TSRA Newsletter
Thoracic Surgery Residents Association

TSRA Newsletter Archive
November 2020 — Volume 1, Issue 11

Socrates and McGoon Award

The TSRA is accepting nominations now for faculty members who have made outstanding contributions to cardiothoracic surgery education through two awards:

The Socrates Award is an annual award presented to a mid-to-late career surgical educator who has demonstrated a significant commitment to excellence in resident education throughout their careers.

The McGoon Award is presented to a junior faculty member (within first 10 years of career) who is a champion of cardiothoracic surgical resident training inside and outside of the operating room, such as through academic or societal efforts.

These awards represent the sincere appreciation of the TSRA on behalf of all cardiothoracic surgery trainees for the exemplary contributions of these individuals and hope that they may serve to further motivate surgical educators in our field. Please send nominations with letter of support to J Hunter Mehaffey (jhm9t@virginia.edu) by **December 15, 2020**. Nominations will only be accepted from current trainees.

Survey: Interest and Attrition in Cardiothoracic Surgery Training: A Survey of General and Cardiothoracic Surgery Trainees.

Although interest in Cardiothoracic Surgery continues following paradigm changes in training, previous studies have shown that there remains great variability regarding decisions to pursue this subspecialty and concern for attrition following general surgery training. we seek to assess and objectively identify the driving interest of resident trainees regarding cardiothoracic surgery as well as identify areas of concern regarding attrition of the general surgery applicant.

Study Link (For Current CT Surgery Trainees)

Survey: Statistics knowledge amongst cardiothoracic surgery trainees (TSRA)

The first part is a self-administered test on baseline statistical fluency, We ask that you take this test WITHOUT help (~15min). You will receive a link for a statistics educational video to follow (~30min at normal speed). After reviewing the video, we ask that you complete the post-test to assess improvement in statistics knowledge (~15min).

Study Link

Trainee Opportunities in CT Surgery

By: Evan Rotar

TSRA/STS Global Outreach Fellowship in Cardiothoracic Surgery APPLY NOW!!!
December 15, 2020 Link:

TSRA/STS Traveling Fellowship in Cardiothoracic Surgery APPLY NOW!!!
December 15, 2020 Link:

Medtronic TAVI Advanced Symposium Webinar
November, 12 webinar lectures available
Link:

Gore Cardiothoracic Fellows Program for TEVAR Advancement
December 4, 2020
Link:

Fellows Webinar Series: Preparing the Next Generation of Cardiothoracic Surgeons. Sponsored by Edwards Lifesciences
Link:

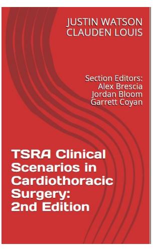
6th Annual CTSNet Resident Video Competition December 1, 2020 Link:

SickKids HOST Program Link:

Associate Membership in the TSRA: General surgery, cardiology, international cardiothoracic surgery resident/fellows, and medical students are eligible: Link:

AATS Scholarship Programs Link:

SESATS 13
Interested in purchasing Link:



JUSTIN WATSON
CLAUDEN LOUIS

Section Editors:
Alex Brescia
Jordan Bloom
Garrett Coyan

TSRA Clinical Scenarios in Cardiothoracic Surgery: 2nd Edition

Clinical Scenarios

Purchase now in online and print.

Newsletter Editorial Staff

Clauden Louis — Editor
Evan Rotar — Trainee Opportunities
Jason Han — Young Surgeon's Notes
Jessica Luc — Manuscript of the Month
David Blitzer — Featured Podcast
Parth Patel — Abstract & Conference Dates
Yihan Lin — Global Health
Fatima Wilder — Diagnostic Challenge
Garrett Coyan — TSRA Educational Resources and Multiple Choice Questions

Young Surgeon's Note

This month's topic: See One, Do One, Mess One Up: Dealing with Complications as a Trainee

By: David Blitzer

As surgical trainees, we have a complicated relationship with complications. Of course, we want every patient to ideally have a perfect operation. However, we also know that as trainees, it's important to see them and learn how to manage them appropriately while we are still in training. No one wants the first time they face an AV groove disruption to be while out in practice alone. At the same time, no one wants to cause complications either. I've always known and feared this instinctively, but it wasn't until recently that I faced it.

I was doing a laparoscopic cholecystectomy on one of my general surgery rotations when I inadvertently caused a liver injury and then watched as it began draining bile. The patient was never unstable or otherwise at risk, but my mistake had changed the course of the operation for the worse. Luckily, in the grand scheme of things, this was a minor mistake. We placed a drain after safely completing the cholecystectomy, and the patient remained in house two extra days. The patient was discharged safely and the drain was removed in clinic a week later.

My first reaction was a wave of shame, partially out of disappointment with myself and partially because I had felt I had let down my attending and patient. It was challenging to be able to focus again and complete the procedure without causing any more problems. Those who have been in this situation will agree that this is far harder than it may sound. Things were not necessarily any easier once we were out of the operating room, as I had to face the same feeling every time that I saw or talked about the patient.

However, these reflections have led to a major change in my perspective. I became more acutely aware of the level of responsibility I am taking on as a surgeon. When a patient consents to an operation under my hands, they will literally be putting their life in my hands. That is a sacred responsibility and one that I will not underestimate again. I know that this won't be the last mistake I make in my career, and it certainly won't be the gravest. So what are the key points that I need to remember for the future?

The first key step is to anticipate and steer away from the shame vortex. It would be easy to let a mistake become the first in a series of errors in judgement. If time isn't of the essence after a mistake, it's okay to take a moment to refocus, or even to step away from the operating table for a moment to create some space between you and your mistake. If time is of the essence, consider calling for help from a partner or colleague who will keep you from the quicksand of errors.

The next step is sublimation. Shame can either be motivating or exhausting. At first, I was compelled to minimize my interaction with the patient. But then I also realized I can use that feeling as a motivator to make sure that there are no other bumps in the road.

Lastly, and more holistically, take ownership of mistakes, or they will take ownership of you. The first thing I did after making my mistake was tell all of my co-residents what I had done. I can't claim to have known it at the time but being open about my mistake from the start meant that I could just take care of the patient and not worry about caring for my own injured ego.

Keeping these things in mind as an attending may help me in the future prevent a complication from becoming a catastrophe. They say that to err is human, so I know I will be responsible for more complications in the future. Now that I have faced my first complication and accepted the unavoidable truth of those to come, I realize that the only unforgivable mistake I could make would be to miss the opportunity to learn and grow from them.

Manuscript of the Month

By: Jessica Luc

Title of Feature Manuscript: The cardiothoracic surgery trainee experience during the coronavirus disease 2019 (COVID-19) pandemic: Global insights and opportunities for ongoing engagement

Authors: Jacqueline K. Olive, BA, Jessica G.Y. Luc, MD, Rui J. Cerqueira, MD, MSc, Jaime-Jürgen Eulert-Grehn, MD, Jason J. Han, MD, Kevin Phan, MD, Ourania Preventza, MD, MBA

Abstract: Cardiothoracic surgery training is demanding of time and commitment. The escalation of the COVID-19 pandemic poses additional challenges to trainees' education and potential risks to their health, safety, and overall wellness. This has led to postponement of exams and licensure, and to more widespread use of virtual platforms in place of in-person interaction and other traditional educational methods.

Citation: Olive JK, Luc JGY, Cerqueira RJ, et al. The cardiothoracic surgery trainee experience during the coronavirus disease 2019 (COVID-19) pandemic: Global insights and opportunities for ongoing engagement [published online ahead of print, 2020 Jun 25]. *J Thorac Cardiovasc Surg*. 2020;S0022-5223(20) 31791-8. doi:10.1016/j.jtcvs.2020.06.060

Click here to read the full manuscript in *The Journal of Thoracic and Cardiovascular Surgery* - https://www.jtcvs.org/article/S0022-5223(20)31791-8/fulltext

Question and answer with lead author Jacqueline K. Olive, medical student from Baylor College of Medicine:

Question 1: Congratulations on your work and publishing this important article in The Journal of Thoracic and Cardiovascular Surgery examining the trainee experience during the COVID-19 pandemic and offering opportunities for trainee engagement. What were the main takeaway points from the manuscript?

What makes this manuscript unique is the global representation of our authorship, as well as our representation across multiple levels of training, when the trainee voice may too often be unheard. The pandemic has posed different challenges at each stage of cardiothoracic surgical training while still requiring all of us to similarly innovate to stay connected and healthy, serve our patients, pursue scholarly work, and prepare for the future. In particular, our manuscript addresses new constraints surrounding patient interactions, clinical redeployment, didactics, examinations, interviews, and wellness. We also offer potential solutions for trainees to be proactive with their education in terms of remote virtual engagement and provide examples of opportunities such as debate-style journal clubs, video library resources, and social media.

Question 2: What are some limitations of the manuscript?

We had begun writing the manuscript well advance of its publication in June 2020, and already within this timeframe, the pandemic had rapidly changed its course and impact throughout the world. Cardiothoracic surgical trainees have been differentially affected based on local transmission rates and many other personal circumstances. In short, we recognize that the global trainee body is heterogeneous, and the issues and suggestions we discuss do not reflect the experiences and opinions of all cardiothoracic surgical trainees, faculty, and institutions.

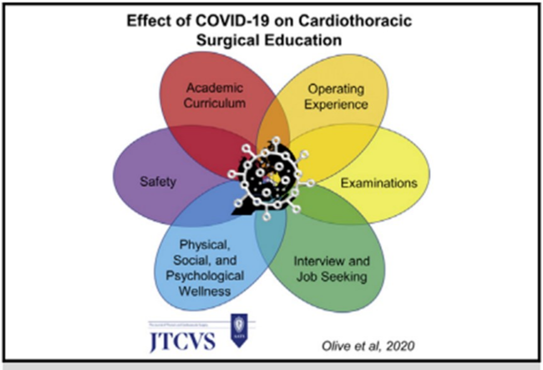
Question 3: This manuscript was written several months ago. How have things changed since for trainees?

The pandemic has since evolved in numerous ways. At the time of writing the manuscript, roughly 10,000 daily COVID-19 cases worldwide were documented. Around the date of publication, the average number of daily cases increased to 180,000. Now, this number hovers around 600,000 daily cases. We still live in uncertain times as we anticipate a rise in cases during the Northern Hemisphere's winter months. However, as many regions have actually seen a decrease in local transmission rates and COVID-19 ICU bed occupancy, many trainees have been able to resume clinical duties, including clinical rotations and elective surgeries, with the appropriate safety precautions. Other times, trainees have even volunteered to serve on the frontlines. Over the past few months, multiple cardiothoracic surgical societies have hosted virtual conferences, where trainees have been able to present important surgical science. The successful virtual fellowship match set a precedent for the ongoing virtual residency application process. In sum, circumstances will continue to change, but we have all demonstrated enormous adaptability and resilience.

Question 4: Looking for silver linings, what are some lessons learned or positives that can come from this pandemic?

While we cannot adequately compare the impact that the pandemic has had on lives lost and families seriously affected in health and financial security, we can appreciate that our community has risen to the challenges and succeeded in many ways to continue to provide excellent surgical care, advance research and innovation, and support one another, including future generations of surgeons. Notably, we have all become more facile with virtual platforms. We have implemented cost-effective means to support education and to minimize waste and travel expenses. Although virtual communication can never fully replace in-person interactions, we should seek to maximize the potential utility of virtual educational methods and consider adopting some of the same strategies in future non-pandemic times.

Once again, thank you for your time and congratulations on an important manuscript.


Effect of COVID-19 on Cardiothoracic Surgical Education
Academic Curriculum
Operating Experience
Safety
Examinations
Physical, Social, and Psychological Wellness
Interview and Job Seeking
JTCVS
Olive et al, 2020

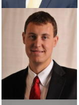
Interconnected elements of cardiothoracic surgery trainee experience during the pandemic.

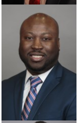
Communications and Social Media

TSRA Executive Committee

(2020-2021)

Alex Brescia
University of Michigan
President


J. Hunter Mehaffey
University of Virginia
Vice President


Clauden Louis
University of Rochester
Secretary and Communications Chair

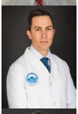
Anthony Mozer
Northwestern University
Treasurer

Xiaoying Lou
Emory University
Immediate Past President

Garrett Coyan
University of Pittsburgh
Projects Chair

Jason Han
University of Pennsylvania
Education Chair

David Blitzer
Columbia University
Membership Chair


Jordan Bloom
Massachusetts General Hospital

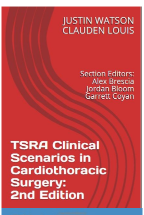
Justin Watson
Oregon Health & Sciences University

Jessica Luc
University of British of Columbia

Fatima Wilder
John Hopkins University

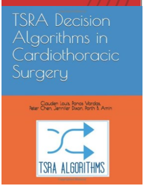
Yihan Lin
University of Colorado Hospital

TSRA Education Resources


JUSTIN WATSON
CLAUDEN LOUIS
Section Editors:
Alex Brescia
Jordan Bloom
Garrett Coyan
TSRA Clinical Scenarios in Cardiothoracic Surgery: 2nd Edition

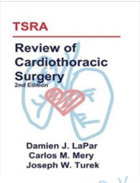
TSRA Clinical Scenarios in Cardiothoracic Surgery (2nd Ed)

Kindle & print available ***NOW!!!***
1. As a print book on Amazon.
2. As a Kindle e-book on Amazon.


TSRA Decision Algorithms in Cardiothoracic Surgery
Clauden Louis, Panos Vardas, Peter Chen, Jennifer Dixon, Parth B. Amin
TSRA ALGORITHMS

TSRA Decision Algorithms in Cardiothoracic Surgery

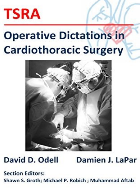
1. As a print book on Amazon.
2. As a Kindle e-book on Amazon.


TSRA
Review of Cardiothoracic Surgery
2nd Edition
Damien J. LaPar
Carlos M. Mery
Joseph W. Turek

TSRA Review of Cardiothoracic Surgery (2nd Ed)

1. As a print book on Amazon.

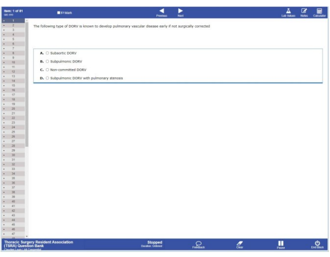
Stay tuned 3rd edition first quarter 2021!!!


TSRA
Operative Dictations in Cardiothoracic Surgery
David D. Odell Damien J. LaPar
Section Editors:
Shawn S. Groth; Michael P. Robich ; Muhammad Aftab

TSRA Operative Dictations in Cardiothoracic Surgery

1. As a print book on Amazon.
2. As a Kindle e-book on Amazon.

TSRA Multiple Choice Review of Cardiothoracic Surgery


The following type of DORV is known to develop pulmonary vascular disease early if not surgically corrected

A. ○ Subaortic DORV
B. ○ Subpulmonic DORV
C. ○ Non-committed DORV
D. ○ Subpulmonic DORV with pulmonary stenosis

Check out the official website with free registration. Open collaboration product with free content questions. Questions updated frequently. 588 questions. Authentic feel.

Abstract Deadlines and Conference Dates

By: Parth Patel

If there are meetings you would like to see here please contact Parth M. Patel, parth.mukund.patel@emory.edu

Meeting	Submission deadline	Location	Dates
Cardiovascular and Thoracic Specific Meetings			
American Heart Association (AHA)	June 4, 2020	Virtual	Nov 14-16, 2020
Resuscitation Science Symposium	June 4, 2020	Virtual	Nov 14-16, 2020
Society of Thoracic Surgeons (STS)	August 11, 2020	Virtual	Jan 29 - 31, 2021
Annual Update on Pediatric & Congenital CV Disease Conference	November 30, 2020	Virtual	Feb 11-14, 2021
International Society for Heart and Lung Transplantation (ISHLT)	October 27, 2020	Toronto, Canada	Apr 27-30, 2021
AATS Mitral Conclave	"Early January 2021"	New York, NY	Apr 29-30, 2021
American College of Cardiology (ACC)	December 2, 2020	Atlanta, GA	May 15-17, 2021
American Association of Thoracic Surgery (AATS) & Aortic Symposium	October 27, 2020	Seattle, WA	May 1-4, 2021
Transcatheter Valve Therapy (TVT) Structural Heart Summit	April 15, 2020	Chicago, IL	June 9-12, 2021
International Society of Minimally Invasive Cardiothoracic Surgery (ISMICS)	December 14, 2020	Warsaw, Poland	June 17-19, 2021
Western Thoracic Surgical Associateion (WTSA)	January 11, 2021	Victoria, BC, Canada	June 23-26, 2021
Extracorporeal Life Support Organization (ELSO)	July 15, 2020	Indianapolis, IN	Sep 30- Oct 3, 2021
Eastern Cardiothoracic Surgical Society (ECTSS)	July, 27 2020	Virtual	Oct 7-10, 2020
European Association for Cardio- Thoracic Surgery (EACTS)	April 30, 2020	Barcelona, Spain	Oct 14-16, 2021
International Thoracic Surgical Oncology Summit	August 17, 2020	Virtual	Oct 16-17, 2020
Transcatheter Cardiovascular Therapeutics (TCT)	June 15, 2020	San Francisco, CA	Oct 22-26, 2021
Congenital Heart Surgeons' Society (CHSS)	May 26, 2020	Chicago, IL	Oct 24-25, 2021
CHEST Annual Meeting	May 31, 2020	Vancouver, Canada	Oct 24-27, 2021
American College of Surgeons (ACS)	August 7, 2020	Washington, D.C.	Oct 24-28, 2021
Surgical Treatment for Arrhythmias and Rhythm Disorders	September 11, 2020	Virtual	Oct 30-31, 2020

Southern Thoracic Surgical Association (STSA)	🟨 April 5, 2020	Atlanta, GA	Nov 3-6, 2021
General Surgery Meetings of Interest			
Southern Surgical Association (SSA)	🟧 July, 31 2020	CANCELLED	Dec 6-9, 2020
Academic Surgical Congress (ASC)	🟧 August 7, 2020	Virtual	Feb 2-4, 2021
American Surgical Association (ASA)	🟩 November 16, 2020	Seattle, WA	Apr 15-17, 2021
American Transplant Congresss (ATC)	🟩 December 15, 2020	Seattle, WA	June 5-9, 2021
American Society for Artificial Internal Organs (ASAIO)	🟩 February 1, 2021	Washington, D.C.	June 9-12, 2021
Southeastern Surgical Congress (SESC)	🟩 February 19, 2021	Atlanta, GA	August 21-24, 2021

Abstract Deadline Status	🟩 Upcoming	🟨 Prior Year for Upcoming	🟧 Passed for Upcoming

Featured TSRA Podcast

By: David Blitzer

In honor of the recent presidential elections, this month we are featuring a career podcast with past AATS and STS presidents. Each faculty member who records a podcast is a highly respected expert in their field, and we have been fortunate to include multiple past AATS and STS presidents among these faculty members. All of these can be found at the podcast main site. Happy listening!

Call for New TSRA Podcast Ideas

We want to expand our popular podcast series with new ideas & topics. Our existing collection is available on Soundcloud & iTunes

Here is a list of unclaimed topics that need to be recorded:

Adult Cardiac

- Brain and spinal cord protection + neuromonitoring
- Electrophysiology (common arrhythmias, postop arrhythmias)
- Total arterial revascularization
- Managing/interrogating LVAD
- Transcatheter Mitral Valve Replacement

General Thoracic

- Advanced endoscopy + POEM
- Interventional pulmonology skills for surgeons
- Thoracic outlet syndrome
- Esophageal motility disorders

Congenital

- Interventional congenital heart procedures
- Congenital mitral valve disease
- Ozaki procedure

Career

- Residents as teachers
- Innovation in cardiac surgery
- Quality improvement and outcomes
- Ethics education in CT surgery: where are we now and where are we headed?
- Ethical research practice in CT surgery
- Imperative care vs. futility

If you are interested in recording one of the unclaimed podcast topics -OR- have new topics to propose, please contact Garret Coyan @ coyangn@upmc.edu.

Ethics and Global Cardiothoracic Surgery

By: Yihan Lin

This month, we highlight an article by Dr. Kathleen Fenton in the Journal of Thoracic and Cardiovascular Surgery: Link

Dr. Fenton outlined key ethical principles for global health initiatives in cardiothoracic surgery. These initiatives affect multiple stakeholders, all of which require individual consideration: patients, local providers, local leaders, donors, and payers. She and her co-authors describe the important components to ensure ethical behavior in each phases of global health initiatives: site selection, preparation, implementation, and post-journey evaluation.

These ethical principles are even more important in the face of a global pandemic. This situation has exponentially heightened the lack of resources, forcing us to place even more scrutiny on our activities. The CTSnet has also outlined ethical considerations of our specialty during a pandemic: Link. All these tenants are equally important to consider in global initiatives.

The AATS acknowledges the importance of ethics in our specialty. Be on the lookout for opportunities to explore this in the future: Link

Diagnostic Challenge

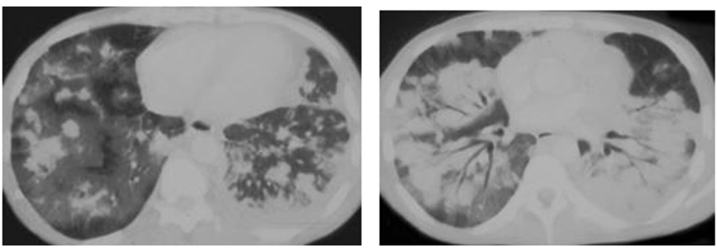
By: Fatima Wilder

HPI: A 30 year old male presents to the hospital with worsening shortness of breath for the past 6 weeks. He has been afebrile, denies night sweats, nausea, vomiting, or weight changes. He has no history of significant exposures.

PMH: Hypertension, HIV

PSH: Appendectomy

CT Chest



The patient undergoes transbronchial biopsy and pathology is consistent with Kaposi's Sarcoma.

Kaposi's sarcoma is due to infection with human herpesvirus 8 (HHV-8). It is normally suppressed in patients with normal immune systems. However patients with HIV/AIDS have the highest risk of developing active disease.

In a patient with HIV/AIDS, pulmonary PCP is also a consideration in the differential. However Kaposi's appears denser than PCP.

Other findings include: Diffuse (skin involved) lesions that are usually painless purplish spots on the legs, feet or face. They can also be seen in the genital region or lymph nodes.

Management begins with combination antiretroviral therapy. Skin lesions can be managed with local care including excision, electro or cryo-therapy, low dose radiation therapy intra-lesional vinblastine injection.

Reference

• Dalla Pria A, Pinato DJ, Bracchi M, Bower M. Recent advances in HIV-associated Kaposi sarcoma. F1000Res. 2019 Jun 26;8:F1000 Faculty Rev-970. doi: 10.12688/f1000research.17401.1. PMID: 31297181; PMCID: PMC6600854.

TSRA Educational Resources

By: Garrett Coyan

Question 1: The factor most influencing flow across a systemic to pulmonary artery shunt is:

Site of the systemic artery
Diameter of the shunt
Length of the shunt
Resistance in the pulmonary arteries

Answer: B; Diameter of the shunt is the most important factor as flow per Poiseuille equation- flow is proportional to the fourth power of radius.

Question 2: A 3.5 kg infant with TA has a modified BT shunt with 4.5 mm PTFE conduit. Spo2 is 95% with BP of 90/25 mmHg. The following statement is correct:

The shunt size is adequate
The shunt size is too small
The shunt size is too large

Answer: C; Arterial saturations between 75 and 85% are considered adequate. Saturation in the higher ranges with DBP lower than 25-30 mm HG is because the shunt is too large. For a 3.5 kg infant, shunt size of 3.5 mm should be adequate.

Question 3: A newborn with Ebstein's has cyanosis and severe RV failure despite medical therapy. Echocardiography shows severe pulmonary stenosis, severely depressed RV function, and good LV function. The most appropriate surgical option is:

Tricuspid valve repair (Cone procedure)
Univentricular repair (Starnes' procedure)
Cardiac Transplantation
One and a half ventricle repair

Answer: B; This newborn with severe pulmonary atresia and severely depressed RV function should have a univentricular repair. The tricuspid valve orifice is patch closed with a 4mm fenestration to allow right ventricular decompression, the ASD is enlarged, and a systemic to pulmonary artery shunt created (Starnes's procedure). Eventually a Fontan pathway is followed. Cardiac transplant is needed for biventricular failure. Other operations are indicated for lesser degrees of RV dysfunction with no pulmonary stenosis.

Questions 4: The most common complication of surgical ligation of PDA is:

Phrenic nerve injury
Recanalization of the ductus arteriosus
Chylothorax
Left recurrent laryngeal nerve injury

Answer: D; Due to the intimate anatomical relationship between the ductus arteriosus and the left recurrent laryngeal nerve, injury to this structure is most common. As many as 25% of preterm infants will demonstrate some degree of vocal cord paralysis after surgical ligation when investigated by laryngoscopy. Interestingly, compensation occurs rapidly. Most patients can be extubated quickly and experience no significant feeding issues.