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2007 SAAC/AAPD: Innovations in Residency Training

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Common Problems at all Programs?

- Not enough time
- Not enough people
- Not enough money
- Not enough motivation
 - Faculty
 - Residents
- Too busy clinically
 - Faculty
 - Residents

Problem:

- Educational series getting “stale”
 - Same topics lectured on each year
 - Because faculty are busy, hard to motivate them to stay current/entertaining
 - Resident perception of series declining along with their participation

CA-1 Lecture Series

Date		Lecture Type	Lecture Topic	Presenter
Wed	06-Sep-06	CA-1 Lecture	Preoperative Evaluation	Dr Boucek
Wed	13-Sep-06	CA-1 Lecture	Electrical Safety in the OR	Dr. Krugh
Wed	20-Sep-06	CA-1 Lecture	Noninvasive and Invasive Monitoring	
Wed	27-Sep-06	CA-1 Lecture	Fatigue	Dr. Bircher
Wed	04-Oct-06	CA-1 Lecture	Anesthesia Machines	Dr. Lawler
Wed	11-Oct-06	CA-1 Lecture	Breathing Systems	Dr. Gelzinis
Wed	18-Oct-06	CA-1 Lecture	ASA Week	
Wed	25-Oct-06	CA-1 Lecture	Ventilators	Dr. Lawler
Wed	01-Nov-06	CA-1 Lecture	Inhalational Agents - Pharmacology	Dr. Whitehurst
Wed	08-Nov-06	CA-1 Lecture	Inhalational Agents - Delivery	Dr. Krugh
Wed	15-Nov-06	CA-1 Lecture	Intravenous Anesthetic Agents	Dr. Murray
Wed	22-Nov-06	CA-1 Lecture	Opioid Analgesics	Dr. MacMurdo
Wed	29-Nov-06	CA-1 Lecture	Morbid Obesity	Dr. Vallejo
Wed	06-Dec-06	CA-1 Lecture	Muscle Relaxants and Reversal Agents	Dr. Kempen
Wed	13-Dec-06	CA-1 Lecture	Cardiovascular Drugs	Dr. Anixter
Wed	20-Dec-06	CA-1 Lecture	Local Anesthetics	Dr. Cladis
Wed	27-Dec-06	CA-1 Lecture	No Lecture- Holiday	
Wed	03-Jan-07	CA-1 Lecture	No Lecture- Holiday	
Wed	10-Jan-07	CA-1 Lecture	AKT-6	
Wed	17-Jan-07	CA-1 Lecture	Peripheral Nerve Blocks	Dr. Orebaugh
Wed	24-Jan-07	CA-1 Lecture	Spinal and Regional Anesthesia	Dr. Dalby
Wed	31-Jan-07	CA-1 Lecture	Anesthesia for ENT	Dr. Metro
Wed	07-Feb-07	CA-1 Lecture	TBA	TBA
Wed	14-Feb-07	CA-1 Lecture	Anesthesia for Anesthesiologists - All	Dr. M

Hurdles

- Come up with additional/alternative educational formats
- Get faculty motivated
- Get residents motivated
- Additional faculty time- from where?
- Create an atmosphere where residents will take part in their own education

Solutions:

- Additional/alternative educational formats
- Get faculty/residents motivated
 - Educational retreat
 - Weekend- resort
 - Social/working- “reward” for involved academic faculty/ residents
 - Solicit input from faculty & RESIDENTS
 - Provide forum where clinical work does not interfere

Solutions:

- Additional faculty/resident time- from where? “Too busy clinically”
 - Is more time needed?
 - Have done “lectures” for years
 - Do we need to repeat every year?
 - Yes or No
 - Format (Live?)
 - Are end of day (or beginning of day) lectures best time for resident learning?
 - Better at their convenience?

Solutions- Time

- Can we use technology to help us with this problem
 - Filming lectures
 - Available how?
 - DVD/ VHS?
 - Web technology
 - Primitive
 - Advanced

“Simple” Web Based Lectures

- Store on free or “nominal fee” sites
 - Mediamax.com
 - Xdrive.com
 - Freedrive.com
 - Idrive.com
 - Orbitfiles.com
 - Vmn.net

“Advanced”: Navigator

WED 10.3.2007 - Inhalational Anesthetics II - Microsoft Internet Explorer provided by UPMC

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Address http://navigator.medschool.pitt.edu/34_viewFolder.asp?folderID=46004803 Go Links

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School of Medicine Curriculum

David Metro
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home calendar **browse** create search reports

School of Medicine / Postgraduate Trainee / Anesthesiology CA-1 Lecture Series (2007) / WED 10.3.2007 - Inhalational Anesthetics II

Up one level [map]

WED 10.3.2007 -
Inhalational Anesthetics II

- 4:00 pm - 5:00 pm
- Inhalational Anesthetics II
- Inhalational Anesthetics II Post-Test
- Inhalational Anesthetics II Evaluation

Inhalation Anesthetics II - Microsoft Internet Explorer provided by UPMC

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Address <http://mediasite.cidde.pitt.edu/mediasite/Viewer/Viewers/Viewer240TR.aspx?mode=Default&peid=ea2cce3e-6b0e-45c4-9f> Go Links

University of Pittsburgh **CIDDE** **CIDDE** Center for Instructional Development & Distance Education

CENTER FOR INSTRUCTIONAL DEVELOPMENT AND DISTANCE EDUCATION

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Polls Ask Options Slide 2 of 40

	MAC ₅₀ (ppm)	MAC ₁₀₀ (ppm)	MAC ₁₀₀ (ppm)	MAC ₁₀₀ (ppm)
Axetone	0.420	0.710		
Fluorothalane	720	0.0085		
Methoxyflurane	9.4	0.0020	0.0010	0.0020
Diethyl ether	12.0	0.011		0.0030
Chloroform	260	0.007		0.0080
Halothane	224	0.007	0.004	0.0045
Enflurane	960	0.0257	0.0100	0.0120
Isflurane	900	0.0141	0.0110	0.0060
Compound A/B	200	1.100		
Desflurane	167	0.072	0.06	0.045
HPFCO ₂ CHFCF ₃	960	0.0024		
Perflorobron	27	1.40		0.090
Aflurane	124	0.0184		
Sulfone	90	0.012		
Diethyl ether	60	0.004	0.0152	0.002
Fluroxene	47.7	0.0599	0.004	0.0045
Semvolthane	47.2	0.0030	0.002	0.0116
Cyclopropane	11.0	0.175	0.052	0.142
Xenon	1.0	1.15	0.71	0.50
Phyline	1.00		0.67	0.5
Nitrous oxide	1.4	1.00	1.04	1.04
Hydro	0.0			4.0
St. ethyl bromide	0.085	< 0		0.1
Argon	0.16			16.2

Playing 01:25/55:2

Inhalation Anesthetics II

Presenter(s): Dr. Steven L Whitehurst MD

Solutions- Involvement

- Get away from passive lectures
 - PBLDs
 - Case Presentations
 - Journal reviews
 - Oral Board formats
 - Key word sessions

Keyword Database

[MAIN] Keywords - Microsoft Internet Explorer provided by UPMC

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Keywords

Keyword Document Tracking

Search Term: Search Show All

Category Keyword / Phrase Existing Documents Document In Progress

Administrator Options: Department of Anesthesiology

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Help

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Done Trusted sites

Benefits of keyword sessions

- Requested by residents (CA3) to study
- Online accessible after sessions
- Encourages resident participation
- Faculty moderate sessions and do something “different”
- Provides different learning format for residents
- “online” publication for resident

Oral Board Sessions

CA 3 question 1 - Microsoft Word

File Edit View Insert Format Tools Table Window Help

Type a question for help

100% Read Times New Roman 12 B

1 2 3 4 5 7

INTRA-OPERATIVE MANAGEMENT-10minutes

1. Monitoring: How would you determine the appropriate rate of intravenous fluid infusion? Explain. Different if mannitol given? Why/Why not? Would an end-tidal CO₂ monitor eliminate the need to measure PaCO₂? Why/Why not? What are sources of error with this monitor? Explain.
2. Anesthetic Induction: How would you sedate/anesthetize patient for CT scan? Explain. If elect general anesthesia, would an awake intubation be a satisfactory approach to this patient? Why/Why not? How would you induce anesthesia? Rationale. What is effect of laryngoscopy and intubation on ICP? How can you minimize this? Explain.
3. Maintenance of Anesthesia: For subsequent craniotomy (subdural hematoma) would you favor fentanyl as the primary anesthetic? Why/Why not? A colleague suggests isoflurane. You respond? Reasons? Use N₂O? Why/Why not? How will you manage alveolar ventilation in relation to anesthetic administration? Why? Does choice of anesthetic agent influence this decision? If so, How? If not, why not? Is propofol infusion an appropriate choice for maintenance? Why/Why not?
4. Prolonged Neuromuscular Blockage: Suppose you had intubated 120 my succinylcholine following 1 mg vecuronium for initial intubation. 50 minutes later nerve stimulator shows no twitches. What might be the cause? Evaluation? Management? Is phase II block likely? Why/Why not? What is it? Why might it occur? How would you manage? Explain. Subsequent post-operative evaluation?

POST-OPERATIVE CARE-15 minutes

1. Difficult Ventilation: One hour post-op, the patient is being mechanically ventilated and you note increased difficulty in inflating lungs. Evaluation? Management? Rationale? If the patient develops a pneumothorax, what would you expect the end-tidal CO₂ to show? Explain.
2. Intracranial Pressure: Following craniotomy with evacuation of hematoma, an intracranial pressure-monitoring device (hollow screw) is in place. ICP is noted to be 30 mmHg. Is this of concern? Why? How would you manage? Why?
3. Hypothermia: Nurse in ICU reports rectal temperature is 33C. Is this dangerous? Why/Why not? Treat? Rationale.
4. Electrolyte Imbalance: Serum sodium is 125 mEq/L. What might be the cause? Evaluation? Management? Rationale.
5. Hypoxemia/Fat Embolus: 48 hours post-op, the patient is still mechanically ventilated. He has developed progressive hypoxemia with SpI₂ 91% on FiO₂ 1.0 without PEEP. Chest x-ray shows increasing bilateral infiltrates. Discuss possible causes. How would you make diagnosis of fat embolus? If suspect this, how would you treat? Why?

ADDITIONAL TOPICS-10 minutes

1. Pre-eclampsia and Labor: Should epidural anesthesia be used for labor analgesia in a patient with severe pre-eclampsia? Why/Why not? Risks? Benefits? What potential complications do such a patient present? How do you minimize risk for ARDS?

Page 2 Sec 1 2/2 At Ln Col REC TRK EXT OVR English (U.S)

Benefits of Oral Board Sessions

- Requested by residents (CA3) to study
- Encourages resident participation
- Faculty moderate sessions and do something “different”
- Provides different learning format for residents
- Fellow participation

Summary

- Technology can be used to increase educational activities in the department without increasing:
 - Faculty required time
 - Resident time out of the OR
- The more educational formats you have, the more residents with different learning styles you help

Questions?



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