



VAIKOLOA

Pacific Primary Health Care Treasures

Vai (water) is a symbol of 'life-source' and koloa (treasures) to share

Rheumatic heart disease in Samoa and the Pacific Nations

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Acute rheumatic fever (ARF) and its long-term sequela chronic rheumatic heart disease (RHD) remain a massive problem around the world, especially in the developing world. ARF is an inflammatory disease that can develop after a pharyngitis caused by Group A streptococcal infection, usually during childhood.¹ RHD is the result of valvular damage caused by this inflammatory disease. It is manifested by inflammation causing thickening of the valves, leaking of the valves as a result of lengthening of the valve chords, failure of coaptation of the valves, annulus dilatations, or stenosis of the valves from scarring and tethering of the valve leaflets or valve chords. RHD remains a massive problem in Pacific nations, including Samoa, Tonga, Fiji, and others.²⁻⁴ RHD prevalence remains high in the indigenous populations of New Zealand (Maori) and Australia (Aborigines), and the Pacific nations' migrant populations in New Zealand and Australia.⁵ RHD remains a major cause of morbidity and premature death. The prevalence of RHD imposes a significant burden on health care systems in the Pacific nations, which have very limited budgets. Since 2003, the Government of Samoa has sent between 25 and 30 young people every year for RHD surgery in New Zealand.² This has an enormous impact on the overseas treatment budget of NZ\$10 million per year. None of the Pacific nations can afford the escalating costs of RHD surgery and, therefore, there should be a strong focus on primordial, primary and secondary prevention of ARF and RHD.

The recognition of symptoms and manifestations of ARF is one of the main keys to diagnosing this disease and sets in motion the cascade of primary and secondary prevention. The symptomatology and manifestations of ARF include carditis, which is manifested by a heart murmur or heart failure; arthritis; chorea; subcutaneous

nodules; and a rash. Other supporting features include fever, high inflammatory markers (erythrocyte sedimentation rate, C-reactive protein), and evidence of streptococcus infection, either by direct visual throat inspection, throat swab, or blood tests. There is no question that regular secondary prevention with intramuscular penicillin is very effective. Primary prevention can also work quite well if it is done well and is timely. If the health systems perform primary and secondary prevention well, the development and worsening of RHD should be minimised and expensive cardiac surgery to repair or replace affected valves should not be needed. Primordial prevention is crucial to the fight against ARF and RHD, but this area involves a multitude of determined and enthusiastic people working within and outside of health ministries to 'chip away' at all the issues to address in housing, socioeconomic status, schooling, culture, cultural behaviour and other areas.

RHD has always been assumed to follow ARF. Unfortunately, it is now becoming increasingly apparent that the majority of RHD cases have had minimal or no symptoms of ARF.⁶ Many patients who have never had ARF symptoms are presenting to hospitals and clinics with arrhythmia and congestive heart failure from undiagnosed RHD. The sensitivity of auscultation for heart murmurs is also becoming lower because auscultation is not done well. Identifying RHD is much easier with echocardiography. The World Heart Federation (WHF) RHD Echocardiography Criteria was recently published in 2012 to assist in defining definite RHD and borderline RHD.⁷ There are now published studies to show the superiority of echocardiographic screening.⁸

As part of our national RHD screening programme in Samoa from 2008 to 2012, we screened 8457 school children aged 3 to 16

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years in primary schools in Upolu and Savaii using a portable echocardiography ultrasound machine. Preliminary results show a RHD prevalence of 14 per 1000. Although there are some concerns regarding the screening of RHD with echocardiography,^{9,10} the utilisation of echocardiographic screening in Samoa may prove cheaper and more effective in the long term, as more RHD cases are identified much earlier. There will be a greater chance of preventing RHD deterioration by the secondary prophylaxis programme, thus reducing the number of costly cardiac operations needed. It must be emphasised, however, that echocardiographic screening should not be carried out without a good secondary prophylaxis programme.

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Nasal saline for chronic rhinosinusitis

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Chronic rhinosinusitis is a common medical condition presenting to the general practice team and one that creates ongoing problems for people who suffer from it. The use of nasal irrigation for the management of nose and sinus complaints has its foundations in yogic and homeopathic traditions. So, how effective is nasal saline in this setting?

AVAILABLE BRAND: NeilMed Sinus Rinse™ (also contains sodium bicarbonate).

ACTIVE CONSTITUENTS: Isotonic saline solution most commonly used in studies; however, hypertonic solutions are also commercially available.

MANUFACTURER CLAIMS: A natural, soothing, saline nasal wash. A large volume, low positive pressure (easy squeeze bottle) nasal wash is the most effective way to irrigate the nose based on current medical studies. Nasal irrigation is an excellent way to clean mucus from the nose, making medication more effective. Nasal irrigation also cleans allergens, irritants, bacteria and viruses from the nose, reducing the frequency of infection. Furthermore, it helps decrease swelling in the nose and increases air flow. It can be used for all ages; it is available in isotonic, paediatric and hypertonic concentrations.

EVIDENCE FOR EFFICACY: There is a single Cochrane Database Systematic Review of nasal saline irrigations for treatment of the symptoms of chronic rhinosinusitis. Randomised controlled trials were evaluated, which included comparison with no treatment (three trials), a placebo (one trial), as an adjunct to other treatments (one trial) or versus other treatments (one trial). Comparisons of hypertonic versus isotonic solutions have been made (two trials). The review provides evidence that saline is beneficial in the treatment of the symptoms of chronic rhinosinusitis when used as the sole modality of treatment, and as an adjunct. The impact of hypertonic over isotonic solutions on symptoms is not clear. Although based on a single study, the review authors highlight that saline is not as effective as an intranasal steroid. A more recent BMJ clinical review highlighted that no distinction has been made between the effects of saline in patients with and without polyps. However, evidence does exist to support the use of saline douches following sinus surgery.

ADVERSE EFFECTS: There are no significant side effects reported in trials. Saline irrigations are well tolerated. Minor side effects are common and include nasal burning, irritation, nose bleeds, headache and pooling of saline in the sinuses and subsequent draining.

Herbal medicines are a popular health care choice, but few have been tested to contemporary standards. **POTION OR POISON?** summarises the evidence for the potential benefits and possible harms of well-known herbal medicines.

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