

AO Trauma Course - Basic Principles of Fracture Management

Day 1: Thursday, August 25, 2022

Time	Topic	Who
9:00	9:10 Welcome and introduction	M Kobayashi
	General principles	Moderator: M Kobayashi
9:10	9:20 The AO world—from history to lifelong learning	T Maehara
9:20	9:40 Bone healing and the effect of patient factors and injury mechanism on fracture management	Y Oh
9:40	9:55 The 2018 AO/OTA Fracture and Dislocation Classification Compendium	Y Oh
9:55	10:10 The soft-tissue injury—a high priority consideration	Y Ueda
10:10	10:25 Absolute stability: biomechanics, techniques, and fracture healing	T Maehara
10:25	10:40 Relative stability: biomechanics, techniques, and fracture healing	C Terada
10:40	10:55 The use of plates in fracture fixation	T Fujiyoshi
10:55	11:10 Principles of external fixation	T Fujiyoshi
11:10	11:20 Summary and Q&A	
11:20	11:35 <i>COFFEE BREAK</i>	
11:35	12:30 AO Skills Lab (First 5 rounds)	Director: M Kobayashi
	A. Torque measurement of bone screws (10)	T Fujiyoshi, M Kobayashi
	B. Soft-tissue penetration during drilling (10)	Y Oh, TI 1
	C. Heat generation during drilling (10)	T Maehara
	D. Mechanics of bone fractures (10)	C Terada, TI 2
	E. Techniques of reduction I(10)	Y Ueda, M Yoshida
12:30	13:10 <i>LUNCH BREAK</i>	
13:10	14:05 AO Skills Lab (Second rounds)	
	F. Techniques of reduction II (10)	T Fujiyoshi, T Doi
	G. Mechanics of intramedullary fixation (10)	Y Oh, TI 1
	H. Mechanics of plate fixation (10)	T Maehara, T Mae
	J. Fracture healing and plate fixation (10)	C Terada, TI 2
	K. Damaged implant removal (10)	Y Ueda, M Yoshida
14:05	14:15 <i>Location change to practicals</i>	
14:15	14:25 How to use drills and benders - before Practical exercise	Y Ueda
14:25	15:25 Practical exercise 1: Internal fixation with screws and plates—absolute stability	Y Ueda
15:25	16:35 Practical exercise 2: Principle of the internal fixator using the locking compression plate (LCP)	Y Oh
16:35	16:50 <i>COFFEE BREAK</i>	
	Treatment of diaphyseal fractures	Moderator: T Fujiyoshi
16:50	17:10 Principles of diaphyseal fracture management—what is important in treating these fractures?	M Yoshida
17:10	17:25 Intramedullary nailing—to ream or not to ream?	T Fujiyoshi
17:25	17:30 <i>Location change to small group discussions</i>	
17:30	18:30 Small group discussion 1: General principles, classification, concepts of stability, their influence on bone healing, and how to apply implants to achieve appropriate stability	A: M Kobayashi B: T Fujiyoshi C: T Maehara, M Yoshida D: Y Oh E: C Terada F: Y Ueda
18:30	End of day 1	

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Day 2: Friday, August 26, 2022

Time	Topic	Who
8:00	9:00 Practical exercise 3: Tibial shaft fractures—intramedullary nailing with the expert tibial nail (ETN) (with reaming)	T Maehara
9:00	9:15 <i>COFFEE BREAK</i>	
9:15	10:25 Small group discussion 2: Management principles for the treatment of diaphyseal fractures	A: Y Ueda B: M Kobayashi C: T Fujiyoshi D: T Maehara E: Y Oh F: C Terada, M Yoshida
10:25	10:35 <i>Location change to lecture room</i>	
	Principles and management of articular fractures	Moderator: C Terada
10:35	10:55 Principles for articular fractures —how do they differ from diaphyseal fractures?	C Terada
10:55	11:10 Forearm fractures—understanding the principles of diaphyseal and articular fractures	T Fujiyoshi
11:10	11:25 Preoperative planning— rationale and how to do it	M Yoshida
11:25	11:35 Summary and Q&A	
11:35	11:40 <i>Location change to Practicals</i>	
11:40	12:20 Practical exercise 4: Application of a modular large external fixator (tibia modular external fixator)	C Terada
12:20	13:20 <i>LUNCH BREAK</i>	
13:20	14:20 Preoperative planning—“plan your forearm operation” (Templating exercise)	M Yoshida
14:20	14:30 <i>Location change to Practicals</i>	
14:30	15:30 Practical exercise 5: Operate your plan? Fixation of a 22C1 forearm fracture using the LCP 3.5 (8 and 11 holes)	M Yoshida
15:30	15:45 <i>COFFEE BREAK</i>	
		Moderator: T Maehara
15:45	16:00 Tension band principle and cerclage wiring	M Yoshida
16:00	16:15 Ankle fractures—a systematic approach to their fixation	C Terada
16:15	16:30 Introduction to tibial plateau fractures	T Maehara
16:30	16:45 Femoral neck fractures	M Kobayashi
16:45	17:00 Trochanteric fractures	T Maehara
17:00	17:15 Distal femoral fractures—management principles	Y Ueda
17:15	17:25 Summary and Q&A	
17:25	17:30 <i>BREAK</i>	
	Emergency management, minimally invasive surgery, and special fractures	Moderator: Y Ueda
17:30	17:40 Radiation in the operating room—appropriate use and hazards	M Kobayashi
17:40	17:55 Treatment algorithms for the polytrauma patient	Y Ueda
17:55	18:10 Emergency management of pelvic fractures—a critical skill can save lives	Y Ueda
18:10	18:25 Fixation principles in osteoporotic bone—the geriatric patient	Y Oh
18:25	18:35 Summary and Q&A	
18:35	End of day 2	

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Day 3: Saturday, August 27, 2022

Time	Topic	Who
8:00	9:10 Small group discussion 3: Management principles for the treatment of articular fractures	A: C Terada B: Y Ueda C: M Kobayashi D: T Fujiyoshi, M Yoshida E: T Maehara F: Y Oh
9:10	9:15 <i>Location change to lecture room</i>	
	Special issues and problems	Moderator: Y Ueda
9:15	9:30 Management of open fractures	Y Ueda
9:30	9:45 Perioperative infection—prevention, evaluation and management	M Kobayashi
9:45	10:00 Delayed healing—causes and treatment principles	M Kobayashi
10:00	10:10 Summary and Q&A	
10:10	10:25 <i>COFFEE BREAK</i>	
10:25	11:00 Practical exercise 6: Tension band wiring of the olecranon	C Terada
11:00	12:00 Practical exercise 7: Management of a type 44C malleolar fracture	Y Oh
12:00	12:40 <i>LUNCH BREAK</i>	
12:40	13:30 Practical exercise 8: Management of a trochanteric fracture (TFNA)	T Fujiyoshi
13:30	13:35 <i>Location change to lecture room</i>	
	Special issues and problems 2	Moderator: M Kobayashi
13:35	13:50 Violation of principles	M Kobayashi
13:50	14:00 Implant removal—Why, when, and how?	M Yoshida
14:00	14:15 Minimally invasive osteosynthesis (MIO)—when to use it?	C Terada
14:15	14:30 Fractures in the growing skeleton—how are they different?	Y Oh
14:30	14:45 The future of fracture treatment	T Maehara
14:45	15:10 Grand final discussion	M Kobayashi, T Maehara
15:10	15:15 Closing remarks	M Kobayashi
15:15	End of the course	