Montenaro Tribal Survival Medical Expedition to West Papua Autumn 2017

This expedition ran for 2 weeks from 31st October until 13th November and was the 4th year that Montenaro Tribal Survival had funded the trip. The first expedition had essentially been an information gathering exercise to establish baseline medical needs and feasibility.

The 2 main aims of the expedition were:

1. To administer Albendazole and DEC to the tree house dwelling Korowai as part of the annual WHO funded MDA programme to eradicate Lymphatic Filiarisis.
2. To provide a basic primary care service to the same population.

LF Treatment Programme

This was the 3rd year of a 5 year programme. The villages had been visited in June/July by 2 elders of the tribe (Fenelom and Bylom) supported by Andreas Nduru who acted as our guide and interpreter in previous years and this year's expedition. Andreas kept detailed records of who had received the treatment in each village this year and in previous years. About 600 people had been treated this year according to these records and the majority had been treated 3 times. However it became clear that there were some gaps in the data. There is no accurate census data for the region. We estimate that 1000 Korowai live in this area (300 live in Yaniruma). Because the tribes are mobile and many women are either breast feeding or pregnant and because of other factors (including operator error) it became clear that establishing comprehensive coverage is challenging but the goal of achieving 65% population coverage appeared to be on track. At each clinic in each village at the end of each consultation we operated a catch up programme to try and ensure that any villagers who had been missed earlier in the year were treated. 35 patients were treated in this way.

We need to improve the way data is collected specifically to record why a person has NOT been treated and it would be easy to produce a protocol or template to facilitate this and ensure a consistent approach for the volunteers who are doing this work.

Primary Care Aspects

Clinics

Before we arrived at each village facilities had already been constructed for us. These included a clinic facility and accommodation. The clinic doubled as a dining area.

We ran clinics every day. It was difficult to operate clinic times. The numbers of patients varied depending on patient demand. We tried to operate 2 clinic sessions per day. It was much easier to deliver this when we stayed in a village for a minimum of 2 nights. The villages had prior warning that we were coming but even so would prioritise other business over their medical needs!

Consultations

Patients wishing to be seen would be seen initially by Andreas who would make a list of their medical problems. We would then see patients in turn. Because we would often need 2 interpreters to obtain a history we saw patients alternately with one doctor expanding on the

history and then deciding on a focused examination whilst the other doctor took brief notes and would dispense medications.

Patients would often present with a number of problems e.g. headache diarrhoea and knee pain. Stabbing arrow pain was a common symptom as was “maybe malaria. ”Establishing timescales and duration of symptoms was difficult. We became more adept at relating history to examination and trying to obtain a working diagnosis and deciding on a treatment plan and pattern recognition became simpler the longer we were there.

We took easily portable standard items of medical equipment including stethoscope sphygmomanometer auroscope/ophthalmoscope, temperature probe and pulse oximeter. We also took a blood sugar monitor but did not use this.

Because of the multiple presentations it is difficult to give an accurate summary of primary diagnosis by system as previous doctors have done but broadly speaking we found the following:

Neurology	1
ENT	6
Gastroenterology	12
Respiratory	31
Dental	9
Dermatology	19
Haematology	5
LF	5
Malaria (acute)	10
Urology	2
Gynaecology	1
Orthopaedics/Trauma	23
Other	3

In total we had 136 patient contacts. Some patients we saw more than once.

Confidentiality and privacy were also difficult to achieve. In some villages we had specially constructed facilities for private examination but this option was often declined.

We used alcohol based hand gels between patients and disposable gloves where indicated. We used sterile wipes to clean the medical equipment at the end of each clinic.

Testing

Because we were in an area where malaria is endemic and transmission stable we chose not to use near patient testing kits (as previous expeditions had done) because results are unreliable in this setting. We used clinical acumen and tried to adopt a pragmatic approach to management.

We had no other testing equipment

Prescribing

We carried a range of basic medications based on previous doctors' experiences. In general we carried antibiotics, antivirals, antifungals, antimalarials, vitamins and analgesia. We carried a small supply of creams and inhalers. We carried a small supply of dressings. See appendix 1 for full list. We also carried emergency injectable drugs and intravenous fluids, cannulae and giving sets. We were glad we did. One patient collapsed due to secondary dental haemorrhage and required improvised dental packing intravenous access and IV fluids.

Prescribing was challenging. We used pre-prepared pictorial instructions in some cases but simple times of day (morning midday afternoon and evening) was often the best we could manage and this was further complicated if patients were being treated with more than one medication. We also had no way of knowing if treatment regimens were being adhered to and in fact we had to simplify treatment schedules to improve compliance as the Korowai do not have an accurate way of telling the time.

In one village we visited we discovered that the tribespeople had been visited the day before by a Chinese NGO with nurse led intervention. In this case patients had been given medications based on symptoms only without any additional assessment. The tribes people were able to show us the medications they had been given. We felt there were significant ethical and safety issues with this approach. One patient had been given 2 types of NSAID medication for example. We learned that NGOs are seeking to influence the Korowai with the ultimate goal of acquiring their land for commercial exploitation.

In addition to this medication packaging was quite similar in some cases. We also had concerns about storage and security of medications. In one village we learned that one child had taken the whole family's LF treatment earlier that year fortunately without any adverse effects. Because of this we dispensed small supplies of pain relief and shorter courses of antibiotics than we would normally use in the UK. It was also difficult to be confident about antibiotic sensitivities and resistance. It was notable that the Korowai seemed to respond extremely quickly to medication. Placebo effect was a consideration.

There was an expectation that each consultation would end with a "prescription" even if this meant a few multivitamins. We were told that the Korowai would be disappointed if they did not receive medication. This felt inappropriate and almost felt that medicines were being used as a "gift". The Korowai have no concept of how western medicine works and in fact very few natural or herbal remedies. They knew that we were different to them but had no concept of where we were from our cultural norms education technology or any of the principles that we take for granted. Patient education is at a very early stage and even very basic public agendas such as hand hygiene clean water smoking cessation and dental health are not in line with the Korowai way of life.

Nonetheless the Korowai appeared keen to be seen by a western doctor and appeared to value the care they received.

General Considerations and Reflections

The general conditions in primary rainforest are challenging. 30 + degree heat and 90% humidity Transport is by foot and by boat. It is a very alien and remote environment. The Korowai are a primitive people essentially living until very recently a stone-age existence (though they now have access to steel axes and machetes). We found them to be very gentle peaceful caring people but conflict with other tribes does occasionally occur. Their belief systems are also primitive and ritual cannibalism still takes place though with decreasing frequency.

We spent less time trekking between villages compared with previous years and this allowed us to feel fresher and more effective when consulting. We flexed the itinerary to allow us to spend the maximum time possible seeing the tribespeople. No 2 days were the same.

Yaniruma is a government sponsored village several hundred miles south of Jayapura only accessible by light aircraft. It takes 90 minutes to fly there from Jayapura. It is home to 300 Korowai and some Kombi. It has a church. Around 700 people live in tree houses in villages in the surrounding rainforest over a large area. The village does have a small medical clinic with a director and several nurses and every month the nurses provide an outreach clinic by boat to nearby villages. They use near patient tests for malaria and TB. There is a good supply of medications at the clinic and there would also normally be a vaccine service though the fridges were inoperative because the power supply was down. They also have a limited midwife service. This service has developed rapidly in the last 2 or 3 years and it seems likely that this will continue though the tribespeople can be reluctant to use this service because they see that the advice they receive can be judgemental. Patients can be referred for further investigations and treatment in Jayapura but funding and transport is not reliable or consistent. It is also costly. A lot of people die at a young age and the Infant Mortality Rate is high.

There is a Public Health agenda. Clean drinking water, prevention of malaria (using nets), dental hygiene, smoking cessation and education re biofuels and cooking indoors (no chimneys) is all possible but the current practises are part of the Korowai culture and trying to influence this way of life feels wrong. How do you preserve their way of life? How do you interact with the tribe without changing them? Your footprints can not be erased. It is an impossible issue to resolve. What about the need for education? Can you morally deny them this? The younger tribespeople appear to want what we have and many now wear clothes. One tribal elder has a mobile phone (though there is no signal) and one larger village has a TV. Increasing exposure to the wider world will inevitably change a society which has remained unchanged for thousands of years and this change is likely to be rapid and uncontrolled.

In the next 5 to 10 years it appears likely that large foreign corporations will put pressure on government to acquire Korowai land for development for palm oil and tobacco. Large sums of money will be involved. How can we help protect the Korowai and prevent their exploitation in the years to come? Protecting their land is key to their survival but how do you do this in a political system which may not consider the needs of the indigenous people over those of powerful well-resourced large corporations.

The experience was incredible if challenging. We felt privileged to witness things and live even for a short time among a remarkable and resourceful tribe that have only seen a handful of white people.

Thanks to Charles and Jane Montenaro for their kindness support and friendship and for their dedication in funding such an important cause. Thanks also to Andreas Nduru for his expertise help and patience and also to the Korowai especially Fenelom and Bylom whose knowledge and wisdom were vital to the success of the expedition.

Suggestions for Future Medical Expeditions

We performed a stock take of drugs. See appendix 2.

We would suggest a basic first aid kit/dressing pack. See appendix 3