

Medical elective in EsSalud hospital, Cusco, Peru.

Peru is a very interesting country for many reasons including culture and heritage, however, what I found most fascinating was its geographical variation. There are 3 main climatic zones in Peru, the highlands, the jungle and the coast. Within each zone there are variations in the type of medical and surgical complications encountered. In the highlands it is much cooler, one of the main issues associated with this area is altitude sickness. However, in the Jungle where it is humid the risk of infectious disease is greater. By the coastal regions presentations are similar to those found in the UK.

I spent most of my time in the city of Cusco-which is an ancient city that was founded in Incan times and initially called qos'qo- meaning 'the navel of the world' in Quechua language. It was built in the shape of a puma, which was of significance in Incan culture as it signified the middle level of the 3 levels of Incan religious beliefs. Cusco has been greatly extended over the years. There are many ancient religious sites around Cusco, which makes it a popular tourist destination. Additionally as it is quite a young and energetic city there are many expats also living in Cusco, although the population consists mainly of people of Quechua heritage as well as Spanish heritage.

1. Describe the main types of illness that patients present with in Cusco, Peru. How does this compare to the UK?

My placement was split so that I was able to spend some time in a local EsSalud hospital in Cusco as well as at a jungle clinic in Puerto Maldonado.

In Peru, EsSalud is a chain of hospitals-these are public hospitals that serve mainly the working class of Peru, approximately 30% of the working population is covered by this health care system¹. The majority (60%) of the population are covered by the Ministry of Health (MINSA)¹. There are also private hospitals as well as healthcare for the military as well as the armed forces in Peru.

I spent my time with Dr Silva in a general clinic within an EsSalud hospital in the centre of Cusco. Dr Silva informed us that most people in Cusco have access to medical care. The employed have insurance that covers them for all of the medical care, including prescriptions as well as any potential surgeries. Depending on their level of income, people contribute a certain amount of their salary each month, typically for most people this equates to about 9% of their yearly income. This insurance covers people for any medical intervention including surgery as well as transplantation that they may require. However, access to healthcare for more remote indigenous communities is much more challenging.

The clinic that Dr Silva ran was similar to that of a general practitioner. He worked at a primary level therefore we saw a variety of cases. Consultations would last approximately 10 minutes and clinics could have 40 people attending in just one session! Quite often patients are referred on to secondary care- often at the patients' insistence. Similarly to the UK, patients would attend with more than one complaint. Presentations in Cusco were quite similar to those in the UK. Tiredness, backache, skin pathology (eczema, psoriasis) abdo pain, chest pain were some of the most common. Peruvian diets vary region to region. By the coast, sea food is the specialty, in more local areas meats such as guinea pig and alpaca are quite common. Meals will often be high in carbohydrates and Peruvians do enjoy desserts as was evidenced by the vast amount of dessert places in Cusco as a result obesity and diabetes are very common. Due to improving healthcare and better access, conditions such as hypertension and diabetes are more readily diagnosed.

Interestingly one of the cases was a teenage boy presenting with pain in his right hypochondrium. I examined the patient and other than pain found no organomegaly or signs of pathology, bowel sounds were also present. However, Dr Silva using a Peruvian technique of

tapping in the region of the gall bladder diagnosed the boy with kidney stones. He was subsequently referred for imaging. Dr Silva explained that Peruvian diets were quite high in cholesterol, as a result gall stones were common in young people.



Examination room in EsSalud – Aldofo Guevara Velasco, Cusco, Peru

2. In what ways are tropical illnesses managed in Peru. How does this compare to the UK?

My placement took place in a hospital in the jungle town of Puerto Maldonado. Unfortunately due to an outbreak of dengue fever, we were unable to visit a remote village in the jungle as the elective organiser felt that it would be unwise for us to go there due to risk of contracting dengue.

We did have the opportunity to visit the jungle which was a very interesting experience. There are many factors to consider before heading in to the jungle including; managing the climate (as it can be very humid in the rainforest and the rains can be very heavy causing the river to rise), being prepared for insect/animal bites or stings as well as which anti-malarial is suitable for the region. Furthermore consideration of sanitation and hygiene as well as access to drinking water needs to be taken.

Puerto Maldonado is a well developed town with adequate facilities for visitors. However, on the outskirts closer to the river living arrangements are a lot more basic.

We spent some time in one of the local hospitals. It was quite a large hospital with a number of departments. I was placed in the department of tropical medicine. The wards consisted of small rooms with 3 beds per room. The rooms were very small with little space between the beds- therefore the patients were in very close proximity to each other- not ideal for preventing spread of disease. Unlike in the UK, the wards were mixed genders and there were no curtains between patients, however, the impression that I got was that this was not a big issue for the patients. Each bed had a mosquito net above it as the risk of malarial infection is high in Puerto Maldonado.

Although the ward round was in Spanish it was quite straightforward to understand the presenting complaint and management plan for each patient. I was surprised at how much information regarding a patients' condition could be gained from standing at the end of the bed and observing the patient, having only a basic grasp of Spanish enabled me to engage my clinical skills more. The ward rounds were conducted in a very similar way to the UK. However, there was also a pharmacist who would approve medication immediately after the doctor had prescribed them.

On ward rounds we encountered a number of patients with dengue fever, a viral disease that causes complications with the clotting of blood. It is a tropical disease that is commonly caused by mosquito bites. The symptoms of which include fever, severe bone pain, (also known as break bone), there is also a characteristic rash associated with the disease. Patients were usually referred to ITU and managed with fluid rehydration. If severe, a blood transfusion may be required.

Other common presentations on the ward included patients with pneumonia result of aspiration due to debilitating disease such as stroke or Parkinson's disease. A number of young women had been admitted due to urine infections. The doctor explained this to be due to poor hygiene, young women wiping themselves incorrectly after going to the bathroom. These women were managed on the ward for a night and were then discharged with antibiotics. There was one young lady who had presented with a UTI, but had gone on to have amenorrhoea, a pregnancy test was negative and therefore she was referred to the obstetrics and gynaecology team.



Empty ward in hospital in Puerto Maldonado



Medicine Cabinet in hospital in Puerto Maldonado

3. Describe an interesting disease/presentation in Peru, that you are unlikely to come across in the UK. Discuss how this was managed.

Being at a significant level above the sea, quite often travellers will suffer from altitude sickness in some form or other. Personally upon arriving in Cusco I could feel myself becoming short of breath when walking distances that in the UK would not have resulted in such a reaction. I also experienced headache that were easily treated by taking paracetamol.

On the Salkantay trek one of the young ladies in the group suddenly fell very ill and passed out. It was snowing and very cold at the top of the mountain. The guide, horseman and cook swiftly

took us to a shelter and gave her dry clothing to put on. The cook immediately prepared coca de mate (coca tea), this was quite effective, and thankfully the lady was able to recover fully. I was quite worried when this happened as the girl looked extremely pale and weak. Being a medical student I did feel that it would be necessary to help contribute to the situation, especially having attended a mountain medicine course and being a prehospital care student. I did voice my concern that the lady should return to Cusco. However, the guides' techniques worked effectively and once the girl had come round she was quite determined to cross the mountain. Amazingly she managed to complete the trek with no further incidents. Thankfully the descent from the peak was very swift. It was however a very delicate situation as a medical student.

Altitude affects residents as well as tourists in Cusco. Quite often you will find locals eating/drinking/chewing coca leaves. This is a very important tradition, coca leaves have been utilised for a number of centuries including Incan times. They are used as an anaesthetic agent as well as to aid digestion as altitude can cause slowing down of the gastrointestinal system, as well as provide energy. Quite often coca leaves are used as part of a traditional form of medicine where it can have a narcotic effect.

4. How this medical elective experience affected me and how I will use this experience to improve my own practice.

As part of my medical elective I was fortunate enough to learn Spanish. I found this to be both a great skill to acquire as well as essential for my medical experience. It made a difference in clinics and on the wards as most consultations and communication between team members were in Spanish. Some of the clinicians spoke English, however, there was not often time for teaching and we'd be on a ward as observers. Additionally not being fluent in Spanish was also useful, as it made me concentrate and pay closer attention to the patient from the end of the bed, I realised that I was noticing a lot more and picking up clues as to what the patients' ailment could be.

It was also valuable to experience being in different environments. Even when I was not in hospital, being faced with altitude sickness and the prospect of injury whilst on the trekking was a great learning opportunity from a prehospital care perspective. Staying in places where access to clean water as well as lack of heating was challenging but a great opportunity to be resourceful! All of these environments provided their own challenges and as a result my elective experience has greatly increased my interest in prehospital care medicine as well as anaesthetics. I have always been interested in working abroad especially in an expedition medicine role. I now feel that after all my different experiences in various parts of Peru, that this is something that I am capable of doing and would like to pursue in the future.

I hope to continue to learn Spanish and become more fluent, and eventually participate in an expedition once I have gained sufficient medical experience.

References

1. Global health work alliance. Peru. Retrieved 7th June from <http://www.who.int/workforcealliance/countries/per/en/index.html>