

AO Trauma Course - Basic Principles of Fracture Management

Day 1: Saturday, August 27, 2022

Time	Topic	Who
9:30	9:40 Welcome and introduction	T Noda
	General principles	Moderator: T Noda
9:40	9:50 The AO world—from history to lifelong learning	H Minehara
9:50	10:10 Bone healing and the effect of patient factors and injury mechanism on fracture management	K Futamura
10:10	10:25 The 2018 AO/OTA Fracture and Dislocation Classification Compendium	M Yorimitsu
10:25	10:40 The soft-tissue injury—a high priority consideration	Y Zenke
10:40	10:55 Absolute stability: biomechanics, techniques, and fracture healing	T Miyamoto
10:55	11:10 Relative stability: biomechanics, techniques, and fracture healing	H Hayashi
11:10	11:25 The use of plates in fracture fixation	T Noda
11:25	11:40 Principles of external fixation	N Maegawa
11:40	11:50 Summary and Q&A	
11:50	12:05 <i>COFFEE BREAK</i>	
12:05	13:00 AO Skills Lab (First 5 rounds)	Director: T Noda
	A. Torque measurement of bone screws (10)	K Matsui, H Minehara
	B. Soft-tissue penetration during drilling (10)	N Maegawa, T Miyamoto
	C. Heat generation during drilling (10)	K Futamura, TI 3
	D. Mechanics of bone fractures (10)	S Kitada, TI 4
	E. Techniques of reduction I(10)	K Shigemoto, H Hayashi
13:00	13:40 <i>LUNCH BREAK</i>	
13:40	14:35 AO Skills Lab (Second rounds)	
	F. Techniques of reduction II (10)	K Matsui, H Minehara
	G. Mechanics of intramedullary fixation (10)	N Maegawa, T Miyamoto
	H. Mechanics of plate fixation (10)	K Futamura, TI 3
	J. Fracture healing and plate fixation (10)	M Yorimitsu, TI 4
	K. Damaged implant removal (10)	K Shigemoto, H Hayashi
14:35	14:45 <i>Location change to practicals</i>	
14:45	14:55 How to use drills and benders - before Practical exercise	H Minehara
14:55	15:55 Practical exercise 1: Internal fixation with screws and plates—absolute stability	H Minehara
15:55	17:05 Practical exercise 2: Principle of the internal fixator using the locking compression plate (LCP)	H Minehara
17:05	17:20 <i>COFFEE BREAK</i>	
	Treatment of diaphyseal fractures	Moderator: K Shigemoto
17:20	17:40 Principles of diaphyseal fracture management—what is important in treating these fractures?	K Shigemoto
17:40	17:55 Intramedullary nailing—to ream or not to ream?	H Minehara
17:55	18:00 <i>Location change to small group discussions</i>	
18:00	19:00 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: K Futamura, T Noda B: S Kitada, H Minehara C: T Miyamoto D: H Hayashi, TI 3 E: K Shigemoto, N Shiota F: N Maegawa, TI 4
19:00	End of day 1	

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Day 2: Sunday, August 28, 2022

Time	Topic	Who
8:00	9:00 Practical exercise 3: Tibial shaft fractures—intramedullary nailing with the expert tibial nail (ETN) (with reaming)	K Futamura
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: N Shiota B: T Noda C: K Futamura, H Minehara D: N Maegawa, T Miyamoto E: H Hayashi F: K Shigemoto
10:25	10:35 <i>Location change to lecture room</i>	
	Principles and management of articular fractures	Moderator: H Hayashi
10:35	10:55 Principles for articular fractures —how do they differ from diaphyseal fractures?	H Hayashi
10:55	11:10 Forearm fractures—understanding the principles of diaphyseal and articular fractures	K Shigemoto
11:10	11:25 Preoperative planning— rationale and how to do it	K Matsui
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)	N Maegawa
12:20	13:20 <i>LUNCH BREAK</i>	
13:20	14:20 Preoperative planning—“plan your forearm operation” (Templating exercise)	T Miyamoto
14:20	14:35 <i>Break & Location change to Practicals</i>	
14:35	15:35 Practical exercise 5: Operate your plan? Fixation of a 22C1 forearm fracture using the LCP 3.5 (8 and 11 holes)	T Miyamoto
15:35	15:50 <i>COFFEE BREAK</i>	
		Moderator: N Shiota
15:50	16:05 Tension band principle and cerclage wiring	Y Zenke
16:05	16:20 Ankle fractures—a systematic approach to their fixation	K Matsui
16:20	16:35 Introduction to tibial plateau fractures	N Maegawa
16:35	16:50 Femoral neck fractures	N Shiota
16:50	17:05 Trochanteric fractures	H Hayashi
17:05	17:20 Distal femoral fractures—management principles	K Futamura
17:20	17:30 Summary and Q&A	
17:30	17:35 <i>BREAK</i>	
	Emergency management, minimally invasive surgery, and special fractures	Moderator: H Minehara
17:35	17:45 Radiation in the operating room—appropriate use and hazards	N Shiota
17:45	18:00 Treatment algorithms for the polytrauma patient	S Kitada
18:00	18:15 Emergency management of pelvic fractures—a critical skill can save lives	H Minehara
18:15	18:30 Fixation principles in osteoporotic bone—the geriatric patient	M Yorimitsu
18:30	18:40 Summary and Q&A	
18:40	End of day 2	

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Day 3: Monday, August 29, 2022

Time	Topic	Who
8:00	9:10 Small group discussion 3: Management principles for the treatment of articular fractures	A: K Shigemto, H Hayashi B: N Shiota C: N Maegawa, T Noda D: H Minehara E: T Miyamoto F: K Futamura
9:10	9:15 <i>Location change to lecture room</i>	
	Special issues and problems	Moderator: T Miyamoto
9:15	9:30 Management of open fractures	N Maegawa
9:30	9:45 Perioperative infection—prevention, evaluation and management	T Noda
9:45	10:00 Delayed healing—causes and treatment principles	T Miyamoto
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	K Shigemoto
11:00	12:00 Practical exercise 7: Management of a type 44C malleolar fracture	H Hayashi
12:00	12:40 <i>LUNCH BREAK</i>	
12:40	13:30 Practical exercise 8: Management of a trochanteric fracture (TFNA)	N Shiota
13:30	13:35 <i>Location change to lecture room</i>	
	Special issues and problems 2	Moderator: T Noda
13:35	13:50 Violation of principles	T Miyamoto
13:50	14:00 Implant removal—Why, when, and how?	K Shigemoto
14:00	14:15 Minimally invasive osteosynthesis (MIO)—when to use it?	N Shiota
14:15	14:30 Fractures in the growing skeleton—how are they different?	K Futamura
14:30	14:45 The future of fracture treatment	T Noda
14:45	15:10 Grand final discussion	T Noda
15:10	15:15 Closing remarks	T Noda
15:15	End of the course	