



AO Trauma Course—Fragility Fractures and Orthogeriatrics

Cases for small group discussions (listed on pages 2 and 3)

Day 1

10:45–12:00	Small group discussions Group 1 Group 2 Group 3 Group 4 3 cases with comorbidities, polypharmacy–timing of surgery, anticoagulation (recommend cases number x, y, z) Breakout rooms	Surgeon and geriatrician Surgeon and geriatrician Surgeon and geriatrician + anesthesiologist
16:55–18:00	Small group discussions: Upper extremity Group 1 Group 2 Group 3 Group 4 Upper extremity cases (2 or 3 cases) Breakout rooms	Surgeon and geriatrician Surgeon and geriatrician Surgeon and geriatrician

Day 2

12:45–13:45	Small group discussions: Lower extremity Group 1 Group 2 Group 3 Atypical, plus 2 or 3 cases - Include pelvis and ankle as optional	Surgeon and geriatrician Surgeon and geriatrician Surgeon and geriatrician
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Case list

No.	Title	Learning objectives
1	Contralateral femoral lesion	<ul style="list-style-type: none"> • Discuss the indications for a prophylactic nail or plate on the contralateral side following an atypical fracture • Discuss the pain assessment and medication in the emergency room as well as postoperatively • Discuss anticoagulation treatment with aspirin in terms of a delay of surgery • Discuss treatment of osteoporosis (duration of treatment with alendronate, missing basic treatment with vitamin D and calcium) • Discuss risk of GI bleeding in this setting (indication of PPI in combination with aspirin, in terms of stress ulcer prophylaxis, in terms of side effects of long-term treatment with PPI) • Discuss and select further treatment options for osteoporosis
2	Periprosthetic total knee prosthesis	<ul style="list-style-type: none"> • Discuss the risk factors of falls and of osteoporosis, including HIV and medications • Classify the periprosthetic fracture • Discuss the revision options and procedure steps
3	Periprosthetic total knee replacement	<ul style="list-style-type: none"> • Review the medication list • Discuss anticoagulation and management (indications, inappropriate prescribing) • Discuss the diagnosis of osteoporosis without any treatment/undertreatment • Discuss the use of MIPO
4	Unstable pertrochanteric fracture and augmentation	<ul style="list-style-type: none"> • Discuss comorbidities, risk factors of delirium, and prophylaxis • Discuss the role and usefulness of the various preoperative tests in fragility fracture patients • Discuss cement augmentation
5	Revision surgery after pertrochanteric fracture	<ul style="list-style-type: none"> • Discuss preoperative assessment and optimization, focus on the usefulness of an echo, and in case of a delay of surgery, make a plan and time schedule for the process • Discuss the usefulness of a urinary catheter and the risk in terms of urinary tract infections and delirium • Discuss the management of rivaroxaban and other DOACs • Discuss the need for a DEXA as well as the result in this case • Discuss the anticoagulation management and doses, time of restart? • Discuss the management of cutout
6	Vertebral fracture	<ul style="list-style-type: none"> • Discuss the results of the DEXA • Discuss the indication of vertebroplasty • Discuss the risk of immobilization in terms of sarcopenia • Discuss the assessment and treatment of pain in older adults • Discuss treatment for osteoporosis
7	Total hip periprosthetic fracture	<ul style="list-style-type: none"> • Recognize the importance of a multidisciplinary approach in complex situations • Discuss the treatment plan and required tests/examinations of a complex patient, in the emergency room and during care • Discuss early mobilization and physiotherapy so that the patient can resume activities of daily living as soon as possible and to prevent further injuries by making the home environment safer

8	Humeral shaft fracture	<ul style="list-style-type: none"> • Discuss nailing vs plate fixation • Discuss osteoporosis, nutrition, and prevention of falls, especially after a first fracture
9	Distal radial fracture	<ul style="list-style-type: none"> • Discuss wrist function as an outcome and operative vs nonoperative care • Recognize and manage a patient with dementia and describe how to get patient consent in this situation • List and recognize the risk factors for delirium
10	Proximal humeral fracture	<ul style="list-style-type: none"> • Discuss operative and nonoperative treatment options • Discuss the impact of further information on the management of complex fragility fracture patients • Discuss the pain treatment • Discuss the risk factors for delirium, the use of restraints, and family support • Discuss the results of lab tests and the indication of antibiotic treatment • Recognize the value and process of shared decision making • Discuss the treatment of delirium
11	Periprosthetic acetabular fracture	<ul style="list-style-type: none"> • Consider revision arthroplasty for (periprosthetic) acetabular fractures • Discuss full weight bearing in geriatric fracture treatment • Discuss management of UTI, infection prevention, and antibiotic prophylaxis
12	Difficulties in fixation and healing	<ul style="list-style-type: none"> • Discuss the medication list regarding comorbidities, and check the indications and discuss undertreatment • Discuss the recommendation for osteoporosis treatment • Discuss the importance of secondary fracture prevention and reasons for treatment failure of osteoporosis medication • Discuss the indication of teriparatide and the treatment of osteoporosis after two years
13	Elbow fracture	<ul style="list-style-type: none"> • Discuss the definition of fragility fracture and the osteoporosis work-up in that case
14	Ankle wfracture	<ul style="list-style-type: none"> • Discuss the risk of wound healing and the problem of fully weight bearing • Discuss the osteoporosis work-up
15	Pelvic fracture	<ul style="list-style-type: none"> • Discuss the prognosis of this patient in terms of independency in the future • Discuss the osteoporosis work-up • Discuss fully weight bearing
16	Simple two-part proximal humeral fracture	<ul style="list-style-type: none"> • Discuss pain management • Discuss bone quality and the osteoporosis work-up • Discuss the risk of anaesthesia in terms of mortality and delirium