

Uday Jain, MSIT, PhD, MD, FACA, FACC, FAHA

Address 1285 Cardigan Road
Hillsborough, CA 94121-7127

Phone (650) 348-2282
Fax (650) 348-6866
Pager (510)243-7086
Mobile (650) 430-0017

E Mail uday_jain@yahoo.com

Age 57 years

Marital Status Married, two daughters

Citizenship U.S.A.

TRAINING

Residency in Anesthesiology	University of Miami, School of Medicine, Miami, FL	July 1982 to June 1984
Internship in Internal Medicine	Rush University, School of Medicine, Chicago, IL	July 1981 to June 1982
M.D.	University of Miami, School of Medicine, Miami, FL	June 1981
Ph.D.	Dalhousie University Heart Disease Research Center, Halifax, Canada Worked on computer analysis of electrocardiograms.	1978
M.S.I.T.	Syracuse University, Department of Computer and Information Science, Syracuse, NY	1974
B.S.E.E.	Indian Institute of Technology, Department of Electrical Engineering, Kharagpur, India	1972

CERTIFICATION

Diplomate, National Board of Medical Examiners	April 1982
Diplomate, American Board of Anesthesiology	April 1985
Recertification by American Board of Anesthesiology	May 1993
Recertification by American Board of Anesthesiology	May 2001
Recertification (MOCA) by American Board of Anesthesiology	Aug 2006
Certification in Perioperative Transesophageal Echocardiography, National Board of Echocardiography	July 1998
Certificate of Achievement in Electrocardiography, American College of Cardiology	January 1997

FELLOWSHIPS

- Fellow, American College of Anesthesiology
- Fellow, American Heart Association
- Fellow, American College of Cardiology
- Fellow, American College of Chest Physicians
- Fellow and Founding Member, International Society for Holter Monitoring
- Member, Association of University Anesthesiologists
- Member, Association of Cardiovascular Anesthesiologists (Membership limited to 50)
- Charter Member, Society for Technology in Anesthesia

WORK EXPERIENCE

Alameda County Medical Center, Oakland, CA, from 2006

Partner & Business Manager
San Francisco Anesthesia Medical Group at St. Mary's Medical Center,
San Francisco, CA, 2000- 2006

Professor of Anesthesiology
Chief, Anesthesiology Service, DVAMC
University of Oklahoma, Oklahoma City, OK, 1998-1999

University of California, San Francisco, CA, 1991- 1998

Loyola University Medical Center, Maywood, IL, 1986-1991

UMDNJ—R.W. Johnson School of Medicine, New Brunswick, NJ, 1984-
1986

SUBSPECIALTY

Full-time member of cardiovascular and thoracic anesthesia group 1984-2006. Trained numerous clinical and research fellows and residents. Certified in perioperative transesophageal echocardiography by the National Board of Echocardiography and SCA. Also have extensive experience in much of anesthesia including neurosurgical, obstetric, trauma, and ambulatory anesthesia, and intensive care.

RESEARCH GRANTS

Site Principal Investigator, Janssen Pharmaceuticals Coronary Artery Surgery Study (H7788-11298-01): \$88, 827

Site Principal Investigator, Aristo Medical Esophageal Sensors Study: Equipment and Supplies, \$15,000

Marquette Electronics Heart Rate Variability Study: Software, \$25,000

Stuart Medical: Two Holter Scanners and Three ECG and Blood Pressure Recorders, Software, \$50,000

Hewlett-Packard: Electrocardiograph, \$15,000

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

Fellow, American Heart Association

Fellow, American College of Cardiology

Association of University Anesthesiologists

American Society of Anesthesiologists

Association of Cardiac Anesthesiologists

Society of Cardiovascular Anesthesiologists

California Society of Anesthesiologists

International Anesthesia Research Society

International Society for Holter and Non-invasive Electrocardiography

Society for Technology in Anesthesia

American Society of Echocardiography

EDITORIAL CONSULTANT

Circulation

Journal of Thoracic and Cardiovascular Surgery

Anesthesiology

Anesthesia and Analgesia

Journal of Clinical Monitoring

Journal of Clinical Anesthesia

Journal of Cardiothoracic and Vascular Anesthesia

Heart and Lung

Cardiovascular and Thoracic Anesthesia Journal Club Journal

COMMITTEE MEMBERSHIPS AND OTHER SERVICE

Extramural

Committee on Trauma and Emergency Preparedness, American Society of Anesthesiologists

Committee on Equipment and Facilities, American Society of Anesthesiologists

Subcommittee on Equipment, Monitoring & Engineering Technology, American Society of Anesthesiologists

Committee on Membership, American Society of Anesthesiologists

Board of Directors & District Director, California Society of Anesthesiologists

Chair, Membership Committee, Society of Cardiovascular Anesthesiologists

Peer Review Committee, California Society of Anesthesiologists

Leadership Development Committee, California Society of Anesthesiologists

Website Taskforce, Association of University Anesthesiologists

Vice-Chair, Education Committee, Society of Cardiovascular Anesthesiologists

Continuing Medical Education Committee, Society of Cardiovascular Anesthesiologists

Nominating Committee, Society of Cardiovascular Anesthesiologists

Research Committee, Society of Cardiovascular Anesthesiologists

Abstract Reviewer, Society of Cardiovascular Anesthesiologists

Scientific Session Moderator, Society of Cardiovascular Anesthesiologists

SCA/ *McSPI* Fellowship Committee, Society of Cardiovascular Anesthesiologists

Clinical Anesthesia Study Commission, Illinois Society of Anesthesiologists

Committee on Midwest Anesthesiology Conference—Local Arrangements Subcommittee

Committee on Continuing Medical Education, Chicago Medical Society

Member Speakers' Bureau, Chicago Medical Society

Committee on Communications, Illinois Society of Anesthesiologists

Intramural

Quality Council, St. Mary's Medical Center, San Francisco

Medical Staff Nominating Committee, St. Mary's Medical Center, San Francisco

Director, Anesthesiology Continuous Quality Improvement, DVAMC, San Francisco

Medical Director, Pre-Anesthesia Clinic, DVAMC, San Francisco

Tissue and Transfusion Committee (Alternate), DVAMC, San Francisco

Chair, Transfusion Committee, DVAMC, Oklahoma City

Performance Improvement Committee, DVAMC, Oklahoma City

Patient Care Committee, DVAMC, Oklahoma City

Operative and Invasive Procedures Committee, DVAMC, Oklahoma City

Pharmacy and Therapeutics Committee (Alternate)
DVAMC, Oklahoma City

Critical Care Committee (Alternate), DVAMC, Oklahoma City

Anesthesia Research Committee, Loyola University Medical Center

RESEARCH FELLOWS

Provided research training to seven residents and fellows: R Mayer M.D., EA Berg M.D., M Dasari M.D., S Suresh M.D., N Purewal M.D., R Ehsan M.D., and D Jennings M.D. They presented the abstracts of their work at scientific meetings.

Claude Laflamme, M.D., F.R.C.P. (C), Assistant Professor of Anesthesia at the University of Montreal worked full-time with me from July 1, 1993 to June 30, 1994.

Raymond Martineau, M.D., F.R.C.P. (C), Associate Professor of Anesthesia at the University of Montreal worked full-time with me from January 1, 1994 to June 30, 1994.

INVITED LECTURES

1. Design of a system for computer analysis of electrocardiogram under anesthesia. Microcomputers in Anesthesia, Biloxi, MS, October 1984
2. Electrocardiographic determination of perioperative myocardial ischemia. Workshop, Postgraduate Assembly of the New York State Society of Anesthesiologists, New York, NY, December 1986
3. Electrocardiography in the perioperative period. Marquette's Seminar on Stress and High-Resolution Electrocardiography, Tucson, AZ, January 1989
4. Transurethral resection of prostate syndrome. Illinois Society of Anesthesiologists Study Commission, Chicago, IL, April 1990
5. Myocardial ischemia after administration of pancuronium. Illinois Society of Anesthesiologists Study Commission, Chicago, IL, April 1990
6. ECG activity linked with postoperative bundle branch block (interview). Anesthesiology News, September 1990
7. Right hemothorax on attempted internal jugular cannulation. Illinois Society of Anesthesiologists Study Commission, Chicago, IL, October 1990
8. Discussant, Scientific Sessions, Society of Cardiovascular Anesthesiologists, San Antonio, TX, May 1991

9. Moderator, Scientific Session, Midwest Anesthesia Conference, Chicago, IL, 1991
10. Case Discussant, Clinical Anesthesia Study Commission of the Illinois Society of Anesthesiologists, Chicago, IL, 1991
11. Determination of the incidence of myocardial ischemia and infarction during and after coronary artery bypass surgery with propofol anesthesia. Pebble Beach, CA, September 1992
12. Determination of the incidence of myocardial infarction during coronary artery bypass surgery in patients receiving placebo or acadesine infusion intraoperatively. Dallas, TX, January 1993
13. Determination of the incidence of myocardial infarction during coronary artery bypass surgery in patients receiving placebo or acadesine infusion intraoperatively. Phoenix, AZ, February 1993
14. Incidence of Q-wave myocardial infarction during coronary revascularization in the 24 center *McSPI* population. San Diego, CA, April 1993
15. Holter and 12-lead ECG monitoring for patients receiving dexmedetomidine infusion during non-cardiac surgery. San Diego, CA, August 1993
16. Q-wave MI and postoperative improvement in Q-waves after CABG. Washington, DC, October 1993
17. Myocardial Ischemia and Infarction in patients receiving propofol for CABG surgery. Washington, DC, October 1993
18. Detection of myocardial ischemia and infarction in patients undergoing non-cardiac surgery and receiving placebo or acadesine infusion. Dallas, TX, October 1993
19. Discussant, Scientific Session, Society of Cardiovascular Anesthesiologists, San Diego, CA, April 1993
20. Discussant, Scientific Session, Society of Cardiovascular Anesthesiologists, Montreal, Canada, April 1994
21. Electrocardiographic monitoring of perioperative myocardial ischemia. VA Nurse Anesthetists' Society, New Orleans, LA, April 1994

22. Myocardial infarction during coronary artery bypass surgery. Society of Cardiovascular Anesthesiologists, Montreal, Canada, April 1994
23. Myocardial ischemia, infarction and hemodynamic stability with the use of propofol infusion during or after coronary artery bypass surgery. Society for Intravenous Anesthesia, San Francisco, CA, October 1994
24. Preoperative myocardial infarction. Society of Cardiovascular Anesthesiologists, Philadelphia, PA, May 1995
25. Perioperative monitoring and outcome. Society of Cardiovascular Anesthesiologists, Philadelphia, PA, May 1995
26. Determination of myocardial ischemia and infarction. (Whole-day workshop) Society of Cardiovascular Anesthesiologists, Philadelphia, PA, May 1995
27. Discussant, Scientific Session, International Anesthesia Research Society, 1995
28. Monitoring and outcome. (Whole-day workshop) Society of Cardiovascular Anesthesiologists, Salt Lake City, UT, May 1996
29. Potential and pitfalls of monitoring for myocardial ischemia. Society of Cardiovascular Anesthesiologists, Salt Lake City, UT, May 1996
30. Perioperative monitoring, outcomes, and costs. (Whole-day workshop) Society of Cardiovascular Anesthesiologists, Baltimore, MD, May 1997
31. Perioperative ischemia and infarction. Society of Cardiovascular Anesthesiologists, Baltimore, MD, May 1997
32. Best cardiac anesthetic. Society for Intravenous Anesthesia, San Diego, October 1997
33. Preoperative low heart rate variability predicts mortality after noncardiac surgery in high-risk patients. Association of University Anesthesiologists, San Francisco, May 1998
34. Myocardial ischemia and infarction during coronary artery bypass surgery. Baylor University School of Medicine, Houston, April 1998
35. Mortality high among CAD patients for noncardiac surgery (interview). Anesthesiology News, January 1999
36. New Developments in Cardiac Anesthesia. Oklahoma Society of Anesthesiologists, Tulsa, April 1999

37. Recent Advances in Cardiac Anesthesia. Oklahoma Review Course in Anesthesiology, Oklahoma City, May 1999
38. Sympatholysis: Mivazerol. The Capital Congress in Anesthesiology and Intensive Care, Berlin, Germany, June 1999
39. Pharmacology and Critical Care. (Whole-day workshop) Society of Cardiovascular Anesthesiologists, May 2000
40. Myocardial Ischemia and Infarction in the ICU. Society of Cardiovascular Anesthesiologists, May 2000
41. Moderating 5 days of roundtable discussions. Society of Cardiovascular Anesthesiologists, May 2000
42. Does hemodynamics affect outcome? Society of Cardiovascular Anesthesiologists, May 2000
43. Myocardial Infarction During On-Pump CABG Surgery. The Capital Congress in Anesthesiology and Intensive Care, Berlin, Germany, April 2001
44. Effect of hemodynamics on outcome. Society of Cardiovascular Anesthesiologists, May 2001
45. Moderated roundtable discussions. Society of Cardiovascular Anesthesiologists, May 2001
46. Anesthesia for the Elderly Patient Undergoing Podiatric Surgery. California Podiatric Medical Association, November 2001
47. Perioperative myocardial ischemia and infarction. Society of Cardiovascular Anesthesiologists, April 2002
48. Sympathicolysis during cardiac surgery- the American point of view. The Capital Congress in Anesthesiology and Intensive Care, Berlin, Germany, June 2003
49. Anesthetic Considerations for Cardiac Patient Undergoing Noncardiac Surgery. Society of Cardiovascular Anesthesiologists, April 2004
50. OPCAB Surgery, Nuts and Bolts. Society of Cardiovascular Anesthesiologists, April 2005

PEER-REVIEWED PUBLICATIONS

In Journals

1. Jain U, Rautaharju PM: Diagnostic accuracy of the conventional 12-lead and the orthogonal Frank-lead electrocardiograms in detection of myocardial infarctions with classifiers using continuous and Bernoulli features. *J Electrocardiol* 1980;13:159-166
2. Jain U, Rautaharju PM, Horacek BM: The stability of decision theoretic electrocardiographic classifiers based on the use of discretized features. *Comput Biomed Res* 1980;13:132-141
3. Jain U, Rautaharju PM, Warren JW: Selection of optimal features for classification of electrocardiograms. *J Electrocardiol* 1981;14:239-248
4. Rautaharju PM, Warren JW, Jain U, et al.: Cardiac infarction injury score: An electrocardiographic coding scheme for ischemic heart disease. *Circulation* 1981;64:249-256
5. Jain U, Gold MI: Monitoring respiration during regional anesthesia (letter). *Anesthesiology* 1984;60:166
6. Jain U: Clinical significance of perioperative T-wave inversion (letter). *Anesthesiology* 1986;65:561
7. Jain U: Drug infusions simplified. *Anesth Rev* 1986;13:51-52
8. Jain U, Rao TLK, Shah K, Kleinman B: Electrocardiographic lead systems (letter). *Anesthesiology* 1989;70:1026-1027
9. Jain U, Bakhos M, Kanuri DP, et al: Ischemic cardiac response to pancuronium in a patient with severe coronary artery disease. *Anesth Rev* 1990;17:41-45
10. Jain U, Kalathiveetil J, Shah K, et al: Severe transurethral resection of the prostate syndrome. *Anesth Rev* 1990;17:52-58
11. Kleinman B, Kalathiveetil J, Jain U, et al.: The occurrence of malignant hyperthermia after cardiopulmonary bypass. *J Cardiothorac Anesth* 1990;4:385-399
12. Jain U, Wallis DE, Shah K, et al.: Electrocardiographic J-Waves after resuscitation from cardiac arrest. *Chest* 1990;98:1294-1296

13. Jain U, Sullivan HJ, Pifarre R, et al.: Graft atheroembolism as the possible cause of failure to wean from cardiopulmonary bypass. *J Cardiothorac Anesth* 1990;4:476-480
14. Jain U, Shah KB, Belusko RJ, et al.: Subclavian artery laceration and acute hemothorax on attempted internal jugular cannulation. *J Cardiothorac Vasc Anesth* 1991;5:608-610
15. Jain U, Rao TLK, Kumar P, et al.: Pulmonary radiographic abnormalities after different types of cardiac surgery. *J Cardiothorac Vasc Anesth* 1991;5:592-595
16. Kleinman B, Shah K, Jain U: ECG signals during cardiopulmonary bypass: Artifact or reality (letter)? *Anesth Analg* 1991;72:128-129
17. Jain U: Myocardial infarction during coronary artery bypass surgery. *J Cardiothorac Vasc Anesth* 1992;6:612-623
18. Jain U, Miller AL, Wallis DE, et al.: Uncertainty in the differential diagnosis of intracardiac masses by echocardiography. *Am J Noninv Cardiol* 1992;6:383-384
19. Jain U: Can myocardial stunning contribute to myocardial infarction during coronary artery bypass surgery? *J Cardiac Surg* 1993;8: S238-S241
20. Jain U, Wallis DE, Moran JF: Significance of electrocardiographic ST elevation during coronary artery bypass surgery. *Anesth Analg* 1994;78:638-643
21. Jain U: Electrocardiographic detection of perioperative ischemia, stunning and infarction. *J Cardiac Surg* 1994;9:S413-S416
22. Jain U: Book Review: Hemodynamic Waveform Analysis. *J Clin Monit* 1994;10:74
23. Jain U: Cardiovascular monitoring. *Anesth Rev* 1994;21:80-90
24. Jain U: New developments in perioperative cardiovascular monitoring. *Applied Cardiopulmonary Pathophysiology* 1994;5:79-91
25. Jain U: Myocardial injury during reoperation for coronary artery bypass surgery. *J Cardiothorac Vasc Anesth* 1995;9:389-394
26. Talke P, Li J, Jain U, et al. : Effects of perioperative dexmedetomidine infusion in patients undergoing vascular surgery. *Anesthesiology* 1995;82:620-633

27. Jain U: An electrocardiographic lead system for coronary artery bypass surgery. *J Clin Anesth* 1996;8:19-24
28. Jain U: Perioperative use of propofol for cardiac surgery. *J Clin Anesth* 1996;8:61S-66S
29. Jain U: Myocardial ischemia after cardiopulmonary bypass. *J Cardiac Surg* 1995;10:S520-S526
30. The *McSPI* Research Group (including Jain U): Effects of Acadesine on morbidity and mortality following coronary artery bypass graft surgery. *Anesthesiology* 1995;83:658-673
31. Wahr JA, Plunkett J, Ramsay J, Reeves J, Jain U, Ley C, Wilson R, Mangano DT, and the *McSPI* Research Group. Cardiovascular responses during sedation following coronary revascularization: Incidence of myocardial ischemia and hemodynamic episodes with propofol versus midazolam. *Anesthesiology* 1996;84:1350-1360
32. Jain U, Body S, Bellows W, et al.: Multicenter study of target-controlled infusion of propofol-sufentanil or sufentanil-midazolam for coronary artery bypass graft surgery. *Anesthesiology* 1996;85:522-535
33. Hubner C, Jain U: Caring for the ICU patient receiving propofol. *Dimensions in Critical Care Nursing* 1996;15:133-141
34. Jain U named as a contributor in the appendix, In: Mathew JP; Parks R; Savino JS, et al.: Atrial fibrillation following coronary artery bypass graft surgery: predictors, outcomes, and resource utilization. MultiCenter Study of Perioperative Ischemia Research Group. *JAMA* 1996;276:300-306
35. Jain U, Laflamme C, Aggarwal A, et al.: Electrocardiographic and hemodynamic changes and their association with myocardial infarction during coronary artery bypass surgery: A multicenter study. *Anesthesiology* 1997;86:576-591
36. *McSPI*-Europe Research Group (including Jain U): Perioperative sympathectomy: Beneficial effects of the α_2 -adrenoceptor agonist mivazerol on hemodynamic stability and myocardial ischemia. *Anesthesiology* 1997;86:346-363
37. Jain U: Calcium channel blockers for ischemia after cardiopulmonary bypass(letter). *J Cardiothorac Vasc Anesth* 1997;11:922-923

38. Jain U: Wave recognition and use of the intraoperative unipolar esophageal electrocardiogram. *J Clin Anesth* 1997;9:487-492
39. Jain U: Intermittent reduction in myocardial perfusion causing ST segment oscillation after cardiopulmonary bypass. (letter). *Anesthesiology* 1997;87:710-711
40. Jain U named as a contributor in the appendix, In: Plunkett JJ; Reeves JD; Ngo L, et al.: Urine and plasma catecholamine and cortisol concentrations after myocardial revascularization. Modulation by continuous sedation. Multicenter Study of Perioperative Ischemia (McSPI) Research Group, and the Ischemia Research and Education Foundation (IREF). *Anesthesiology* 1997;86:785-796
41. Jain U: In Reply (letter). *Anesthesiology* 1997;87:1015
42. Jain U named as a contributor in the appendix, In: Comunale ME, Body SC, Ley C, et al.: The concordance of intraoperative left ventricular wall-motion abnormalities and electrocardiographic ST segment changes. Association with outcome after coronary revascularization. *Anesthesiology* 1998; 88:945-54
43. Spiess BD, Ley C, Body SC, Siegel LC, Stover EP, Maddi R, D'Ambra M, Jain U, Liu F, Herskowitz A, Mangano DT, Levin J, and the McSPI Research Group: Intensive care unit entry hematocrit influences the frequency of Q wave myocardial infarction after coronary artery bypass graft surgery. *J Thorac Cardiovasc Surg* 1998; 116:460-467
44. Spies CD, Kern H, Schroder T, Sander M, Sepold H, Lang P, Stangl K, Behrens S, Sinha P, Schaffartzik W, Wernecke KD, Kox WJ, Jain U: Myocardial ischemia and cytokine response are associated with subsequent onset of infections after noncardiac surgery. *Anesth Analg* 2002;95:9-18
45. Heymann CV, Redlich U, Jain U, et al. Recombinant Activated Factor VII For Refractory Bleeding After Cardiac Surgery – A Retrospective Analysis of Safety and Efficacy. *Critical Care Medicine* 2005; 33:2241-2246
46. Hein, Ortrud Vargas MD; Birnbaum, Jurgen MD; Wernecke, Klaus D. PD; Konertz, Wolfgang MD, PhD; Jain, Uday MD, PhD; Spies, Claudia MD: Three-year survival after four major post-cardiac operative complications. *Critical Care Medicine*. 2006; 34:2729-2737
47. Jain U, Ghoshal S, Mangano DT: Risk stratification for long term mortality after non-cardiac surgery. (In preparation)

Book Chapters

1. Jain U: Optimal feature discretization for classification of electrocardiograms [Ph.D. Dissertation]. Halifax, Canada: Dalhousie University, 1978
2. Jain U and Rautaharju PM: The use of discretized features for classification of electrocardiograms. In: Wolf HK and MacFarlane PW (eds). *Optimization of Computer ECG Processing*. New York: Elsevier, 1980:17-120
3. Jain U, Krishnamurthy A, Dasari M: Perioperative myocardial infarction during coronary artery bypass surgery. In: Pifarre R (ed). *Acute myocardial infarction and its complications*. In the series: *Cardiac Surgery: State-of-the-Art Reviews*. Philadelphia: Hanley and Belfus, 1992;6(1):85-100
4. Jain U: Perioperative anticoagulation. *Progress in Anesthesiology* 1993;7:150-163
5. Jain U: Perioperative cardiovascular monitoring: New developments and controversies. *Cardiovascular Reviews and Reports* August, 1993; 33-43
6. Jain U: Cardiovascular monitoring. *Progress in Anesthesiology* 1994;8:83-96
7. Jain U: Cardiovascular monitoring during the perioperative period. *Surgical Physician Assistant* 1995;1:26-32
8. Jain U: Perioperative myocardial infarction: A threat to bypass graft surgery [Interview]. *Advances in Cardiovascular Surgery and Anesthesiology* 1995;2(2):13-15
9. Jain U: Commentary on "Prognostic importance of myocardial ischemia detected by ambulatory monitoring early after acute myocardial infarction." *Cardiovascular and Thoracic Anesthesia Journal Club Journal* 1996;1:113-115
10. Jain U: Commentary on "Acute changes in left atrial and left ventricular diameters after physiological pacing." *Cardiovascular and Thoracic Anesthesia Journal Club Journal* 1996;1:269-271

11. Jain U: Commentary on "Reversal of left ventricular hypertrophy in essential hypertension: A meta-analysis of randomized double blind studies." *Cardiovascular and Thoracic Anesthesia Journal Club Journal* 1996;1:287-292
12. Jain U: Commentary on "Value of analysis of ST segment changes during tachycardia in determining type of narrow QRS complex tachycardia." *Cardiovascular and Thoracic Anesthesia Journal Club Journal* 1996;1:330-332
13. Jain U: Hypercholesterolemia. In: Roizen MF and Fleisher LA (eds). *Essence of Anesthesia Practice*. New York: Saunders, 1996, 1997, 1998: 168
14. Jain U: Hypertriglyceridemia. In: Roizen MF and Fleisher LA (eds). *Essence of Anesthesia Practice*. New York: Saunders, 1996, 1997, 1998: 178
15. Jain U: Lipidemias. In : Roizen MF and Fleisher LA (eds). *Essence of Anesthesia Practice*. New York: Saunders, 1996, 1997, 1998: 203
16. Commentary on "Quality of life, employment status, and anginal symptoms after coronary angioplasty or bypass surgery: 3-year follow-up in the randomized intervention treatment of angina (RITA) trial." *Cardiovascular and Thoracic Anesthesia Journal Club Journal* 1997;2:23-25
17. Commentary on "Adverse cerebral outcomes after coronary bypass surgery." *Cardiovascular and Thoracic Anesthesia Journal Club Journal* 1997;2:123-126
18. Commentary on "Improved survival with an implanted defibrillator in patients with coronary disease at high risk for ventricular arrhythmia." *Cardiovascular and Thoracic Anesthesia Journal Club Journal* 1997;2:177-180
19. Jain U: Myocardial ischemia and infarction during coronary artery bypass surgery. In: Barash P (ed). *Problems in Anesthesia*. Philadelphia: Lippincott-Raven, 1998;10:153-167
20. Commentary on "A comparison of thrombolytic therapy with primary coronary angioplasty for acute myocardial infarction." *Cardiovascular and Thoracic Anesthesia Journal Club Journal* 1998; 2:223-225
21. Commentary on "Long-term protection from myocardial ischemic events in a randomized trial of brief integrin beta-3 blockade with percutaneous

- coronary intervention." *Cardiovascular and Thoracic Anesthesia Journal Club Journal* 1998; 2:229-232
22. Jain U: Ischemic heart disease and heart failure. In: Hemmings H and Hopkins P (eds). *Foundations of Anaesthesia Basic and Clinical Sciences*. Philadelphia: Mosby, 2000; 419- 428
 23. Jain U: Myocardial infarction after on-pump coronary artery bypass surgery. *Journal fur Anesthesie und Intensivbehandlung* 2001; 3:S226-S228

Abstracts in Journals

1. Jain U, Rao TLK, Dasari M, et al.: Left lung radiographic abnormalities after aortocoronary bypass surgery. *Can J Anaesth* 1989;36:S106
2. Jain U, Rao TLK, Dasari M, et al.: Simplified ST segment analysis of intraoperative esophageal electrocardiograms. *Can J Anaesth* 1989;36:S60
3. Jain U, Rao TLK, Dasari M, et al.: Anesthetic induction can reduce myocardial ischemia. *Anesthesiology* 1989;71:A54
4. Jain U, Rao TLK, Dasari M, Wallis DE, et al.: Effect of anesthetic induction on the morphology of the electrocardiogram. *Anesthesiology* 1989;71:A399
5. Jain U, Rao TLK, Dasari M, et al.: Suitability of esophageal electrocardiogram for intraoperative monitoring. *Anesthesiology* 1989;71:A342
6. Jain U, Rao TLK, Dasari M, et al.: Chest radiographic changes due to mammary artery grafting. *Chest* 1989;96:159S
7. Jain U, Wallis DE, Rao TLK, et al.: Correlates of post-bypass conduction changes. *Chest* 1989;96:235S
8. Jain U, Rao TLK, Dasari M, et al.: Myocardial ischemia may improve after anesthetic induction. *Chest* 1989;96:234S
9. Jain U, Rao TLK, Dasari M, et al.: Placement of invasive monitoring catheters in ischemic patients. *Chest* 1989;96:238S

10. Jain U, Rao TLK, Dasari M, et al.: Intraoperative esophageal electrocardiography. *Chest* 1989;96:241S
11. Jain U, Rao TLK, Shah K, et al.: Incidence of myocardial ischemia on arrival for aortocoronary bypass surgery. *Anesth Analg* 1989;69: S177
12. Jain U, Wallis DE, Rao TLK, et al.: Electrical activity on cardiopulmonary bypass does not cause release of creatine kinase. *Clin Res* 1989;37:268A
13. Wallis DE, Jain U, Moran J, et al.: Critical coronary stenosis is not associated with electrical activity on cardiopulmonary bypass. *Clin Res* 1989;37:305A
14. Wallis DE, Jain U, Moran J, et al.: Electrical activity during cardioplegic arrest is associated with post-bypass bundle branch block. *Clin Res* 1989;37:305A
15. Jain U, Rao TLK, Bakhos M, et al.: Electrical activity on cardiopulmonary bypass is not associated with myocardial infarction. *Anesth Analg* 1990;70:S176
16. Jain U, Rao TLK, Moran J, et al.: Myocardial infarction during coronary artery bypass surgery. *Clin Res* 1991;39:120A
17. Jain U, Rao TLK, Krishnamurthy A, et al.: Intraoperative ischemia: Compared to what? *Anesth Analg* 1991;72:S126
18. Jain U, Rao TLK, Krishnamurthy A, et al.: Identification of ischemia in the presence of persistent ST changes on the ECG. *Anesthesiology* 1991;75:A492
19. Jain U, Rao TLK, Krishnamurthy A, et al.: Identification of the onset and triggers of myocardial infarction during coronary artery bypass surgery. *Anesth Analg* 1992;74:S150
20. Jain U, Krishnamurthy A, Zawaorski K, et al.: Electrical activity during cardiopulmonary bypass is associated with myocardial infarction. *Anesth Analg* 1992;74:S149
21. Jain U, Krishnamurthy A, Dasari M, et al.: Multilead digital electrocardiographic monitoring during cardiac surgery. *J Clin Monit* 1992;8:168-169

22. Jain U, Krishnamurthy A, Krishnamachari K, Zaworski K: Electrocardiographic lead systems for perioperative applications. *Anesthesiology* 1992;77:A581
23. Jain U, Krishnamurthy A, Zaworski K, Krishnamachari K: Should creatine kinase MB or its percentage be used for the detection of myocardial infarction after coronary artery bypass grafting? *Anesthesiology* 1992;77:A1094
24. Jain U, Krishnamurthy A: Effect of criteria for MI on the incidence of MI after CABG. *Anesth Analg* 1993;76:S160
25. Jain U, Krishnamurthy A: Prognostic significance of ST elevation during CABG. *Anesth Analg* 1993;76:S161
26. Weitz SR, Drasner K, Cohen NH, Jain U, Mangano DT: PCA vs. epidural morphine: Comparison of perioperative myocardial ischemia. *Regional Anesth* 1993;18:S4
27. Talke P, Mangano DT, Li J, Hollenberg M, Jain U and SPI Research Group: Effect of dexmedetomidine on myocardial ischemia in vascular surgery patients: A safety and dose escalation study. *Anesthesiology* 1993;79:A60
28. Weitz SR, Drasner K, Cohen NH, Jain U, Mangano DT: Patient-controlled versus epidural morphine: Comparison of perioperative myocardial ischemia. *Anesthesiology* 1993;79:A841
29. Talke P, Jain U, Li J, et al.: Hemodynamic effects of dexmedetomidine on vascular surgery patients. *Anesth Analg* 1994;78:S431
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