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the **bulletin**

*Society for Cardiothoracic Surgery
in Great Britain and Ireland*



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Report of the transplant sub-committee of SCTS

Prof Rajamiyer Venkateswaran, Consultant Transplant Surgeon & Adult Cardiothoracic Surgeon, Manchester
Aman Coonar, SCTS Executive Co-Chair



Of late, the transplant sub-committee of SCTS has been the quietest member of the various committees of SCTS. This has been because of the extremely demanding time commitments of those cardiothoracic surgeons who undertake transplant over and above their regular jobs and because a large part of the activities of the transplant committee is covered by other organisations, such as NHSBT committees and the Cardiothoracic Transplant Advisory Group (CTAG).

Notwithstanding that, we remember the reason the SCTS transplant sub-committee was set up was to allow an independent professional forum for the

development of cardiothoracic transplant and the mutual support of cardiothoracic teams. We would like to thank our previous co-chair Mr Steven Tsui, at Royal Papworth Hospital, for steering the committee during his tenure. We welcome Prof Rajamiyer Venkateswaran, well known as Venkat from Manchester University NHS foundation trust, Wythenshawe Hospital as the new chair of the committee.

There are important issues within cardiothoracic transplantation, and central to that is the provision of an effective and sustainable workforce to deliver cardiothoracic transplantation with manageable job plans. There is also

the issue of addressing the competing and different needs of cardiac and lung transplantation. With respect to lung transplantation, it is widely known that the numbers of cases done in Great Britain are lower than what might be the case if we were to index ourselves against a health care system such as Canada. The issues are complex, and it is the aim that the committee will address these.

We know that NHSBT and NHS specialised commissioning also have their concerns about cardiothoracic transplantation and we look forward to working collaboratively to improve patients outcomes and support our teams. ■

Undrained mediastinal blood causes inflammatory processes and may contribute to post-operative atrial fibrillation (POAF).¹
Effective evacuation of blood and fluids is essential.

Provide efficient drainage right after surgery, significantly reducing drainage-related complications by using Thopaz⁺.²

Come and see us at the SCTS Annual Meeting 2024 at stand 36 to learn more about a potential solution.



¹ St-Onge et al. Ann Thorac Surg 2018;105:321-8. ² Van Linden A et al. J Thorac Dis 2019;11(12):5177-5186.

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Joint Focus Session on Drainology at the SCTS Annual Meeting in Birmingham, 2023



Francesco Di Chiara, Consultant Thoracic Surgeon, Oxford University Hospitals

In a session at the 2023 Society for Cardiothoracic Surgery (SCTS) conference, attention was directed towards Drainology – a developing scientific discipline examining the complexities of drain management in cardiac and thoracic surgery. The inclusion of this joint focus session marked a notable moment in the ongoing effort to establish consensus among surgeons dealing with optimal strategies for drain management.

Mr Francesco Di Chiara, serving as the session's chair, discussed the origin of Drainology in response to the ongoing debate regarding elements such as the ideal number, size, suction levels, and type of drainage systems. The session aimed to address the need to establish best practices, minimising drains' impact on patient outcomes, including pain, recovery, and complications.

Central to Drainology is the understanding that a collaborative, multidisciplinary approach, supported by evidence-based data, is essential to reach a consensus on best practices. Challenges in drain management were recognised between cardiac and thoracic surgery, with thoracic teams focusing on air leaks and cardiac teams handling blood drainage.

Mr Hazem Fallouh presented evidence on the effectiveness of digital drain systems in both cardiac and thoracic surgeries. Rigorous randomised controlled trials showed favourable outcomes with digital drains using constant, regulated low suction compared to analogue counterparts in thoracic surgery. Data from

the National Institute for Health and Care Excellence (NICE) indicated the potential cost-effectiveness of digital suction in thoracic surgery, suggesting its adoption. Additionally, the benefits of low suction in reducing air leaks and drainage duration were discussed, with digital drainage seen as an advanced air leak monitoring device.

Professor Juriq Kalisnik delved into drainage challenges in cardiac surgery, shedding light on Retained Blood Syndrome (RBS). This condition, resulting from inadequate blood evacuation around the heart, poses a significant risk post-cardiac surgery. The session highlighted a US study linking two-thirds of cardiac arrests in intensive care to tamponade, emphasising the gravity of RBS. Prof Kalisnik presented evidence connecting RBS to postoperative

atrial fibrillation (POAF) and showcased a randomised controlled trial illustrating the efficacy of posterior pericardial chest drain placement in reducing POAF.

The debate over optimal drain sizes for recovery and complications in thoracic surgery lacks consensus. Andrea Bille's presentation of real-world prospective data on hydrogel-coated drains suggested potential benefits in reducing postoperative complications without compromising drainage efficiency.

Professor Eric Lim offered insights into chest drain size selection, cautioning that larger drains might not necessarily improve drainage rates in the majority of thoracic operations. He emphasised the role of drain size in specific scenarios, where incorrect choices could have implications.



DRAINOLGY FOR THE WIDER TEAM

1. IDENTIFY AND UNDERSTAND IF A CLINICAL EVENT IS LINKED TO CHEST DRAINAGE OR NOT
2. CORRECT ANY ELEMENT OF CHEST DRAINAGE THAT IS CAUSING A COMPLICATION
3. BUILD STRUCTURED AND AGREED UPON FLOW-CHARTS FOR SIMPLE AND COMPLICATED CHEST DRAINAGE
4. PREVENT OR REDUCE THE RISK OF COMPLICATIONS DUE TO INCORRECT CHEST DRAIN MANAGEMENT
5. EDUCATE PATIENTS AND THEIR CAREGIVERS ABOUT AVOIDING AND OBSERVING FOR COMPLICATIONS

In the concluding talk, Ashiq Abdul Khadern outlined the Royal Brompton Hospital's chest drain removal strategy post-thoracic surgery. The shift from fluid-based to air leak criteria facilitated earlier drain removal, resulting in reduced hospital stays and acceptable complication rates. The use of digital drains allowed real-time assessment of air leaks, contributing to a move towards day-case thoracic surgery.

Summing up the session, the chairs highlighted the NICE recommendation for adopting digital systems in drainage management, citing potential clinical benefits and cost savings in thoracic surgery. They underscored the need to identify patients in thoracic surgery who do not require large-bore chest drains, emphasising the potential for improved outcomes and enhanced recovery. The unresolved impact of digital chest drains on postoperative retained blood in cardiac surgery was acknowledged, calling for further exploration of this critical aspect. ■



INSINC INSIGHT Reflection Competition – First Place

Mahira Purna, Year 13, Woodford County High School



After having learnt about the heart in my biology lessons this year, alongside the five day webinar series on cardiothoracic surgery that I attended, my fascination towards the heart blossomed as felt the longing urge to portray this vital, yet beautiful organ with an explosion of fluorescent colours, combining my love for both anatomy and painting. Not only this but also the biology behind it all is so captivating to learn about! How the heart pumps blood around our bodies, how the atria and ventricles contract, and how the coronary arteries are essential in supplying oxygen for muscle contraction and more!



The arteries and veins are connected by small capillaries allowing each to deliver oxygenated blood from the heart to the rest of the body and to retain deoxygenated blood from the body

back into the heart, respectively. The right atrium is the one that receives deoxygenated blood that has returned from the body which then pumps this blood into the right ventricle, which then pumps it into the lungs to pick up a fresh supply of oxygen. The

left atrium receives this oxygenated blood from the lungs and pumps it to the left ventricle, which then pumps this blood to the rest of the body. This is a one way system and valves are the ones that regulate the direction of blood flow. They act like doors that open and close with every heartbeat! The pulmonary valve being on the right and the aortic valve being on the left side of your heart.

After attending the five day lecture series, I gained valuable knowledge about the procedures undergone during cardiothoracic surgery. I was privileged enough to hear a consultant speak about her regime and

I learnt how a multidisciplinary team is essential within this field of medicine as a patient in need of cardiac surgery will require surgeons and cardiologists to work together in order to ensure the best treatment and outcome possible for the patient.

Moreover, I find it enthralling how an organ that can often represent love, sadness or joy and other strong emotions in literature and music, is the same organ that keeps us alive. I wanted my painting to show the heart like how my eyes see it, a vibrant and attractive entity that is not only multifunctional, but can have several connotations, representing certain aspects in the bigger picture of human life on paper and through the use of rhythm, melodies and words. In my personal life, I have experienced these strong emotions multiple times, however the one that stands out to me the most is when I went through grief due to the loss of a loved one. Such overwhelming sadness can even cause physical pain in the chest, when our heart palpitations increase and the heartbeats begin to sound like a song of worry, suggesting that the heart is possibly more than just a blood pumper and is without a doubt, one of the most unique organs in the human body! ■