

Hinton's Treatment of Anemia in Cambodia



Blood sampling showed girl has genetic anemia.

For the last few months money collected by Glenda Carter in Hinton (west of Edmonton, Alberta) has been used to help people with anemia or weak blood in Kean Svay, Cambodia. Kean Svay is a small village 12 km from Phnom Penh. Many of the villagers are very poor but they are fortunate to have an active NGO, Resource Development International (RDI). RDI has provided sustainable changes in the health of the area by producing water filters, introducing new agricultural methods, making insecticidal soap, and providing medical care (www.rdic.org). RDI volunteered two health workers to coordinate the Cambodians for the Hinton blood study and treatment. The money from Hinton bought essential kits, supplies and lab analysis. Nary, the lady who volunteered to collect blood is a second year student in pharmacy. Tom Murphy recently retired from Environment Canada and volunteered to lead the study.

Most people in Cambodia suffer from anemia. Woman and children suffer more. Most anemia is caused by bleeding and too little iron in their diet. At present, iron is provided at some of the richer schools and some medical clinics give iron to pregnant ladies. Many women and children get no support for their anemia.

Management of anemia is made much more awkward by genetic anemia. Thalassemia and other hemoglobin genetic diseases are very common in South East Asia because they have been selected by malaria. Hemoglobin binds oxygen in red blood cells. Malaria parasites live inside red blood cells. In patients with these hemoglobin diseases, there is an early destruction of red blood cells infected with the parasite and increased chance of survival for the carrier of the disease. The genetics is complicated. With only a few bad

genes, the effects vary from no symptoms to being weak. With more deletions, death comes quickly. Haemoglobin diseases create a special problem in Cambodia in that there is little infrastructure to measure these common genetic diseases.

In the last few months, we have evaluated 65 Cambodians. More than 50% had anemia from low haemoglobin and 10% suffered from severe anemia. The worst shared these problems: tired but unable to sleep, sensitive to cold, shaking, dizzy, occasional racing heart, headaches, and often sick. All responded strongly to their treatment. They all feel good and hopefully, they will be more resistant to disease and parasites. It's wonderful to energize people with simple treatment. More than 95% of people we analyzed had too little iron. Iron deficiency can result in reduced ability to think, a lack of energy and depression. Iron deficiency must enhance the severity of genetic anemia. We hope to expand upon the treatments so that more people can work well and enjoy life.

Kean Svay is also in an arsenic rich zone and RDI and others are supplying arsenic free drinking water to many people. However, some people still drink arsenic rich water and there is an added concern that people with anemia will be poisoned more readily by arsenic.

Not all aspects of anemia are manageable. Anemia can be caused by other problems. Some people cannot afford to eat well. Some older ladies had severe anemia and likely they ate poorly; they responded great to treatment. Nary found a case of hepatitis B that is being treated effectively. Genetic anemia is complicated. Lets use an example and not worry too much about the science. Everyone in the little girl's family (see first picture) has thalassemia minor, a genetic form of anemia. The girl is fine now but her iron demand will increase when her period starts. Her mother (see second picture) had a baby die in the womb; presumably the baby had thalassemia major – too many bad genes. An older sister is pregnant and the expectant father also has thalassemia minor. We gave her iron and folic acid for her anemia and thalassemia. Her chances now are better for a healthy baby but NOT if there are too many bad genes. In Cambodia, thalassemia major is likely a major cause of infant and associated death of ladies in birth. Our team was hit with another “gotcha”. One our workers has thalassemia minor. She was just married. Her new husband understands and wants to be analyzed. People hear about our success and worry about their genetics – the need will not stop expanding

We have made a good start. We are able to greatly help many poor people become strong. For little money for treatment, more than 50% of Cambodians could be stronger. The management of the extremes – child death from too many gene deletions is not our interest, is beyond the grasp of anyone in Cambodia and is an ethical issue for the world. Hinton should be proud of helping Cambodians. Please, think about a Christmas donation via Glenda Carter (wyndswept@moradnet.ca, 780 866 3950) or RDI (www.rdic.org). Glenda would gladly help with any Christmas party solicitations. RDI is registered in the USA and charity tax credits are not possible in Canada.



A mother holds her youngest daughter for blood sampling.

By Tom Murphy, Ph.D., Sc.D.