JOSEPH ZACHARIAS

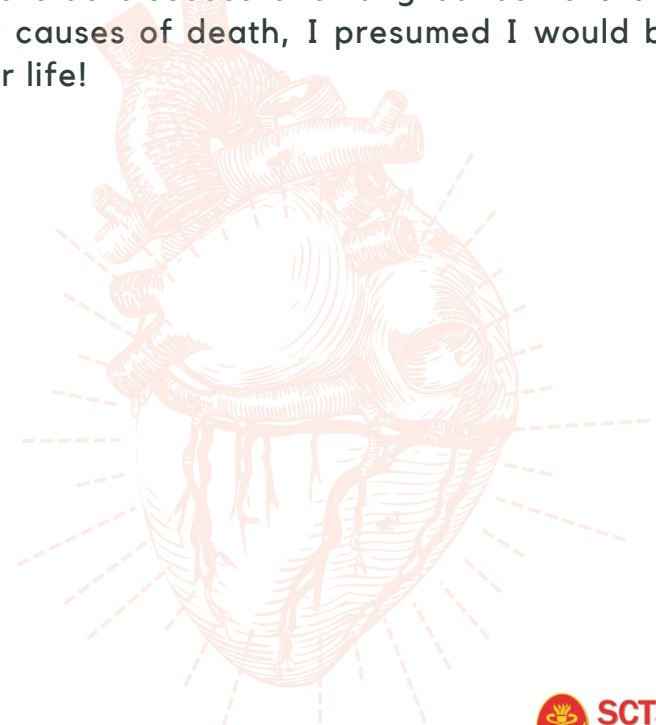
SURGEON OF THE MONTH

NOW A CONSULTANT CARDIOTHORACIC SURGEON IN THE LANCASHIRE CARDIAC CENTRE IN BLACKPOOL, YOU'VE WORKED ALL OVER THE COUNTRY AND WORLD. WHAT HAVE BEEN SOME OF YOUR BIGGEST PERSONAL AND PROFESSIONAL ACHIEVEMENTS ALONG THE WAY?

Yes, I was very lucky that I was given a year, after being appointed as a consultant in Blackpool, to go and pursue my interests. I made a wish list of all the cardiac surgeons I would like to watch or work with, and managed to tick some of them off in that year, ranging from Dr Cosgrove, Dr Vanerman, Mr Walker, Dr El Khoury, Dr David and Dr Cheung. As for my biggest personal and professional achievement over the past 18 years, it must be that I have managed to introduce many patient-centred procedures in a cost constrained, closely scrutinised and poorly supported environment for surgical innovation, that is, the NHS. I have also really enjoyed seeing many trainees come to our unit and blossom into capable surgeons, many of whom are now consultants in different centres. Finally, I have enjoyed visiting centres all over UK and Europe to help established surgeons to start successful minimally invasive programs.

CAN YOU TELL US ABOUT YOUR FIRST EXPERIENCE OF CARDIOTHORACIC SURGERY - WHAT WERE YOUR FIRST IMPRESSIONS AND HOW HAVE THESE CHANGED OVER THE YEARS?

Thanks Kirstie, my first exposure to cardiac surgery was in my medical school in India. All the medial students wanted to do cardiac surgery as an elective. The cardiac surgery department were not very welcoming and this attitude came from the surgeons. I decided that I did not want to spend any time in that speciality and instead, chose Psychiatry as my elective and enjoyed it thoroughly. When in the UK, I initially wanted to be an Orthopaedic surgeon, but could not get a General surgery job as a requisite to do my FRCS. The only job that came up included a six month post in Cardiothoracic Surgery. My orthopaedic boss sold it to me as a job that involved breaking a lot of bones so I should go for it! I got to work at the Freeman Hospital in Newcastle with Colin Hilton, one of the most inspirational men I had come across. His manner, skill and humility was what changed my mind and I decided to "try" it out! I loved the fact that cardiothoracic surgery involved a highly skilled team and that good surgery was followed by good results. And, since cardiac diseases and lung cancer are the biggest causes of death, I presumed I would be busy for life!



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IF YOU COULD HAVE THIS TIME AGAIN, IS THERE ANYTHING YOU'D DO DIFFERENTLY OR ADVICE YOU'D GIVE YOURSELF DURING YOUR TRAINING?

I live a life without regrets. As the saying goes, you either win or you learn. Of course, I've learned a lot along the way. My advice to my younger self would be to find good trainers in the speciality of your choosing. It is better to have a few months with somebody who is a good role model, than a few years of the opposite. These good role models may be too busy to be at meetings, so they need to be actively looked for. I was very lucky to find many along the way. The greatest myth in surgical training is that, "next year will be better"! If the first month is not good, start planning an alternative. I did move a lot during my training and am glad I did. Today with structured training programs it's harder, particularly if you end up in a deanery with a poor training record. I wish trainees would start a system to rate their trainers so the ground work is done for those who come after! Maybe that's what I would setup if I were back in training.

WHAT IS SOMETHING YOU HAVE LEARNT FROM ANOTHER MEMBER OF THE TEAM THAT HAS IMPROVED THE WAY YOU WORK?

When I first came to Blackpool there was a culture of suspicion between surgeons and anaesthetists in the department. One of my anaesthetic colleagues was especially kind and supportive. This is very important when you are a new consultant, trying to find your niche in a unit. Sadly, a month after his 50th birthday, he was diagnosed with terminal cancer. The grace with which he approached his illness and his impending demise was something that had a profound effect on me. To his end, he spent his time and energy fundraising and doing things for others. Today, when worry about pensions and work conditions are discussed, I often think about him and how he was never negative and always saw the job we do as a gift to help others with. I did learn to put things into perspective and to take every day as an opportunity to do my little bit to make this a better place.

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NOW WITH AN INTEREST IN MINIMALLY INVASIVE SURGERY, YOU WORKED IN ONE OF THE FIRST CENTRES TO INTRODUCE ENDOSCOPIC VEIN HARVESTING INTO YOUR PRACTICE. CAN YOU TALK US THROUGH SOME OF THE BASIC PRINCIPLES OF AN ENDOSCOPIC APPROACH AND WHY IT CAN OFTEN BE A PREFERABLE OPTION?

I think I first fell in love with the endoscope doing knee arthroscopy lists with my orthopaedic consultant. Thoracic surgery did a brilliant job adopting it in many of its procedures, and so it was only a matter of time before cardiac surgery would follow. The most rewarding procedure is the endoscopic conduit harvesting, as the incision to remove the long saphenous vein is the longest incision made on the human body, and can be very unsightly in some. We in Blackpool were the first to publish our early, midterm and long term results with EVH in the UK, and hope that it gives confidence to other centres to consider offering this approach to more patients. The reason that the endoscope is a preferable option, is that the collateral damage of entry and exit to the leg and the pericardium associated with a big incision or a sternotomy, is a major insult, and avoiding a big incision when possible must be an aim that we, as a group of surgeons, should aspire to. The other advantage of three dimensional endoscopes is that it adds illumination, magnification and depth perception, which helps teaching and learning. Finally, the endoscope gives the ability to review the procedure afterwards, in order to drive constant improvements in the field.The reality of achieving this is not easy, but nothing good in life is easy, and so it is up to all of us to make it happen, however long the process takes. Thankfully we are achieving a good deal of interest and hopefully, with more units starting, there will be a gradual shift towards its safe adoption and training.

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MOST RECENTLY, YOU CARRIED OUT A STUDY LOOKING AT THE EFFECT OF SEX AND SURGICAL INCISION ON SURVIVAL AFTER ISOLATED PRIMARY MITRAL VALVE INCISIONS. COULD YOU BRIEFLY SUMMARISE ITS FINDINGS AND WHAT THIS MIGHT MEAN FOR FUTURE PRACTICE?

It has always fascinated me that women get an extra point on nearly all scoring systems. We wondered if an endoscopic approach reduces that risk? What came out of the audit, was that women are referred later along the disease pathway for surgery, and this was what we decided to concentrate on, even though the results with an endoscopic approach were good. We now need to understand if cardiologists refer women later, or if women prefer medical management until they are sicker? I hope women will consider an endoscopic approach earlier, as they may have greater concerns regarding scars, though this could be my bias creeping through. There is a lot of work that is required in this area and we hope our paper has contributed in a small way to the conversation.

IT IS ARGUED THAT MEASURING AN INDIVIDUAL SURGEON'S OUTCOMES COULD BE ONE OF THE FACTORS DETERRING TRAINEES FROM LEARNING IN MINIMALLY INVASIVE TECHNIQUES. HOW CAN WE OVERCOME THIS WHILST STILL ENSURING OPTIMAL PATIENT OUTCOMES?

There are always a lot of reasons used by people who don't want to step out of their comfort zone. Yes, individual surgeons outcomes were a very bad idea on many levels, and I am glad it has been moved to team based results. Patients want minimally invasive options and trainees want to learn them, so what then is the hold up? As a group we need to develop structured training pathways that encourage trainees to follow their interests by their fourth or fifth year of training, be it transplant, congenital or minimally invasive surgery. Heart surgery will need to become more like a law firm in the future, where you have groups that specialise in special interest areas, working together. It is already happening with aortic surgery and mitral valve repair and hopefully minimally invasive will soon be recognised as a sub specialist interest too. Once that is done we can set up national fellowship programs that help train interested trainees in the UK. Today, there is no need to put a patient through a surgeon's learning curve, and we have surgeons like Mr Asif Hasan who have published on starting new techniques like the Ross procedure, without an obvious learning curve impact on outcomes. The key, is a responsible approach to introducing new techniques, following the principles of audit and governance. It has already been done and we need to learn from past lessons.

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ASIDE FROM THIS, WHAT ARE SOME OF THE OTHER CHALLENGES POSED IN PROVIDING A MINIMAL ACCESS SERVICE ACROSS THE COUNTRY?

The biggest challenge that cardiac surgery has faced in the past 20 years is the widespread belief that percutaneous techniques will replace the need for cardiac surgery. Two decades later, there is now a realisation that cardiac surgery and interventional cardiology are not in a zero sum game, rather, they can collaborate to create a positive sum game for our patients. Traditionally, industry invested large amounts of money in interventional cardiology, and very little in cardiac surgery. I was surprised to find out that pre-pandemic, The British Heart Foundation spent less than 3% of its funds on cardiac surgery research. The adoption of new techniques in surgery, be it offering the Ross procedure to young adults, or valve-sparing root replacements and endoscopic techniques, needs a big injection of funds. We need specialist training units, cadaver labs and mentorship programs to support fully-trained surgeons and senior trainees to navigate the path from sternotomy to endoscopic procedures, safely and responsibly. This will not happen by accident.

FINALLY, DO YOU HAVE ANY TOP RECOMMENDATIONS FOR ADDITIONAL READING AROUND THE SUBJECT OR INTERESTING PROGRESSIONS WITHIN THE FIELD?

Now this is embarrassing, but I am going to plug a book called "Endoscopic cardiac surgery. Tips, Tricks and Traps" that I am editing. It has a planned release date for January 2023 by SpringerNature. The cool thing about the book, is that it has over 8 hours of high quality videos on steps and techniques in endoscopic cardiac surgery. It is the closest thing to having a book like you see in the Harry Potter movies where there are moving images on the pages. I am quite excited, as it will be one of the first books to be linked to a More Media App, that helps the viewer see the videos on their phones while reading the book. I am a big believer that surgeons often benefit from visual learning, and so recommend videos to complement written material. There are an increasing number of youtube channels playing cardiac surgical videos. I am part of a group called the endoscopic cardiac surgeons club, that is trying to facilitate the free transfer of high quality videos to those interested at www.ecsclub.org.

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