Elbow Arthroscopy: Avoiding Complications

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MAYO CLINIC
Mistake #1

Not respecting neuroanatomy
Neuroanatomy

-Fear of nerve injury is what makes us most hesitant (appropriate)

-Clearly under reported- only a few cases in the literature

-I have heard of every elbow nerve injured (by good surgeons)
Anatomy Anterior Capsule

- Humerus
- Radial Head
- Radial Nerve
Radial Nerve
Mistake #2

Poor preoperative imaging
ELBOW ARTHROSCOPY

- Preoperative Planning
- Standard Radiographs:
  Anteroposterior
  Lateral
  Oblique
  CT scan (3-D very good for Arthritis and Fracture workup)
Mistake #3

Forgetting that open release is a good option
Lateral Exposure

Radial Head
Lateral Approach

Anterior

Posterior
Mistake #4

Poor patient positioning
Operative Set-up

- Non sterile tourniquet and holding strap
- Front support & brace
- Main patient support strap
- Pillows between legs
- Arm board angled toward head of table
- Arm holder
Operative Set-up

- Main patient support strap
- Pillows between legs
- Non sterile tourniquet and holding strap
- Back support brace
- Mayo logo
Operative Set-up
Intraoperative Positioning
Mistake #5

Forgetting to insufflate the joint
ELBOW ARTHROSCOPY

**Surgical Technique:**
- Mark out all portals with surgical pen
- Exsanguinate with Esmarch/tourniquet
- Inject 20-25 cc saline (direct posterior or anterolateral is easiest)
Mistake #6

Blowing up the elbow
Maintain constant outflow
Changing viewing portal over switching stick
Articulating Retractor
Mistake #7

Thinking you *have to* start with a lateral portal
Elbow Arthroscopy

Portals

- First there is no *wrong portal*
- Just safe portals
- Okay to start on Medial, Lateral or Posterior
- No limit on the number or portals - use what you need for the job
Anterolateral portal

Radial nerve
Posterior Portals
Mistake #8

*Not* doing the bony work first
Mistake #9

Don’t be fooled by resident’s ridge
Beware of “Resident’s Ridge” in the posterior joint
Mistake #10

Avoid swordfighting
Osteochondritis Dissecans
Osteochondritis Dissecans
Operative Setup – Keep portals orthogonal, don’t swordfight
Mistake # 11

All patients do not need CPM post-op
Got CPM?
-or splints (static or dynamic?)

- Place in compressive dressing 24-48 hours, elevated (Statue of Liberty position)
- Begin CPM at 24-48 hours OR use splints
Open elbow contracture release: postoperative management with and without continuous passive motion

- 16 patients with elbow stiffness matched to 16 control group (age, gender, diagnosis, xray appearance)
- Open release
- CPM vs. No-CPM
- ROM no difference (58°CPM vs. 61° No-CPM)

Lindenhovius, Luijtgaarden K, Ring D, Jupiter J. J Hand Surg Am. 2009
REMEMBER:

Small Cases ... ...before Big Cases
Thank You