



TSDA Weekly Curricula for the week of **June 15, 2009**.

Week 88 of 88, Year 2

The Weekly Curricula will resume in mid-July with Week 1, Year 1.

To ensure you continue to receive timely TSDA news, or to provide another e-mail address for the TSDA Weekly Curricula, please forward contact information to tsda@tsda.org.

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Welcome to Week 88, Year 2 of the TSDA Weekly Curricula. The Curricula is based on an 88-week lesson plan. You can expect to receive TSDA Weekly Curricula e-mail messages every Thursday for the upcoming week, with the exception of holiday weekends. The weekly assignments are a supplement to your residency curriculum and include pre-requisite basic readings for newly-matched residents, as well as core curriculum topics with more extensive and in-depth materials for CT surgery residents. TSDA hopes the Weekly Curricula expands your current knowledge base and enhances your learning experience.

Attention residents completing their CT surgery residency in July 2009: This issue of the TSDA Weekly Curricula represents week 88 of the 88-week curricula; **this is the last issue of your subscription**. If you would like to continue to receive TSDA Weekly Curricula messages, please send your name and e-mail address to tsda@tsda.org, and enter "TSDA Weekly Curricula Request" in the subject line. The Week 1, Year 1 message will be sent in mid-July.

PRE-REQUISITE READINGS

- [Effect of Work-Hour Restriction on Operative Experience in Cardiothoracic Surgical Residency Training](#), by Connors, R.C., Doty, J.R., Bull, D.A., May, H.T., Fullerton, D.A., Robbins, R.C., in the *Journal of Thoracic and Cardiovascular Surgery*, March 2009; 137:710-713.
- [Should Surgical Errors Always Be Disclosed to the Patient?](#), by Mavroudis, C., Mavroudis, C.D., Naunheim, K.S., Sade, R.M., in *The Annals of Thoracic Surgery*, August 2005; 80:399-408.
- [No Heroic Measures: How Soon Is Too Soon to Stop?](#), by D'Amico, T.A., Krasna, M.J., Krasna, D.M., Sade, R.M., in *The Annals of Thoracic Surgery*, January 2009; 87:11-18.

CORE CURRICULUM

Cardiac Topic: Mitral Valve Disease, MVR, A-Fib and Stroke Risk

Cardiac Talk

- [Early and Late Stroke After Mitral Valve Replacement With Mechanical Prosthesis: Risk Factor Analysis of a 24-Year Experience](#) – Ko Bando, MD

Cardiac Reading

- [Mitral Valve Replacement](#), Chapter 43, pp 1050-1061, by Gudbjartsson, T., Absi, T., Aranki, A., in *Cardiac Surgery in the Adult, Third Edition*, Cohn, L.H. (ed), New York, McGraw-Hill, 2008.

Additional Cardiac Readings

- [Thromboembolic Complications After Surgical Correction of Mitral Regurgitation: Incidence, Predictors, and Clinical Implications](#), by Russo, A., Grigioni, F., Avierinos, J-F., Freeman, W.K., Suri, R., Michelena, H., Brown, R., Sundt, T.M., Enriquez-Sarano, M., in the *Journal of the American College of Cardiology*, 2008; 51:1203-1211.
(“The risk of Thromboembolic events [TE] is not just procedural and remains high within 30 days (approximately 40 times the risk of spontaneous Ischemic Stroke {IS}) in the age adjusted general population. Prosthetic materials activate platelets with sustained platelet deposition and clot formation. This observation justifies prevention of thrombus formation after MR surgery, irrespective of procedure.” The risk ratio for a first ischemic stroke during the first 30 postoperative days ranged from 31X for mitral repair to 72X for bioprosthetic replacement [Expressed as Risk Ratio to Expected First Ischemic Stroke Rates in the general population.]

*This increased risk of thromboembolic events early after valve repair/replacement appears to be a feature of the mitral position and not the aortic, at least after repair or replacement using a bioprosthesis. Below, a large retrospective analysis (2) and a prospective trial (3) which affirm the safety of avoidance of warfarin after aortic bioprosthetic replacement. Noteworthy is that current ACC/AHA guidelines recommend anticoagulation with warfarin for 3 months after bioprosthetic AVR or MVR.**

- [*ACC/AHA 2006 Guidelines for the Management of Patients With Valvular Heart Disease, A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines \(Writing Committee to Revise the 1998 Guidelines for the Management of Patients With Valvular Heart Disease\)](#), by Bonow, R.O., Carabello, B.A., Chatterjee, K., et al., in the *Journal of the American College of Cardiology*, 2006, 48:e1-148 (Section 9.2. Antithrombotic Therapy) Rec: Class IIa.
(“During the first 3 months after AVR or MV replacement with a bioprosthesis, in patients with no risk factors, it is reasonable to give warfarin to achieve an INR of 2.0 to 3.0. [Level of Evidence: C.]*
- [Is Early Anticoagulation With Warfarin Necessary After Bioprosthetic Aortic Valve Replacement?](#), by Sundt, T.M., Zehr, K.J., Dearani, J.A., Daly, R.C., Mullany, C.J., McGregor, C.G.A., Puga, F.J., Orszulak, T.A., Schaff, H.V., in the *Journal of Thoracic and Cardiovascular Surgery*, 2005; 129:1024-1231.
(Of note, the risk of thromboembolic events early after bioprosthetic valve placement, especially stroke, appears to be associated with the mitral position and not the aortic. “Although these data do not address the role of antiplatelet agents, early anticoagulation with warfarin after bioprosthetic aortic valve replacement did not appear to protect against neurologic events.”)
- [Comparing Warfarin With Aspirin After Biological Aortic Valve Replacement, A Prospective Study](#), by Gherli, T., Colli, A., Fragnito, C., Nicolini, F., Borrello, B., Sacconi, S., D’Amico, R., Beghi, C., in *Circulation*, 2004; 110:496-500.
(“There seem to be no advantages in performing early anticoagulation therapy compared with a low-antiplatelet regimen with regard to early cerebral ischemic events, bleeding, and survival. Currently there is no evidence to support the fact that warfarin is more

- effective than aspirin” early after AVR with a bioprosthesis.)*
- [Anticoagulation Therapy After Aortic Tissue Valve Replacement](#), by Revuelta, J.M., Cardiothoracic Surgery Network (CTS-net) Valve Technology Center, 6/3/2004, CTSNet 2004.
(Less than 30% of the 726 cardiac surgeons responding to a CTSNet poll used warfarin routinely after tissue AVR.)
 - [Interventions on Prevention of Postoperative Atrial Fibrillation in Patients Undergoing Heart Surgery: A Meta-Analysis](#), by Crystal, E., Connolly, S.J., Sleik, K., Ginger, T.J., Yusuf, S., in *Circulation*, 2002; 106:75-80.
(“Conclusions: Beta-Blockers, sotalol, and amiodarone all reduce risk of postoperative AF with no marked difference between them. There is evidence that use of these drugs will reduce LOS. There was no evidence that reducing postoperative AF reduces stroke; however, data on stroke are incomplete.” The risk of stroke/day is so small [$< 1:1000$] that it will be difficult to sufficiently power a trial, during the relatively brief postoperative period, which will demonstrate a difference favoring anti-arrhythmics or anticoagulation early after cardiac surgery.)

Summary statement, after AVR using a bioprosthesis, the ACC/AHA Guidelines advise anticoagulation with warfarin for 3 months, even in patients with no risk factors. (Recommendation Class IIa; Level of Evidence C.) This is not a particularly strong advisement, and a 2004 CTSNet poll indicated that most heart surgeons are aware of the recommendation, but chose anti-platelet therapy alone in most cases. Somewhat concerning however is that this loose interpretation of the ACC/AHA recommendation for the aortic position is often embraced regarding tissue valves in the mitral position as well. The article above may encourage some to rethink this assumption.

Thoracic Topic: Interesting Case Conference

- Use this time for an interesting case conference or to review the CTSNet [Thoracic Literature Watch for the First Quarter 2009](#).

ADDITIONAL RESOURCES

- **Attention program directors, faculty and residents:** If you know of a curriculum topic for which you would like to create a talk, the TSDA Curriculum Committee encourages such contributions. [Instructions for creating a talk can be found on TSDA.org](#). Submissions prepared according to these instructions will be reviewed by the TSDA Curriculum Committee Editorial Board.
- View the [88-week core curriculum](#). The schedule is currently in Week 88 of 88, Year 2.
- A complete listing of TSDA Weekly Curricula cardiac and thoracic [talks and readings](#) is posted on TSDA.org. Talks and readings reflect the 88-week core curriculum. Content is subject to change.
- View TSDA Weekly Curricula [Readings and References](#).
- View TSDA Weekly Curricula [E-mail Archive](#).
- Access the [TSDA Education Universe](#). Open access now available.
- View 2009 CT surgery residency [interview dates](#) and [open positions](#) on TSDA.org.

NEWS & INFORMATION

- **Attention residents completing their CT surgery residency in July 2009:** This issue of the TSDA Weekly Curricula represents week 88 of the 88-week curricula; **this is the last issue of your subscription**. If you would like to continue to receive TSDA Weekly Curricula messages, please send your name and e-mail address to tsda@tsda.org, and enter “TSDA Weekly Curricula Request” in the subject line. Week 1, Year 1 will be sent in

mid-July.

- **Heart Valve Summit Program Scheduled for September 10-12, 2009:** Click [here](#) to view the program schedule. The early bird registration deadline is July 15.
- **The Society of Thoracic Surgeons Submission Site Now Open:** STS is now accepting abstracts and surgical video submissions for the STS 46th Annual Meeting through 11:59 p.m. CT on Friday, June 19, 2009. Click [here](#) to access the site or visit www.sts.org.
- **The Society of Thoracic Surgeons 45th Annual Meeting Webcast Now Available:** Click [here](#) to access the webcast.
- Please contact Beth Winer at bwiner@tsda.org if you have comments or suggestions for the TSDA Weekly Curricula.

*The next message will be sent on July 9 for the week of July 13.
This message will represent Week 1, Year 1 of the 88-week curriculum.*

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