

## **A fellowship in Singapore during februari 2011**

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Singapore is an island, country and city between Malaysia and Indonesia in Southeast Asia with 5 million inhabitants that speak English, Mandarin, Malaysian and Tamil. Republic of Singapore is independent since 1965 and a wealthy country with a BNP per capita of 50523 USD.

I got a fellowship during February 2011 in the maternal fetal medicine department at KK women's and children's hospital (KKH) for one month to widen my experience and perspectives. KKH was founded 1858 and is a specialist hospital for women and children conditions. They have 830 patient beds, 400 specialist doctors and 12000 deliveries/year, 40-60 emergency patients/day, which makes it the largest obstetrics, gynecology, pediatrics and neonathology hospital in Singapore.

I was in maternal and fetal medicine (MF) Mondays to Wednesdays where I observed antenatal diagnostics, antenatal care and deliveries. Thursdays and Fridays I was in minor invasive surgery (MIS) and watched surgery, and observed out patient clinics. I have followed doctors of different levels, from house officers to senior consultants. Every day there were different discussions or audits. Mondays there was audit on last weeks Cesarean sections and intensive care unit patients, Tuesdays there was discussion on the fetal abnormality cases for the day and later department meeting, Wednesdays there was audit on deliveries and neonathology care, Thursdays there was discussion on the fetal abnormality cases of the day and Fridays there was reporting of the patients to be operated in the subsequent week.

In addition to all these meetings, audits and discussions I participated in the obstetric ward rounds Mondays and Wednesdays, where we went to all the obstetric wards and saw the most important or interesting cases, the cases where a consultant was needed. The rest of the patients were taken care of by their private doctor or the medical and house officers. After the ward rounds I was either in Antenatal diagnostics and watched ultrasound examinations or in the delivery suite watching and discussing antenatal and delivery cases.

Thursdays I was observing the ongoing surgery from MIS. Mostly laparoscopic operations, salpingoophorectomies, hysterectomies, myoma enucleations, cyst enucleations, ectopic pregnancies and diagnostic surgery. There were also some vaginal hysterectomies, prolapse surgery and laparotomies.

Fridays I followed one of the doctors in the out patient clinic and observed their hectic work. They usually saw 25-35 obstetric and gynecological patients during a half day clinic.

### Singaporean health care system

In Singapore you pay tax only if you have a very high salary, and then you pay of 50Euro per year. This means that you can do what you wish with all your money, but also that you need a big buffer to be able to pay for for example health care and education. In the hospital there are different levels depending on how much you want to pay, from C, subsidized and taken care of by the people on duty that day, to A, highest of private with your own private doctor 24 hours seven days per week.

Every employee has the right of 12 days of sick leave every year. When you are ill you get a medical certificate from your doctor to show your employer that you have the right to be on sick

leave.

In Singapore, as in many countries in Asia, the family is the priority, this implies that the best of the family is prioritised, not the patient himself or herself and that the family must agree what should be done for the patient.

In all the departments work house officers (HO) that do most of the documenting and is the first one to see the patient and then refers to the medical officer (MO) that are in their first year of their specialisation. If the MO don't know how to handle the patient he/she refers to the registrar, who has done some years as a specialist trainee.

Hierarchy from bottom up: house officer (HO), medical officer (MO), registrar, associate consultant, senior consultant.

### Antenatal Diagnostics Center (ADC)

During pregnancy you have your obstetrician that takes care of and manage your pregnancy. This obstetrician consults the ADC for ultrasounds. They recommend first trimester screening (FTS), second trimester screening (STS) and growth control. Routine controls as HIV, Hepatitis, blood value, MCV (to check for thalassemia) and blood group are done in early pregnancy and blood glucose check if needed.

FTS is performed between 11 and 14 weeks of pregnancy and they do nuchal translucency and risk calculation for trisomia as well as fetal features of nasal bone, brain, heart, tricuspid, ductus, ventricle, bladder, cord, arms, legs, placenta and uterus. If they discover some anomalies they do a new scan around 16 weeks. The trisomia risk cutoff for chorionic villi biopsy and amniocentesis is 1/300. The risk of miscarriage caused by amniocentesis or chorionic villi biopsy is 1/300 and the samples are sent for chromosome culturing to check all chromosomes. If parents ask for a fast result a FISH is done, which is rarely. Abortion can be done until 24 weeks without consent from the medical council, except if it is a reduction of multiple pregnancy. From 24 weeks of gestation the child is resuscitated if preterm birth.

Twice a week they have a ADC round where they discuss all cases where something abnormal has been found.

STS is the organ scanning ultrasound done around 20 weeks where also the size, gender, uterus, placenta and uterine artery blood flow are checked.

Growth scan around 30 weeks is done to see that the fetus is growing as expected.

Rhesonative negative mothers get a prophylactic shot of anti-D at 28 and 34 weeks in addition to the shots they get with any manipulation during pregnancy.

All mothers are screened for Group B Streptococks at 35-36 weeks and hence get intrapartal Penicillin G if positive.

### Delivery Suite

KKH has about 12000 deliveries every year out of 16000 in total in Singapore. The incidence of Cesarean section is >30%.

When a pregnant woman, usually from 22 weeks, comes to the delivery suite she is first of all triaged by a team of nurses and doctors, that decide whether the patient is to stay or go home.

If antenatal care she stays first in the delivery suite for observation before the decision is made whether she can move to the antenatal ward. In delivery ward all patients are bed bound and if for a longer period given high pressure thigh high socks and have continuous CTG .

Corticoids for pulmonary maturity is given until 36 weeks. If premature contractions nifedipin is given 3 times per day and if still contractions salbutamol infusion. If premature preterm rupture of membranes patient is given antibiotics.

Patients for delivery are admitted to the delivery suite where a doctor is responsible and checks the opening of cervix, but if uncomplicated and subsidized patient a midwife delivers and suture minor tears. If it is a private patient the private obstetrician will deliver and take care of any tears.

Every four hours there are rounds with the HO, MO and consultant of all patients in the delivery suite, but no reporting to the new staff coming when there is a change of team for day and night shift.

### Minor Invasive Surgery, MIS

This is a benign unit that does mostly laparoscopic surgery. For example 99% of the ectopic pregnancies are done laparoscopically. The HO takes care of the ward during the day which means that the rest can go to OT or clinic.

In clinic they see 30-35 patients on a half day, which means about 5 minutes per patient. The waiting time to get an appointment is short. Some specialist do ultrasound, but most of the ultrasound is done by either radiologists or sonographers and after the ultrasound the patient has to come back for information.

OT is effective with 15-30 minutes changing time between patients. The surgeons are in the OT waiting for the next case. Three to four surgeons are needed since the nurse doesn't assist, other than taking care of the instruments. With all this experience and training they get very good in surgery. The doctor that has seen the patient is the one operating.

### Thoughts and reflections

I thought that there would be differences between Sweden and Singapore, but the differences were bigger than expected. As a tourist in Singapore, staying for a few days, you see a clean, safe, wealthy country very much like Europe, but if you stay there longer you get to see big differences. In Sweden we are individualists, we are atheists and we are social, in Singapore family comes first, the individual second, most people believe and it is very competitive and elitist. People come from different cultures, also the patients that I meet in Sweden. Now that I know about the differences in culture, it makes me understand those patients of mine that come from a different culture better. Hopefully I will be able to give them better care. This has been a great experience.