ANAESTHESIA

Elective Report

SSC 5c:

Anaesthesia, Rashid Hospital Dubai UAE

By Samia Nesar

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SSC 5C

Elective report

Objective 1

What are the prevalent conditions that complicate anaesthesia in UAE (Rashid hospital)? How do they differ from the UK?

Many conditions can potentially complicate the anaesthesia in both countries. I aim to focus on the main conditions that I have observed during my elective.

In Dubai, I have noted that obesity in all age groups, particularly in children is prevalent.
A 2007 study undertaken on 4381 children aged between 5-17 years in the United Arab Emirates (UAE) demonstrated using the International Obesity task force criteria that 944 (21.5%) were overweight and 601 (13.7%) of these were obese. It also showed that females were more likely to be obese than males and boys from rural areas had the lowest prevalence of obesity (23.6%) [1] Thus indicating that there is a high prevalence of overweight children in UAE.

Obesity can complicate airway management as the patient has a reduced functional residual capacity, vital capacity and respiratory reserve, thereby resulting in a ventilation-perfusion mismatch.
Other adverse effects of obesity are related to the presence of systemic hypertension, lipid abnormalities and diabetes mellitus. All these are risk factors for cardiovascular disease e.g. hypertension and ischaemic heart disease. [2]

Other prevalent conditions complicating anaesthesia in UAE are cardiovascular disease and diabetes mellitus. The international diabetes federation (IDF) reported in 2010 that the UAE was one of the top five countries with the highest prevalence of diabetes globally (the other countries include Nauru, Saudi Arabia, Bahrain and Mauritius). It is estimated that 25% of the population suffer from DM. [3]
The known microvascular and macrovascular complications of diabetes that can cause peri-operative complications include nephrology and cardiovascular disease hypertension, ischaemic heart disease and stroke respectively.

Autosomal recessive disorders are very common in the UAE. Haemoglinopathies are one of the most common disorders in the national population of UAE, in particular ά-thalassemia and sickle cell disease.
Due to the climate, dehydration causing metabolic acidosis is also very common which complicates the anaesthetic management.

Rashid hospital is a specialised trauma and neurology centre and many of the emergency cases are related to high-speed collisions. Numerous patients present with splenectomies secondary to trauma and head injuries with a reduced Glasgow Coma Scale (GCS). This further complicates the anaesthesia are airway management that is required.

Similarly, in the UK obesity and diabetes mellitus are highly prevalent. Comparative figures show that the prevalence of diabetes is higher in the UAE (25% opposed to 5.1% of the population) compared to the UK: [4]

Prevalence

- In 2009, the prevalence of diabetes in the adult population across the UK was as follows:

Country	Prevalence	Number of people
England	5.1%	2,213,138
Northern Ireland	4.5%	65,066
Wales	4.6%	146,173
Scotland	3.9%	209,896

Figure 1: Table demonstrating the prevalence of Diabetes in the UK in 2009 [4]

Obesity levels in both the UK and UAE are higher compared to the global average. However, the obesity levels are higher in the UAE compared to the UK in all age groups as well as in both females and males.

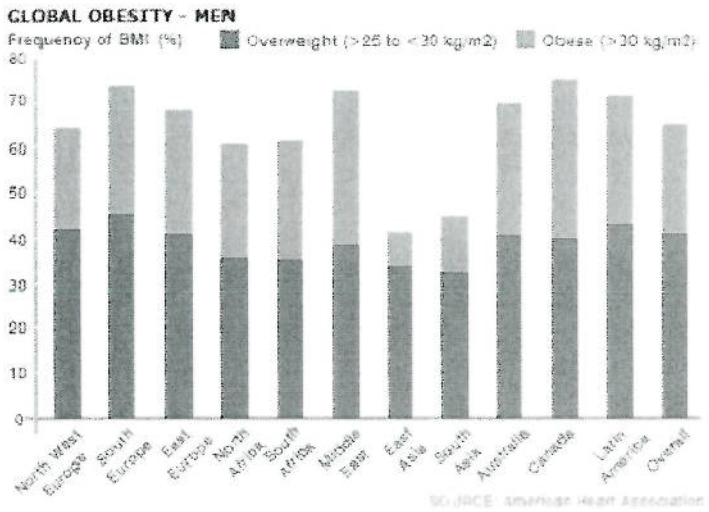

Figure 2: Graphical representation of global obesity in men [5]

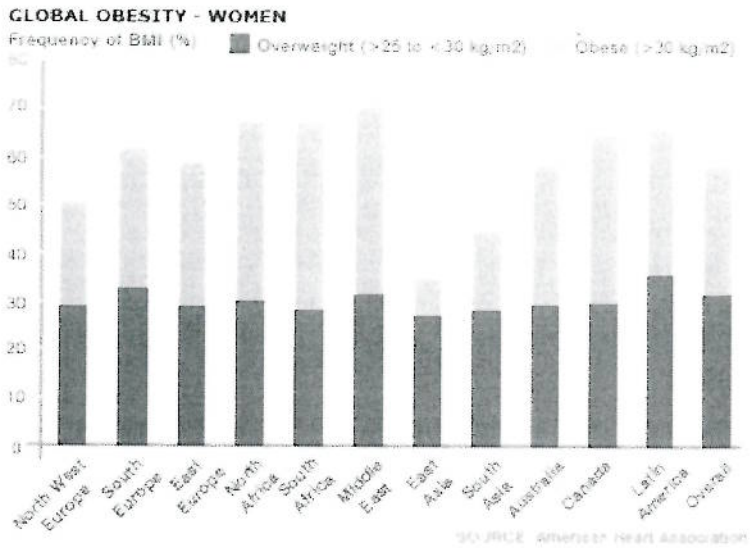

Figure 3: Graphical representation of global obesity in women [5]

However, in the UK alcoholic liver disease is highly prevalent which results in deranged liver function, coagulopathies and renal impairment (hepato-renal syndrome). All these factors effect the pharmacological management and hence anaesthestic agents and management.

Summary points:

- UAE has higher levels of DM and obesity compared to the global average and UK.
- Automsomal recessive disorders in particular haemoglinopathies (sickle cell anaemia and thalassemia are more prevalent in UAE.
- High speed trauma RTA are more common in the UAE
- Dehydration is more common in the UAE
- Other high risk conditions in UAE (included in the appendix)
- In the UK – alcoholic liver disease is more prevalent

Conclusion

All the above points complicate anaesthesia and hence the anaesthetists need to take anticipate potential complications as a result. The conditions seem to be similar but more prevalent in the UAE (due to the local population as well as the migrant population).

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Objective 2:

How is the anaesthetic health care system organised in UAE (Rashid hospital)?
How does this differ from the UK?

UAE health care system

The UAE health service is organised by the Department of Health and Medical services (DOHMS).
This is further divided into:

- Dubai Health Authority (DHA): for public and private healthcare facilities in the Emirate of Dubai
- Ministry of Health (MOH): for public and private healthcare facilities in the Emirates of Sharjah, Ajman and the rest of the north Emirates, also few public facilities in Dubai like Al Baraha Hospital and Al Amal Psychiatric Hospital.

The health system is free to the local residents of UAE. The health care doctors are a mixture of local doctors and foreign health professionals.

40 years ago there were only seven public hospitals in UAE, whereas now there are over 40 hospitals. This is predominantly due to multi-dollar investments by the government. The aims of the health services in UAE are to improve the well-being of the people and works very strategically to ensure patient centered care. Medical services include vaccinations, medical fitness examination and psychiatric treatment. A free general practice service does exist to the locals however, it is known as a family doctor service.

Foreign nationals always receive free treatment in the time of emergencies.

UK health system - NHS

The National Health Service (NHS) is in charge of the healthcare in England. The department of health centrally monitors the NHS. At the top is the Secretary of State for Health, the government minister in charge of the Department of Health, responsible for the NHS in England and answerable to Parliament. The Department of Health and the NHS Executive are responsible for the strategic planning of the health service as a whole. It consists of four independent organisations, one for each country, which makes up the UK. Each service is in charge of treating citizens of parts of the UK.

Healthcare in the UK is similarly free to citizens who are registered as long-term residents in the UK. It is one of the very few countries, which provide a free walk in system of healthcare with little supplementary charges. The UK has a very strong private healthcare service, which is usually funded by private insurance contributors. However, private health insurance is often used in addition with the basic free healthcare.

Members of the armed forces working abroad also receive free treatment. However, British citizens living outside the UK are charged regardless of whether they are payers of national insurance.

Organisation and structure

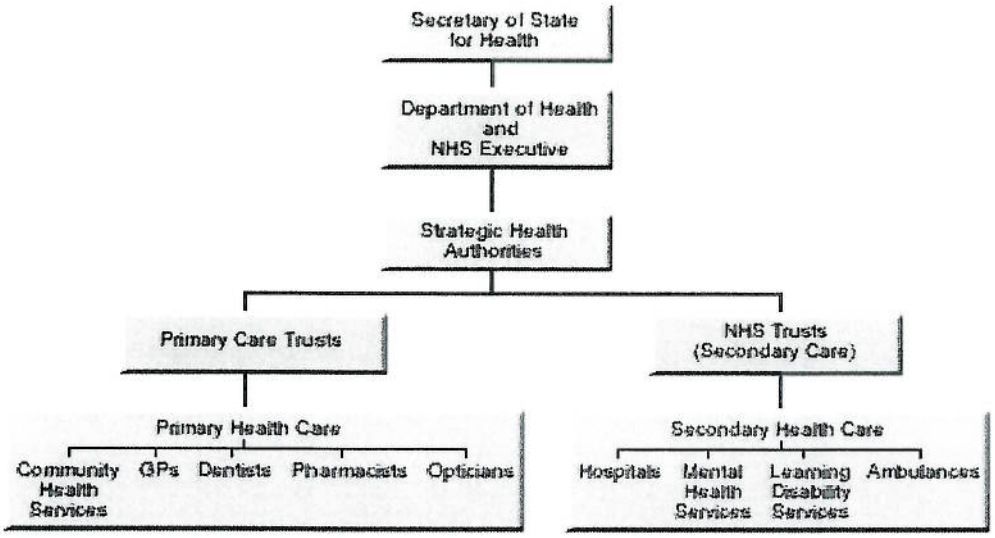

Figure 4: Diagram showing the organisation and structure of the NHS [6]

Health services are divided between 'primary' and 'secondary'. Primary care services include GPs, dentists, pharmacists, opticians, district nursing etc. These are provided locally, near to where patients live, as well as home visits.

Services are provided by hundreds of NHS organisations called trusts. NHS Trusts supply secondary care. "The more specialised services (secondary care) are provided in fewer locations. This includes not only hospitals but also ambulances and specialised health services for the mentally ill and the learning disabled.

Anaesthetic perspective

In the UAE, all elective cases have pre-anaesthetic check-up; this is run by nurses, registrars or consultants. If there are any medical problems that need to be rectified for example uncontrolled hypertension – they are then referred to the physicians who manage them in an outpatient setting. The consultation findings lasts for 2 months – if there has been no change in the patient's condition. On the day of the admission, the investigations are performed again and if results are adequate the surgery is commenced, if unsatisfactory the anaesthetists liaise with the surgeons and a joint plan is discussed.
In regards to post-operative care, the anesthetists look after the patient for the post 24 hours.
Chronic pain is managed with management related to specific nerve blocks in an outpatient setting,

In the UK, there are pre-operative clinics that are run solely by trained senior nurses. If they have any concerns, the patients are then referred to consultant led pre-

operative clinics. If there were any medical, conditions that need looking into the anaesthetist would then liaise with both the surgeon and the general practitioner, this would also be managed in an outpatient setting.
Post-operative care is the same is the same as in the UAE.

Summary points:

- Both UAE and UK have pre-operative anaesthetic clinics which are run by anaesthetists and nurses.
- Post-operative care for the first 24 hours is anesthetist led and the care is taken over by the surgeons.
- Chronic pain is managed in outpatient clinics – in the UAE more emphasis is on regional anaesthesia whereas in the UK – emphasis is on pharmacological analgesic control using the pain ladder.

Conclusion

The anaesthetic heath care system in the UAE is organised in a very similar manner to the UK.

Objective 3:

What steps have the government and other organisations taken to improve the health in Dubai?

During my elective, it quickly became apparent at how much money has been invested into trying to improve the health by the government as well as numerous organisations.

The ministry of health promotes heart disease awareness with regular campaigns in order to educate people about the contributing risk factors such as smoking, diabetes, obesity, hypertension, stress and other lifestyle modifications.

On world heart day, an annual free check up for the community is provided, which includes: free blood pressure measurement and BMI checks. Lifestyle modification advice is also provided.

There are many posters in the hospital which advertise good health e.g. eating 5 portions fruit and vegetables daily, 'Say no to tobacco', 'Get active' as well as signs advising at least 30 minutes daily exercise and maintaining a healthy weight. Due o the increasing problem of child obesity there are many strategies aimed at diet and lifestyle advice for children. [7]

This is consolidated in the sense that the hospital canteen provides extremely healthy food options (no chips and beans in sight!), although the portions were much larger than our portions. We were able to split 1 UAE portion between 3 of us!

There are also many posters around the hospital e.g. 'Wash me' (for hand) and other health campaigns. In terms of cleaning, the hospitals are very clean, as they have been contracted with cleaning companies thus promoting health and sanitation.

Objective 4:

Continue to practice my clinical skills with an evaluative aspect

During my anaesthetic elective in Rashid hospital, Dubai, I have had many valuable experiences. I have learnt from many experienced doctors and nurses and the whole experience has been very informative and rewarding.
I spent most of my time in operating theatres, observing and practicing clinical skills under direct supervision.
All the doctors were extremely helpful, kind and very willing to teach.

I was able to practice my practical skills by inserting cannulae, intubations and airway management. I was also able to practice my communication skills with patients, by taking histories in Urdu, Hindi and English, whilst receiving feedback from the doctors there and then.
I observed regional anaesthesia, which I had never observed before and was even able to assist in many procedures. These techniques are slowly being introduced in the UK, and at present only are performed in very specialist centres. I think this made my elective exceptionally valuable as regional anaesthesia is the future of anaesthesia.

At the end of my firm, we had a discussion about my time in Rashid hospital. We evaluated the differences between the healthcare system and teaching standards between the UK and UAE. Overall, the placement was excellent, my experiences were 'very hands on' experiences and I was able to learn a lot about anaesthesia in the UAE.

Word Count 1512

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