Medical students today would argue that basic surgical training in the United Kingdom has certain drawbacks when providing opportunities to allow trainees to explore many avenues of their interest within surgical specialities. The drive to complete surgical training at first requires trainees to be competent in a wide range of surgical skills and their proficiency is assessed at both basic and advanced levels leading on from medical school through to postgraduate qualification. A drawback of this format is that, on occasion, it may not be possible for an individual to pursue and learn about all branches of surgery in which they may be interested due to the nature of the surgical game. This is not to say that surgical trainees are not exposed to a plethora of surgical activity and experience during their formative years, which is classically intensive and world class, however, a potential drawback of the training schema means that it is not always possible to immerse oneself into all specialities in order to work out the ins and outs of a particular field.

A forum to learn more about a particular super-speciality within surgery is in the arena of research. There are countless research opportunities in surgical topics and indeed, trainees often pursue a line of interest via research work which enhances their knowledge and their surgical resume to strengthen future applications. However, along with honing practical surgical and management skills, it is also important for surgical trainees to develop an interest which can be a beacon directing their future career. This is becoming more important especially in the midst of fierce competition for training places as is currently seen.

From the classic medical school days of heavy textbooks and endless disease list-learning, the format of specialist training poses new challenges. It enters trainees into an open portal to the world of surgery and this new-found independence in directing their own career means that it is important to take an active role in deciding what they want to do professionally within surgery.

On the other side, centres of excellence across the world are pioneering new surgical techniques every day with unprecedented success, ranging from facial transplantation to remote surgical technology using robotics. The media frequently reports outstanding advances based on the foundation of solid surgical training and implementation.

As a result, unique and challenging surgical cases provide grounds for enhancing our knowledge and techniques in surgery. We can learn from these examples on how to perform complex corrective procedures in a new setting and spark discussion and debate on the best approaches to deliver the highest quality of care to our patients. These surgical cases allow new techniques to evolve and build upon existing conventions. Furthermore, the importance of managing these patients cannot be underestimated in directing an interest and shaping a surgeon’s career focus.

Moreover, as a result this year, it was stimulating for trainees and specialists alike to see an exciting case from the speciality of cardiothoracic surgery in the case of a cardiac transposition of the great arteries in a young boy.

Alec Hutchison from County Durham, is an extraordinary three-year-old who had this rare cardiac condition, formally diagnosed as congenital corrected transposition (CCT). His condition only occurs in a handful of children in the UK every year; and therefore provided an interesting surgical case for discussion.

It has been estimated from data from the Baltimore-Washington Infant Study that corrected transposition occurs in less than 1% of all infants born with congenital heart defects, highlighting its rare nature within surgery. The abnormalities of this condition are shown briefly in Fig. 1.

Normal cardiac structure connects the left ventricle to the aorta providing oxygenated blood to the body and organs and on the right side of the heart, the right ventricle leads to the pulmonary trunk which carries blood to the pulmonary system to be oxygenated.

However, in the case of corrected transposition of the vessels (CCT), as shown in Fig. 1, the right ventricle is wrongly connected to the aorta which passes deoxygenated blood to the body and systemic circulation. In the left heart, the left ventricle pumps semi-oxygenated blood to the lungs; this leads to hypoxia and cyanosis in the patient due to this abnormal arrangement of the heart chambers and great vessels.

The corrective operation was performed by the surgical team at The Freeman Hospital in Newcastle in a complex 8-h procedure. The operative risks of the procedure were as high with a significant one in five chance of peri-operative mortality.

The surgical approach for correcting this abnormal cardiac arrangement was technical and tested the management and technical skills of the surgical team. The ventricular chambers were surgically detached from the great vessels and then swapped sides.
and planted to the appropriate sides of the heart in order to restore the correct anatomy.

The procedure resulted in a successful outcome with a resolution of the boy’s symptoms and a success for the surgical team for a technically difficult operation, the first performed at that particular centre.

This case served food for thought within the field of surgery highlighting the particular complexities that can be found within Cardiothoracic surgery with its challenging and rewarding nature. It demonstrated an excellent teaching case for trainees and specialists alike with thought and discussion on the importance of pursuing a line of interest to enhance a surgeon’s surgical repertoire.

References

