Goals and Objectives:

Course attendees: Attending surgeons paired with a PGY3, 4 & 5 resident from their institution

Goal #1: to gain a greater understanding of bile duct injuries (BDI) in laparoscopic cholecystectomy, and learn how to minimize this risk in clinical practice.

Goal #2: To gain the cognitive knowledge and technical skills necessary to perform common bile duct exploration, enabling them to provide comprehensive surgical management of bile duct stones, reduce the need for additional procedures, lower costs, and shorten hospital stays for cholecystectomy patients.

Objectives: Upon completion of this course, attendees will be able to:

Safe cholecystectomy:
- Describe the magnitude of the BDI problem
- Describe the risk factors and anatomic conditions which predispose to BDI.
- Describe safe strategies for dissection, ductal identification, and the use of cholangiography to increase safety.
- Describe what to do when faced with a difficult cholecystectomy, and how to perform a safe bailout maneuver if necessary.

Common Bile Duct Stone Management:
- Describe an appropriate preoperative approach to patients with suspected common duct stones that maximizes efficiency and safety, and minimizes unnecessary testing and delays in care.
- Correctly interpret intraoperative cholangiograms to identify relevant operative anatomy and bile duct stones.
- Choose an appropriate approach to clearance of common duct stone(s).
- Achieve a passing score on a pre-defined mastery-learning standard for simulated transcystic exploration.
- Demonstrate proper deployment of a transcystic biliary stent.
- Gain exposure to techniques of transcholedochal common duct exploration and open exploration.
  o Some (but not all) learners may achieve a passing score on a pre-defined mastery learning standard for simulated transcholedochal exploration.
- Correctly setup instruments necessary for bile duct exploration on a back table.

Course Chairs: Matthew Bloom, M.D. and B. Fernando Santos, M.D.

Course Faculty: Matthew Bloom M.D., B. Fernando Santos M.D., Eric Hungness M.D., Ezra Teitelbaum M.D., Louise Yeuk Yan Yeung M.D., Michael Brunt M.D., Brian Davis M.D., Edward Phillips M.D., Dennis Kim M.D., Peter Muscarella M.D., Marian McDonald M.D.

Advisors: Butch Rosser M.D., and Jenaya Goldwag M.D.

Saturday, August 24, 2019

6:30-7:00am Meet in hotel lobby to travel to Cedar-Sinai Medical Center
7:00-7:15am  Breakfast *(location TBD)*

7:15-7:20am  Introduction/Welcome:  *Why you're here, what we're going to learn.*  Brunt/Bloom/Santos

All participants  (Duration: 80 minutes)

7:20-7:45am  **BDI: The problem/anatomy/risk factors/pre-op eval** (25 minutes)

*Group I* - 12 participants  
*Presenter:*  Michael Brunt

7:45-8:10am  **Dissection/Identification of anatomy/IOC** (25 minutes)

*Group I* - 12 participants  
*Presenter:*  Marian McDonald

8:10-8:35 am  **Difficult gallbladder/judgement/bailout maneuvers** (25 minutes)

*Group I* - 12 participants  
*Presenter:*  Brian Davis

8:35-8:40 am  Panel discussion/questions

8:40-8:50 am  10 minute break

8:40-8:50 am  LCBDE Baseline testing, All Participants, 8 stations of LCBDE baseline testing (Duration: 80 minutes)

Station faculty:  Hungness, Teitelbaum, Bloom, Kim, Yeung, Davis, Santos

10 min intro video  
15 min transcystic test  
2 min. rating/setup  
15 min transcholedochal test  
2 min. rating/setup  
15 min transcystic test  
2 min. rating/setup  
15 min transcholedochal test  
2 min. rating/setup

10:10-10:20am  Break

10:10-10:20am  LCBDE Lectures All Participants
10:20-10:35am  **Transcystic CBDE – basic (15 min)**  
Presenter: Teitelbaum

10:35-11:00am  **Transcholedochal CBDE (25 min)**  
Presenter: Edward Philips

11:00-11:25am  **Advanced cases and adjuncts - sphincteroplasty, stents, difficult stones (25 min)**  
Presenter: B. Fernando Santos

11:25-11:30am  **Open discussion/questions**

11:30-12:00pm  Lunch (location TBD)

12:00-12:25pm  **Open CBDE (25 min)**  
Presenter: Peter Muscarella

12:25-12:50pm  **Starting a program (25 min)**  
Presenter: Dennis Kim

12:50-12:55pm  **Open discussion/questions (5 min)**

12:55-14:55pm  **Hands-on Laboratory (Room:TBD)**  
CBDE Deliberate Practice part 1 (2 hours)

**Group I (teams 1-4) Lap transcystic CBDE and stent placement**  
4 stations - 2 hours (approx 1 hour deliberate practice per participant)  
Faculty: Hungness, Kim, Davis, Bloom, Teitelbaum (floating/sub)

**Group II (teams 5-8) 4 different station rotations (A/B/C/D) - 2 hours total**

A. Transcholedochal (choledochotomy/suturing), 2 stations (2 per station, 60 min)  
   Faculty: Yeung, Santos (floating/sub)

B. Cholangiogram interpretation station (2 per station, 20 min)  
   Faculty: McDonald/Brunt

C. Equipment/choledochoscope setup station (2 per station, 20 min.)  
   Faculty: Cedars OR nurse

D. Open CBDE station (2 per station, 20 min)  
   Faculty: Muscarella
Station Schedule by Team:
Team 5: A (60 min), B (20 min), C (20 min), D (20 min)
Team 6: A (60 min), D (20 min), B (20 min), C (20 min)
Team 7: B (20 min), C (20 min), D (20 min), A (60 min)
Team 8: D (20 min), B (20 min), C (20 min), A (60 min)

14:55-15:05pm Break

15:05-17:05pm Hands-On CBDE Deliberate Practice part 2 (2 hours)
Group I (teams 7-12) Lap transcyctic CBDE and stent placement
6 stations - 2 hours (approx 1-hour deliberate practice per participant)
Faculty: Hungness, Teitelbaum, Davis, Kim, Santos (floating)

Group II (teams 1-6) 4 different station rotations (A/B/C/D) - 2 hours total
A. Transcholedochal (choledochotomy/suturing), 3 stations (2 per station, 60 min)
   Faculty: Yeung, Bloom (floating/sub)
B. Cholangiogram interpretation station (2 per station, 20 min)
   Faculty: McDonald/Brunt
C. Equipment/choledochoscope setup station (2 per station, 20 min.)
   Faculty: Cedars OR nurse
D. Open CBDE station (2 per station, 20 min)
   Faculty: Muscarella

Station Schedule by Team:
Team 1: A (60 min), B (20 min), C (20 min), D (20 min)
Team 2: A (60 min), D (20 min), B (20 min), C (20 min)
Team 3: B (20 min), C (20 min), D (20 min), A (60 min)
Team 4: D (20 min), B (20 min), C (20 min), A (60 min)

17:05-18:05pm 8 station post-test -60 min. (transcyctic and transcholedochal)
   team 1 Hungness
   team 2 Teitelbaum
   team 3
   team 4 Bloom
   team 5 Kim
   team 6 Santos
team 7 Yeung
team 8 Davis

All surveys/written post-test, faculty feedback/eval

18:15pm  Adjourn