

Appendix

TABLE E-1 Procedural Checklist for Closed Reduction and Percutaneous Pinning

Checklist No.	Procedure	Simulation Only	Score*
1	Positions patient supine with affected arm abducted		
2	Turns table 90° and brings C-arm in parallel to table (from above or below patient)		
3	Obtains appropriate prereduction images prior to reduction attempt (anteroposterior, lateral)	When prompted to demonstrate appropriate positioning for prereduction radiographs, correctly shows how to obtain anteroposterior and lateral	
4	Performs reduction in correct order (correct coronal malalignment, then traction and flexion to reduce sagittal malalignment)	Able to answer the prompt “what is the proper reduction technique for an extension-type supracondylar humeral fracture fixation with coronal malalignment?” with some variation of correct coronal malalignment and then traction and flexion to reduce sagittal malalignment	
5	Obtains appropriate postreduction images after reduction attempt (Jones view, oblique views, lateral)	When prompted to demonstrate appropriate positioning for postreduction radiographs, correctly shows how to obtain Jones anteroposterior, oblique views, lateral	
6	When asked “how do you assess proper reduction in the sagittal plane?” answers with some variation of anterior humeral line intersects the capitellum		
7	When asked “how do you assess proper reduction in the coronal plane?” answers with some variation of Baumann angle or medial and lateral cortical alignment		
8	When asked “how do you assess proper reduction rotationally?” answers with some variation of medial and lateral cortical alignment		
9	Starts first pin on lateral condyle or capitellum, trajectory has pin crossing fracture site before exiting through medial supracondylar cortex		
10	Starts second pin on lateral condyle or capitellum, trajectory has pin divergent from first pin when crossing fracture site and exiting medial supracondylar cortex	Able to describe trajectory goals of second pin if unable to see protruding from medial cortex	
11	Starts third pin on lateral condyle or capitellum, trajectory has pin divergent from first and second pin when crossing fracture site and exiting medial supracondylar cortex	Operating room only: if third pin not needed, able to answer the question “if second pin is not sufficient to stabilize the fracture, what is the next option?” with some variation of add a third lateral or a medial pin	
12	Tests stability following reduction and pinning (varus and valgus stress with anteroposterior view, flexion and extension of elbow with shoot-through lateral view)		
13	Bends and cuts pins properly to decrease prominence	Able to answer the question “what will you do with the pins now that you are finished placing your pins?” with some variation of bend and then cut them	

14	Places patient into long arm cast or posterior mold splint for pin and elbow protection	Able to answer the question "what, if any, kind of immobilization do you place the arm into?" with some variation of a long arm cast or splint	
15	Assesses perfusion of fingers with capillary refill test on completion of case	Able to answer the question "what essential examination must be done at this point?" with some variation of vascular examination; operating room cases requiring an open reduction or medial pin are excluded	

*1 = done correctly and 0 = done incorrectly, corrected by attending physician, prompted by attending physician, or not done.