a revised patient management system to prevent recurrences of rheumatic fever is planned.

In addition, the Department of Paediatrics at the University of Auckland and epidemiological experts from across the country have independently undertaken a large scale audit of different RHD surveillance processes in Auckland to better understand their strengths and weaknesses, as well as identify children with or at risk of developing RHD.

As a result of this audit, over 500 children with definite or probable ARF were identified in Auckland through a range of these complementary methods. There is a necessity to have high quality and all-encompassing processes to identify as many cases as possible of ARF, which can prevent the deaths of hundreds of children every year.

"Rheumatic heart disease is responsible for the deaths of thousands of young people under the age of 25 each day around the world and cannot be ignored. New Zealand is at the forefront when it comes to RHD prevention and our study shows the important role that efficient surveillance tools can play to avoid the devastating consequences of acute rheumatic fever being left untreated," said Professor Diana Lennon, Department of Paediatrics: Child & Youth Health, The University of Auckland.

Finding and preventing the burden of RHD in India

RHD continues to be a problem in India, but despite this it is overlooked as a public health priority. A study organised by the Indian Council of

Medical Research (ICMR) established 10 registries between 2000 and 2010 to look at a range of factors, which contribute to RHD, including biology and the existing health infrastructure. In addition, the registries undertook a wide range of prevention activities across India, including community health education campaigns, additional training for medical teams and prescription of oral antibiotics.

The results of this large study show that the use of this registry-based prevention programme in existing healthcare settings works well and is a practical and achievable means of preventing and controlling RHD, which can ultimately lead to fewer deaths in children across India. The study also illustrates the challenges in obtaining representative data from large countries with great geographic and socio-economic diversity. Additionally, sustaining the effort over several years will require robust long term policies based on the experience of the registry.

"Too many children die each year from this preventable disease and we have shown how surveillance tools and secondary prevention techniques delivered through existing healthcare structures can help prevent the onset of rheumatic heart disease and reduce the burden of heart disease amongst children. Our research demonstrates that it is not only possible to make a difference, but that it needn't be a difficult process," said Meenakshi Sharma, Indian Council of Medical Research, India

The burden of RHD in Australia

In Australia, Aboriginal and Torres Strait Islander people are 8 times more likely to be hospitalised for ARF/RHD and 20 times more likely to die from rheumatic heart disease than any other group. The Heart Foundation's National Cardiovascular Health Director Dr Robert Grenfell, said that heart disease was the greatest single contributor to the gap in life expectancy between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians.

"Many people may think that rheumatic heart disease is a thing of the past, something that happened in the 1950s, but that isn't the case: many young Indigenous people from Australia and around the world are living with the burden of this disease and dying early because of it. The Heart Foundation is passionate about supporting research and projects to address this serious problem and give more young Indigenous Australians the chance to live a full and healthy life," said Dr Grenfell.

Tools for implementing RHD programmes: TIPs toolkit

Based on sixty years of experience in RHD prevention and control around the world, the TIPs handbook compiles interviews, case studies, unpublished reports and peer reviewed publications into an accessible format for the very first time. Topics include burden of disease data, fundraising, development of RHD registries and the interface with cardiac surgery. TIPs will be distributed to clinicians and policy makers tackling RHD in endemic countries.

Lead author, Dr Rosemary Wyber, Rheumatic Heart Disease Program Manager at RhEACH describes: "TIPs provides a foundation to describe, design and implement comprehensive RHD control programmes in the areas of greatest global need. Collating and disseminating lessons from around the world will help make the delivery of RHD control programmes more effective, efficient and sustainable."

The TIPs handbook is designed to build health system capacity to reach the World Heart Federation's goal to achieve a 25% reduction in premature deaths from rheumatic fever and RHD among individuals aged under 25 years by 2025. It is also well aligned with WHF CVD "roadmaps" for implementing national targets around CVD. The Toolkit can be found here: http://www.rheach.org/tips

Medical Xpress

Provided by World Heart Federation

Citation: New tools to help prevent the burden of rheumatic heart disease amongst children (2014, May 7) retrieved 26 April 2024 from https://medicalxpress.com/news/2014-05-tools-burden-rheumatic-heart-disease.html

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