also the additional problem of run-down of intracellular calcium stores associated with P2Y receptor – PLC – IP_3 receptor-gated signalling. Thus while having potential, the feasibility of calcium imaging of CHO cells during prolonged and repeated ATP exposure would need to be investigated further. However as the pharmacological threshold and EC_{50} for P2Y receptor activation is comparable to the most sensitive of the P2X receptors, this component of the study has developed an interesting new element of the proposal to develop the CHO cell as a biosensor.

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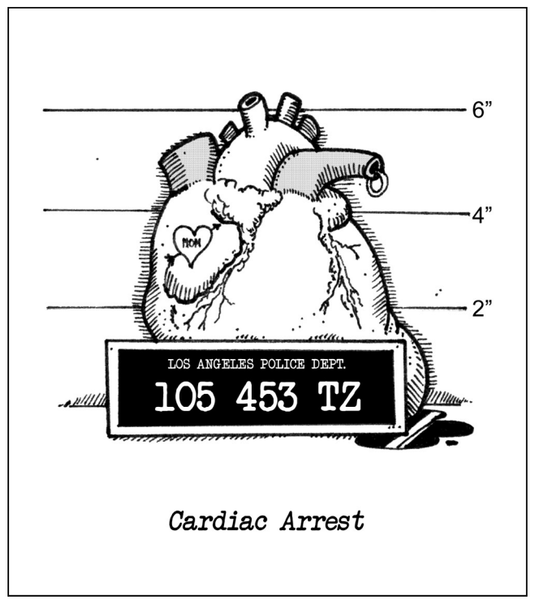

Cardiac Arrest

FEATURE : OPINION

A Fijian Experience

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The author has a strong interest in Pacific Island and indigenous health as his mother was born in Tonga. He has also been involved in student politics and education for last 3 years and is the NZMSA president for 2006. He is involved in rural health with NZMSA and Matagouri Rural Club and he was the OUMSA president in 2003/2004.

Sigatoka Hospital

At the end of fourth year in 2004, I decided to spend my summer holidays working in hospital in Fiji to gain some more clinical experience. I have always had a strong interest in Pacific Island health as my mother was born in Tonga and moved over to Auckland when she was young. I decided to work in Fiji because our family had a timeshare in Sigatoka and there was nearby hospital.

There are two main public hospitals in Fiji, one in Suva and one in Lautoka. I worked in Sigatoka District Hospital, about 1hr drive from Nadi along the beautiful Coral Coast. The Sigatoka valley is known as the "salad bowl" of Fiji because of the many crops, fruit and vegetables that are grown. These products would be on sale at the local markets along with freshly caught fish and shellfish and imported spices and curry mixtures from India. Food is an important part of life in Fiji and for a Dunedin student this was paradise!

Sigatoka District Hospital has about 60 beds, with 4 doctors, nurses and midwives. There are two separate men's and women's wards, obstetric unit, emergency surgery theatre, emergency department (ED) and an outpatient's clinic. The beauty of this set up was that I could do a bit of everything. I mainly stayed in the emergency department, where I would be with another doctor or often just with a nurse! It was a bit daunting at first to be responsible for admitting patients and their management. All I can say is that I learnt very quickly and became very good friends with the staff who I learnt much from. In Fiji, GPs are private so people either come to the ED or go to the outpatients, this meant we dealt with many people and problems that varied from trivial to life threatening.

When most people think about Fiji, they think about the resorts and lazy cocktails on the beach. After working there it soon became apparent that the reality was far different, as 25.5% of Fijian's live below the poverty line. Many Fijians live in villages in concrete or corrugated houses. Power is usually by generator, with outside showers and toilets. There are often many people living in one house. These factors impact hugely with the control of infection and disease. We would often see a whole family or part of a village for vomiting and diarrhoea. This would be related to a common water or food source. Scabies and skin abscesses were very common because of the poor hygiene, humid conditions and the shortage of water. The skin abscesses would develop as folliculitis or small abscesses and because of the reluctance to see a doctor would develop into carbuncles (large abscesses) with surrounding cellulitis. For severe cases some needed surgery. These late presentations were common with indigenous Fijians. They would normally see the doctor after they have tried herbal or local remedies. Other examples of late presentations included diabetic patients with 2 year old foot sores, dislocated shoulders that had been out for 2 months, pregnant women that had not been to any antenatal appointments and turning up the day before delivering. Fijian Indians on the other hand came more readily to the hospital. It was sometimes difficult to judge their level of pain and how sick they were. The lack of quick lab tests and reliable imaging made decisions on transferring patients to the main hospital in Lautoka very difficult.

We would often see a whole family or part of a village for vomiting and diarrhoea.

The ED was always busy, with no triage system and only 4 beds. It was hard to work out who you had and hadn't seen. We would often be rehydrating 10 patients for gastroenteritis and then mixed in between, have some very serious cases. One particular occasion in the space of 20 minutes while working with a nurse, we were stabilizing a patient for transfer with heavy vaginal bleeding, managing a patient with BP of 230/150 and then a pick up truck pulls up with a man who fell out of a large tree while pruning it! Another busy occasion when the ED was overflowing, I noticed an Indian girl, about 13 who I hadn't seen. I asked her to get up from her chair and onto the bed. She was markedly

ataxic and nearly fell over. She had marked torticollis (stiff head turned towards the right) with a left lateral gaze. My immediate impression was that she had a neurological problem. With limited resources, I did a detailed history and examination. It turned out that she had been treated with Prochlorperazine (Stemetil) for nausea and vomiting two days ago and that she was developing a hypersensitivity reaction to the medication. After consulting the pharmacist, we found out that we had to give Benztropine. Unfortunately the hospital had no more supply of this!! So we had to get her father to drive into town to a community pharmacy to buy the Benztropine. Meanwhile, the girl was getting very scared and crying. I have to admit I was feeling worried as well. To add to the situation, a priest arrived and started praying for the girl with the family. Finally her father arrived and we gave the Benztropine, which thankfully resolved things.

In the afternoon I would often work in the outpatients with another doctor. We would have very large clinics often seeing 40 plus people in an afternoon. These clinics were general medical, surgical and diabetes. Diabetes and heart disease, like in the western world, is a major problem in Fiji. We would often see patients at each clinic that had blood sugars over 35mmol! The Indian population seem to be affected just as much as the Fijian population. Public and preventive health is an area that will need to be targeted, though it is difficult to advise a sugar cane farmer who works 12 hours a day about diet and exercise!

The Fijian people have to be the friendliest people I have met. They seldom complain and are always smiling. I became very good friends with the staff and got to know many of my patients. I used to run through the villages after work and often people would yell after me "hello doctor!" or "my stomach is better now!" I thoroughly enjoyed my time in Fiji. I will hopefully do part of my elective in Tonga and I would like to go back to the Pacific Islands to help in the future.

I think every medical student should go at least once in their career to a country with limited resources. It puts your medicine in perspective. It makes you realise the resources you have, and emphasizes the importance of the basics of history taking and examination. For me the experience has made me think a lot about my career in medicine and the differences in health care in the world. I feel privileged to be part of a profession that is able to make a difference to the quality of life of many people.

I used to run through the villages after work and often people would yell after me "hello doctor!" or "my stomach is better now!"

Top: a traditional Fijian ceremony.
Bottom: a village dance on Nacula island.

FEATURE : OPINION

Leaving Banda Aceh

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Steve Tripp is a medical doctor who works for the University of Otago Physiology Department as a Medical Teaching Fellow, and as a locum House Surgeon for Dunedin Public Hospital. Steve has an interest in public health, with a particular interest in community development in the third world. He is currently planning to move to Cambodia in 2006 to work in community development.

I woke up this morning at 5AM with three mosques seemingly competing for my attention. I could swear they had crept up in the night and were directly parked outside my tent. After half an hour the Islamic prayer calls were winding down and so some Christians started up with their praise music. They had only stopped at midnight the night before! I was just dropping off back to sleep at 6:30 and there was a bloody earthquake! God, if you're trying to get my attention, can't you give me dreams and visions in my sleep! I gave up and got up.

There's something tragic about waking up in the morning and squashing a fat, bloody, mosquito on the inside of your net! Tragic for the

The day after arriving I saw the unbelievable sight of a steel hulled barge that had been picked up by the tsunami, swept over roads, houses, trees and deposited, in a suburb three kilometers inland.

mosquito that spent a happy night consuming only to find himself trapped and doomed; tragic for me, who spent the night being consumed for no ultimate purpose. I would rather make the sacrifice for a cause although the cause of mosquito reproduction is not one of my priorities. Are our causes worth more? Are our happy days consuming worth more?

I feel sad to be leaving Banda Aceh, but happy to be going home; a sense of fulfillment for what has been achieved, but also a sense that I am leaving unfinished work, a story without an ending. It has only been three months after the tsunami that claimed the lives of 140,000 Acehnese lives. It will be years before the wounds that remain can heal. Since arriving in Banda Aceh nearly four weeks ago my ideas of reality and life have been seriously challenged. The day after arriving I saw the unbelievable sight of a steel hulled barge – larger than an Olympic size swimming pool – that had been picked up by the tsunami, swept over roads, houses, trees and deposited, in a suburb three kilometers inland. I met people who had lost their entire families on Boxing Day of 2004, while I was still digesting the turkey and alcohol from the day before – and yet they knew how to laugh, to cry, and to sing. I worked with people who were so grateful to be able to do something for their neighbours, grateful to have work, and grateful that we had come to help that they would shower us with praise, food, transport, gifts and love.

On the flight to Banda Aceh nearly four weeks ago I was sitting next to a medical specialist – an eye surgeon from Jakarta – with a preference for retinal surgery over corneal surgery. "To an eye doctor, the cornea is to the retina what a wife is to a girlfriend. With a girlfriend you never know what to expect. There always seems to be surprises and you have to tread carefully. With a wife, things are predictable, domestic and, well, to be honest, boring!" And the guy is still married!

Leaving Banda Aceh today I sit next to a critical care specialist. Bahman is an Iranian, with a United States passport who lives in New Zealand. He's quite a passionate man with a passion for environmental health and a passionate dislike of George W. Bush. Over twenty years ago, Bahman left Iran because of Saddam Hussein; eighteen months ago, he left the United States because of George W. Bush. Together we had great discussions and many laughs.

Looking out of the airplane window, I see Jakarta – large, sprawling, flat and overcrowded. Until recently, it had the dubious reputation of being the largest city in the world without an organized sewage system. Having taken off from Jakarta airport fifteen minutes ago I see densely