

ELECTIVE (SSC5b) REPORT (1200 words)

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

Interventional radiology and cardiology are specialities that we do not get much exposure in at our time at university. One of the main aims of my elective was to gain some experience and exposure into the niche speciality of interventional cardiology.

Upon embarking on my elective, I quickly realised that interventional radiology and cardiology were completely new territories of medicine that I knew close to nothing about. Each procedure required superior knowledge of anatomy, multiple forms of imaging to evaluate the extent of disease and observe any deviation from the norm in terms of anatomy, and vast knowledge of instruments required for the procedure. It was interesting to see imaging used in a different light with times where imaging was used throughout the whole procedure to guide the instruments such as fluoroscopy or CT. I was baffled by the different instruments that were used including catheters, microcatheters, guidewires, biopsy needles, angioplasty balloons, stents, IVC filters and much more. Each of these has their own sub-classifications in terms of size, material, flexibility and also other properties such as being hydrophilic or not. All these have repercussions for each procedure and need to be taken into account before deciding what is most suitable.

The health care system in the Kingdom of Saudi Arabia (KSA) is a bit different to the one found in the UK. Government agencies exist that provide healthcare services however, there is a significant role played by private hospitals (more than in the UK) especially to cater for the growing population that demand quicker healthcare. There are different types of hospitals in KSA; government hospitals are free and serve the general public. The private hospitals provide healthcare for profit to those that pay for their services. Sulaiman-al-Habib Hospital (where I undertook my elective) is one of the leading private hospitals in the country that recruits a significant number of consultants that have trained across the world in countries such as the US, the UK and Australia. There are also specialist hospitals and military hospitals that provide specialist treatment for specific patient groups.

Saudi Arabian Cardiac Interventional Society and the American College of Cardiology have collaborated together for a very exciting project just this year. They plan to implement the NCDR CathPCI Registry across different healthcare providers across the KSA. This registry assesses characteristics, management and outcomes of patients who receive PCI procedures as well as diagnostic catheterisation. This is very interesting for Saudi Arabia as it will allow hospitals to improve the quality of care that they provide, improving heart health. This year they start with a one-year pilot program that includes five hospitals in the country, including the hospital where I undertook my elective. This will allow Saudi Arabia to support a country-specific data benchmark. It will allow the direct comparison of the performance of the five hospitals involved, and also provide a solid foundation for targeted research and partnerships throughout the country. They also hope to apply this information to improve areas in interventional cardiology such as the management of STEMI, limb salvage and valve procedures.

The procedures that I observed and assisted with in KSA were very similar to the ones that are treated by interventional cardiologists in the UK as well including PCIs, angioplasty, valve replacement and repair, valvuloplasty and insertion of stent. Due to the easy and cheap access of food, coupled with a sedentary lifestyle, heart health is not very good in KSA. However, what I did find different between

KSA and the UK was the form of access. The femoral artery was the most common artery used to access the vascular system in Saudi Arabia. They do not use the radial artery at all, which is in contrast to the UK, where some centres use the radial artery for cannulation. The instruments and technology to do so has still not reached that part of the world but is getting introduced there very soon. The radial artery access has numerous advantages including its easy access, reduced bleeding and patient comfort. As healthcare in the UK is not private, it was interesting to note the average salary of consultants in the two countries. There is a big contrast with the average pay of consultants in KSA being just under twice that of the consultants in the UK.

Having assisted and being allowed to get involved with the care of the patients in the cardiac unit, including taking histories and conducting physical examinations, I was able to get very involved with the provision of healthcare. I was able to get involved with the procedures in the catheter lab, scrubbing in on numerous occasions. The consultant always talked through the procedure explaining each and every part and also allowed me to do minor tasks such as put dilators on to the guide wire, inject contrast or administer local anaesthetic. The doctors were extremely welcoming and this certainly added to the experience. It was also great and enriching to be able to interact with patients from a different setting, some of whom that didn't know English.

Interventional radiology/cardiology are very advantageous compared to traditional techniques as there is a reduction in scars and pain, and post-operative recovery is way quicker. The speciality does face a few issues including 24/7 care and a bit of turf war with other specialities as there is potential encroachment by other specialities. Research into efficacy of procedures done by interventional cardiology is still limited even though the speciality has undergone substantial expansion over the past few decades. In addition, there is not much exposure of this speciality to medical students like myself, leaving this speciality with a very low profile.

Having done 6 weeks in the niche speciality of interventional cardiology, I have been able to get a glimpse of the speciality and the daily workings. It has given me a very good foundation on which to base my decision of what future speciality to pursue. Through the placement, I was also able to get involved in audits that were going on at that time. In addition, having seen some interesting cases, my supervisor and I now plan to write a case report on one of the cases. All this puts me in good standing to pursue a career in interventional radiology/cardiology or even any speciality and I look forward to what the future holds.