Complications after Reverse: Acromion Fractures

2020 Tampa Shoulder
Friday, January 31, 2020

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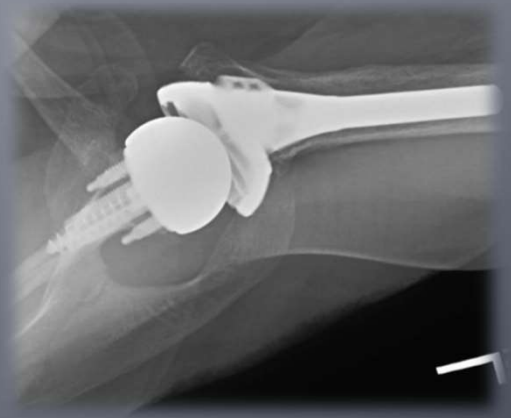


Holy Cross Orthopedic Research Institute

Disclosure: Consultant, Royalties, & Research Support from DJO

shoulderandelbow.com

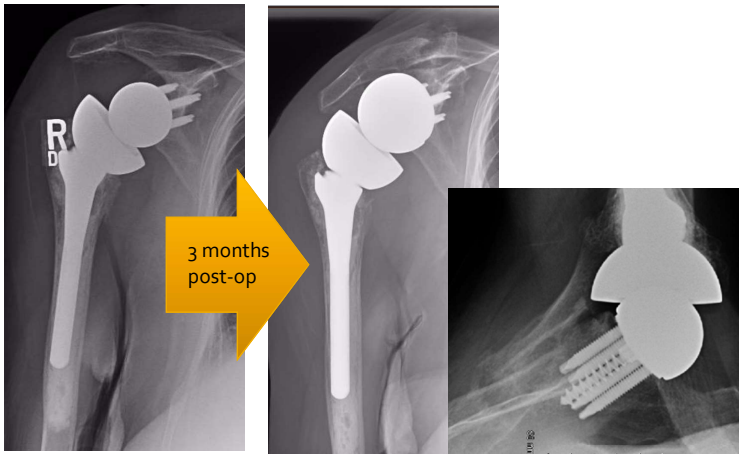
Disclosure: I have obsessed about this problem for over 10 years!

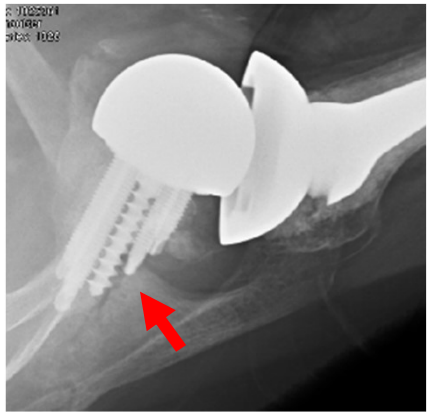
What do you do in an effort to avoid Acromion Stress Fractures?

How do you treat Acromion Stress Fractures?

Technical Tips:
Things I do to avoid Acromion Fractures

- **Avoid Overlengthening**
  - Inlay > Onlay Prosthesis
- **Avoid Long Screws in Postero-superior Quadrant** (Crosby)
  - Max Size Superior Screw 14-18mm
- **Do not release CA Ligament** (Sam Taylor, AAOS)
  - Diving Board Principle
- **Avoid Intra-operative Impingement**
  - Check abduction/rotation
  - Modifications:
    - Tuberoplasty
    - Semiconstrained Socket (fit under acromion)
    - Small Patients – glenosphere low



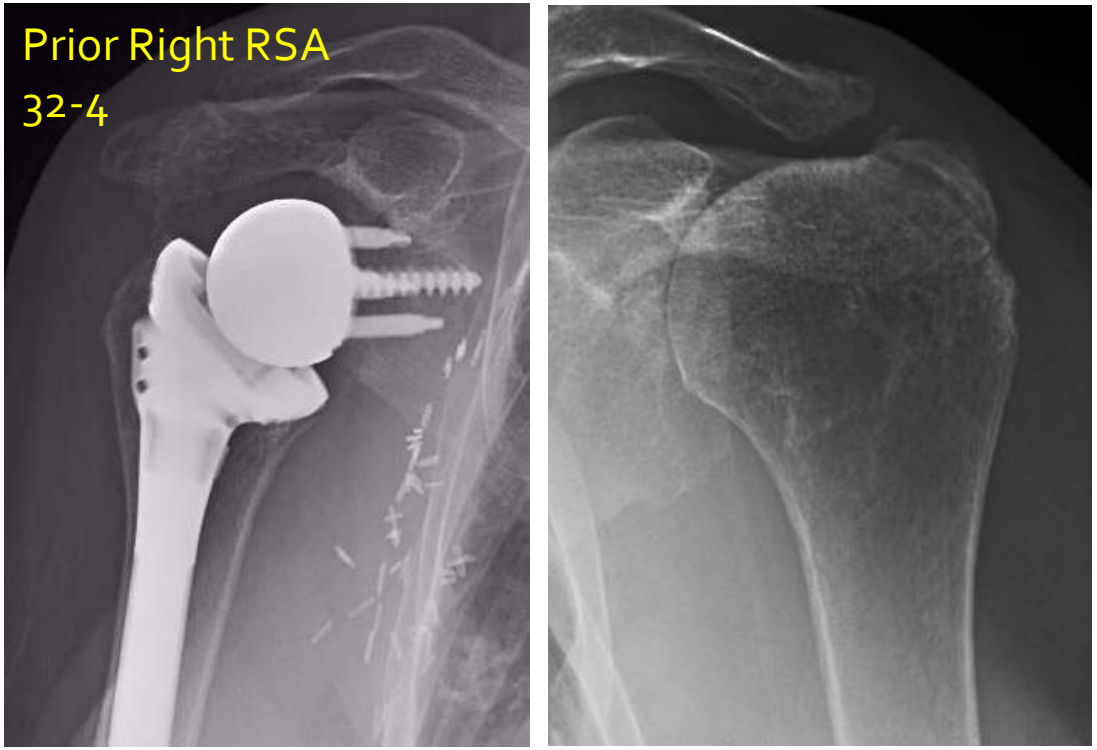


Cases For The Panel

Case 1

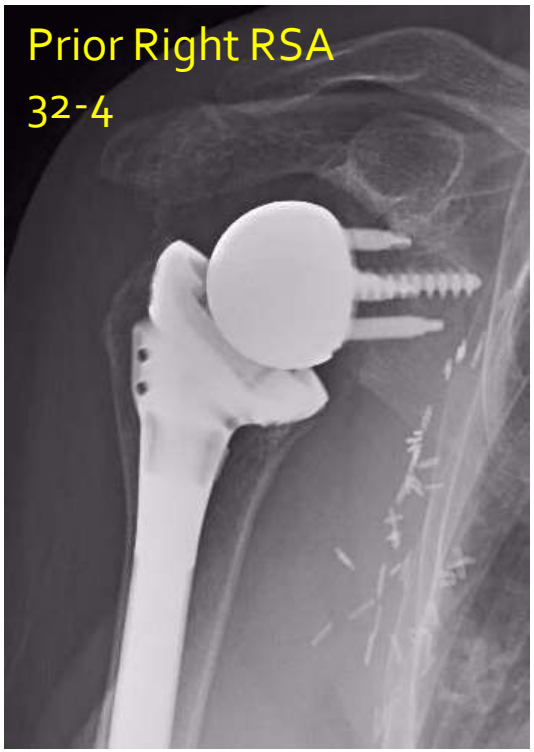
History

- 84 yo female with Left Shoulder Pain
  - Previous R-RSA for CTA
  - Left with CTA as well



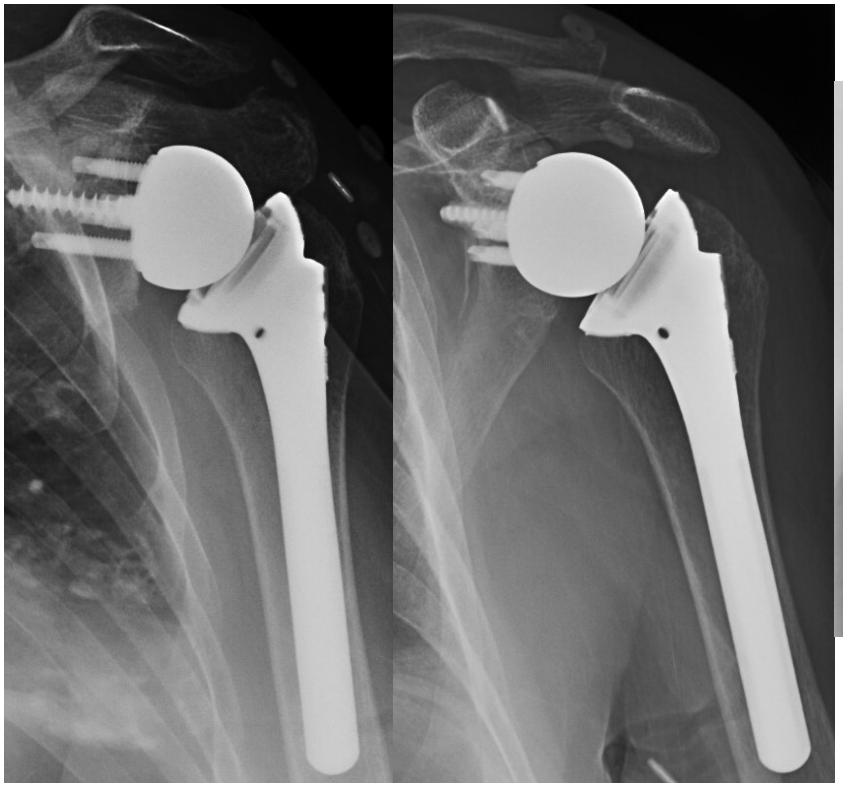
History

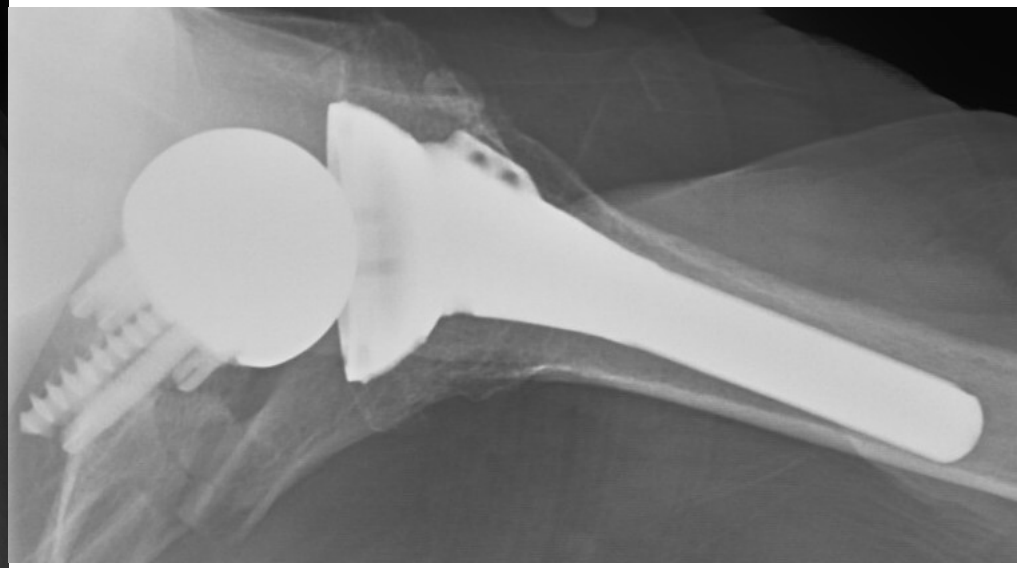
- Treated with rTSA in October 2018



History

- Sustains Fall 6 months later with loss of ability to elevate arm



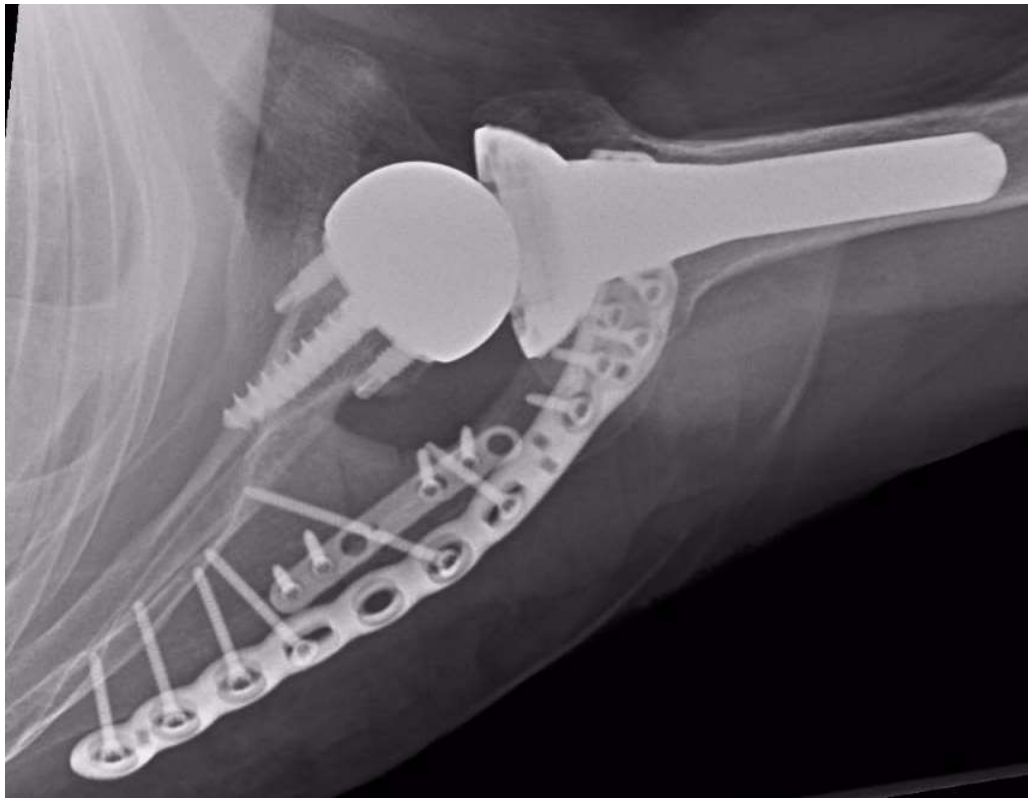


Treatment Options

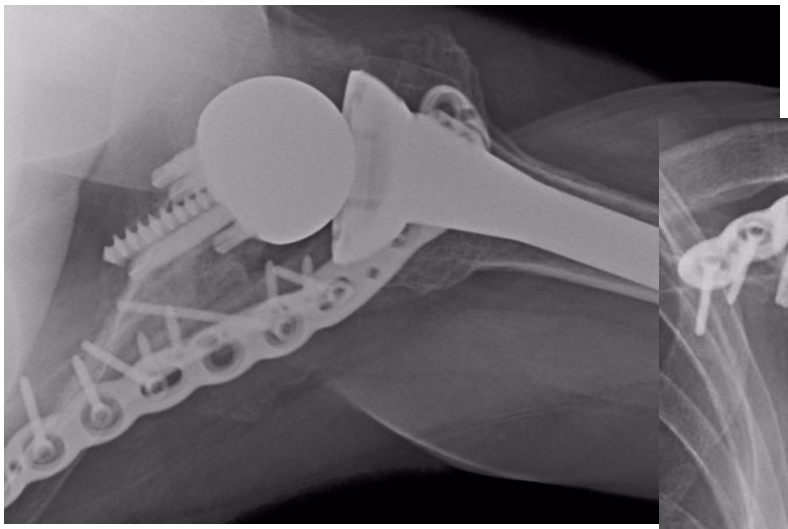
1. Non-op and reassurance *(please define)*
2. ORIF
    1. Plate(s)
    2. Tension Band
    3. Addition of Supplemental Fixation (ie hook plate)
3. Excision

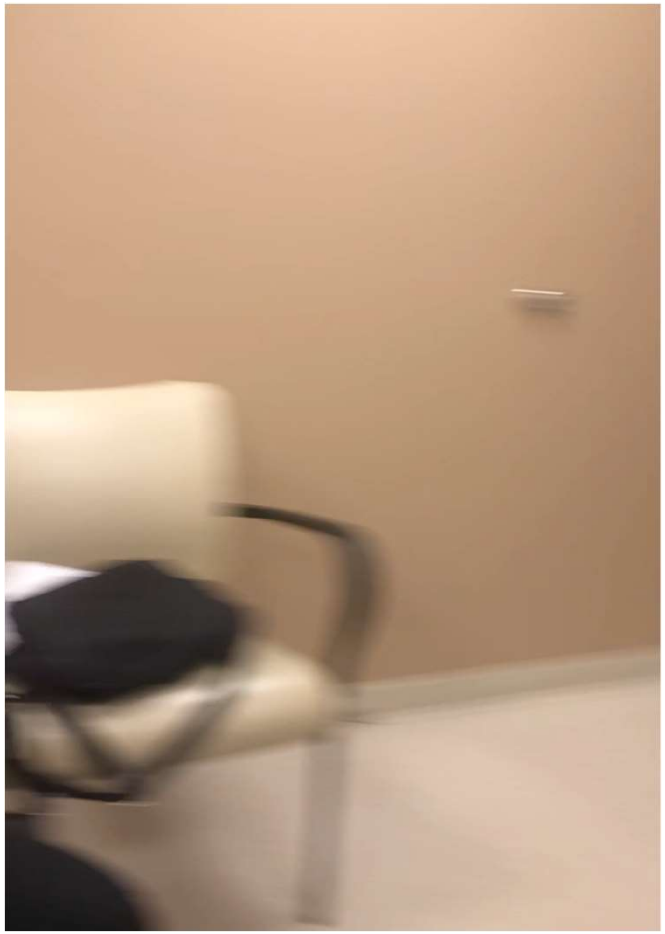
Treatment

- Underwent ORIF following week
  - Double Plate
    - Distal Clavicle Plate
    - 6-hole Straight Plate
    - Tension Band Suture
    - Infuse (OP-1) off-label

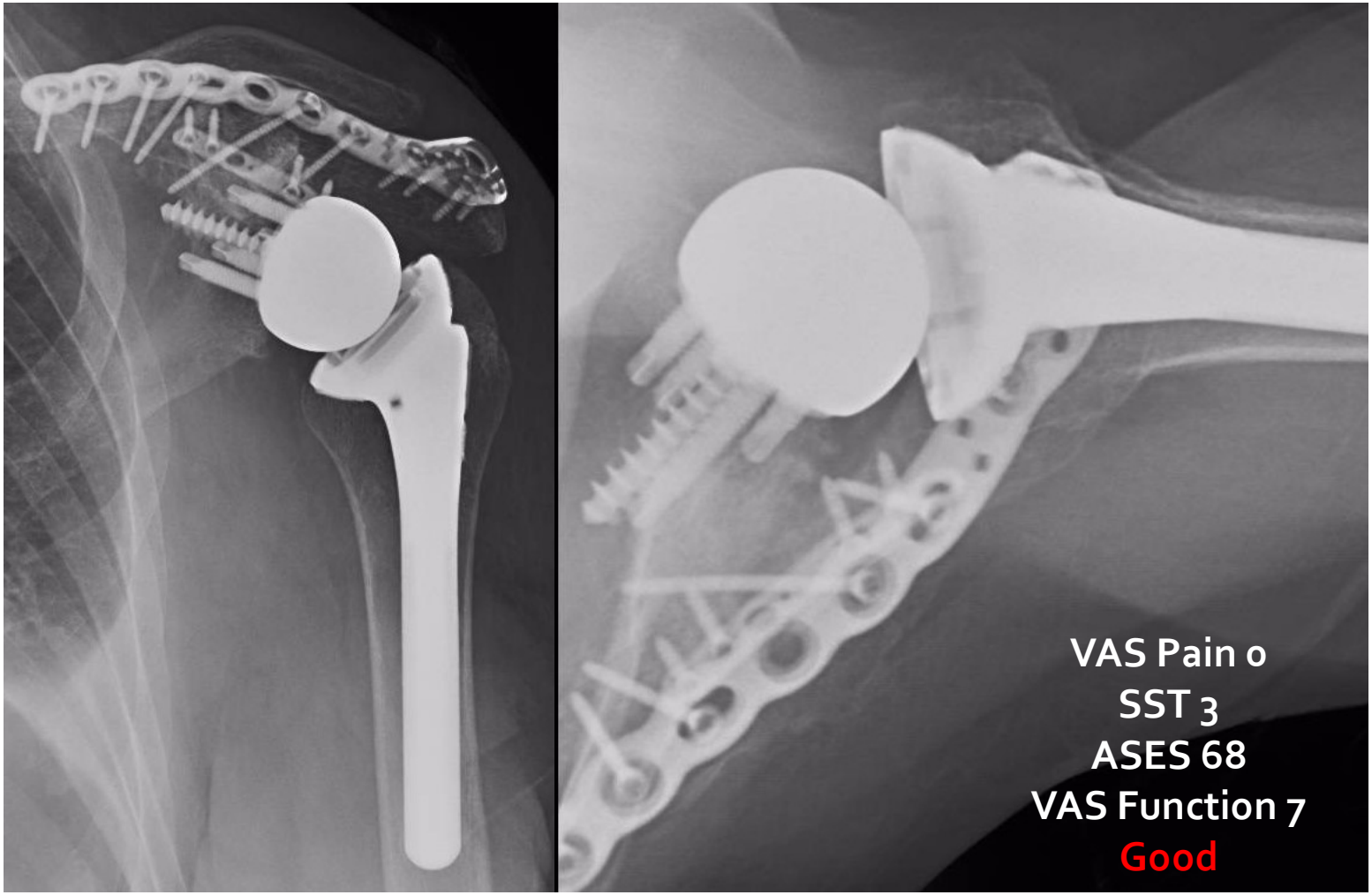


6-Week Post-op





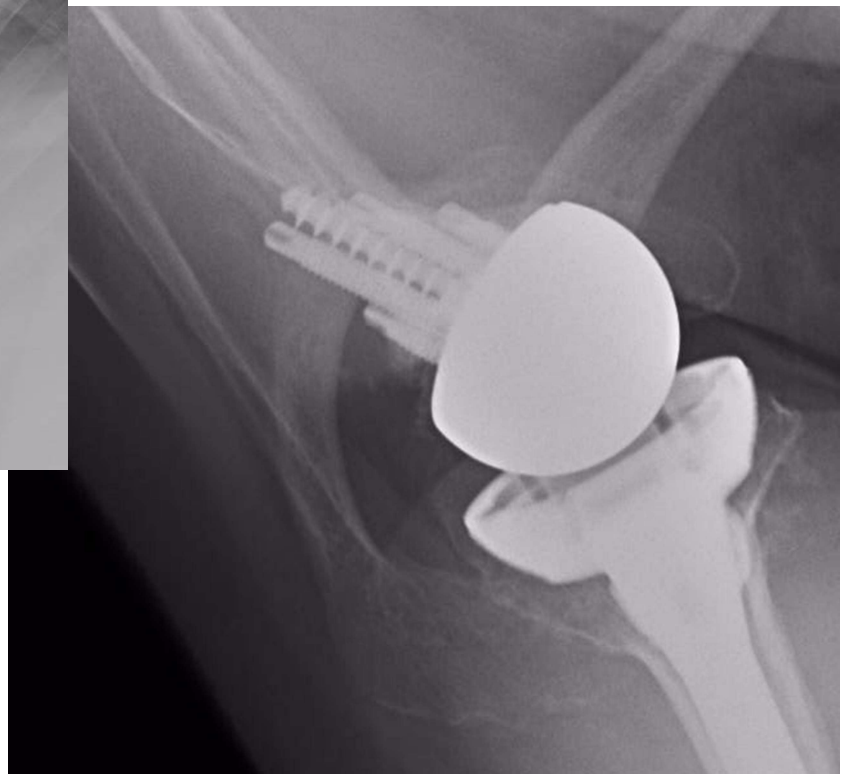
3-month Post-op



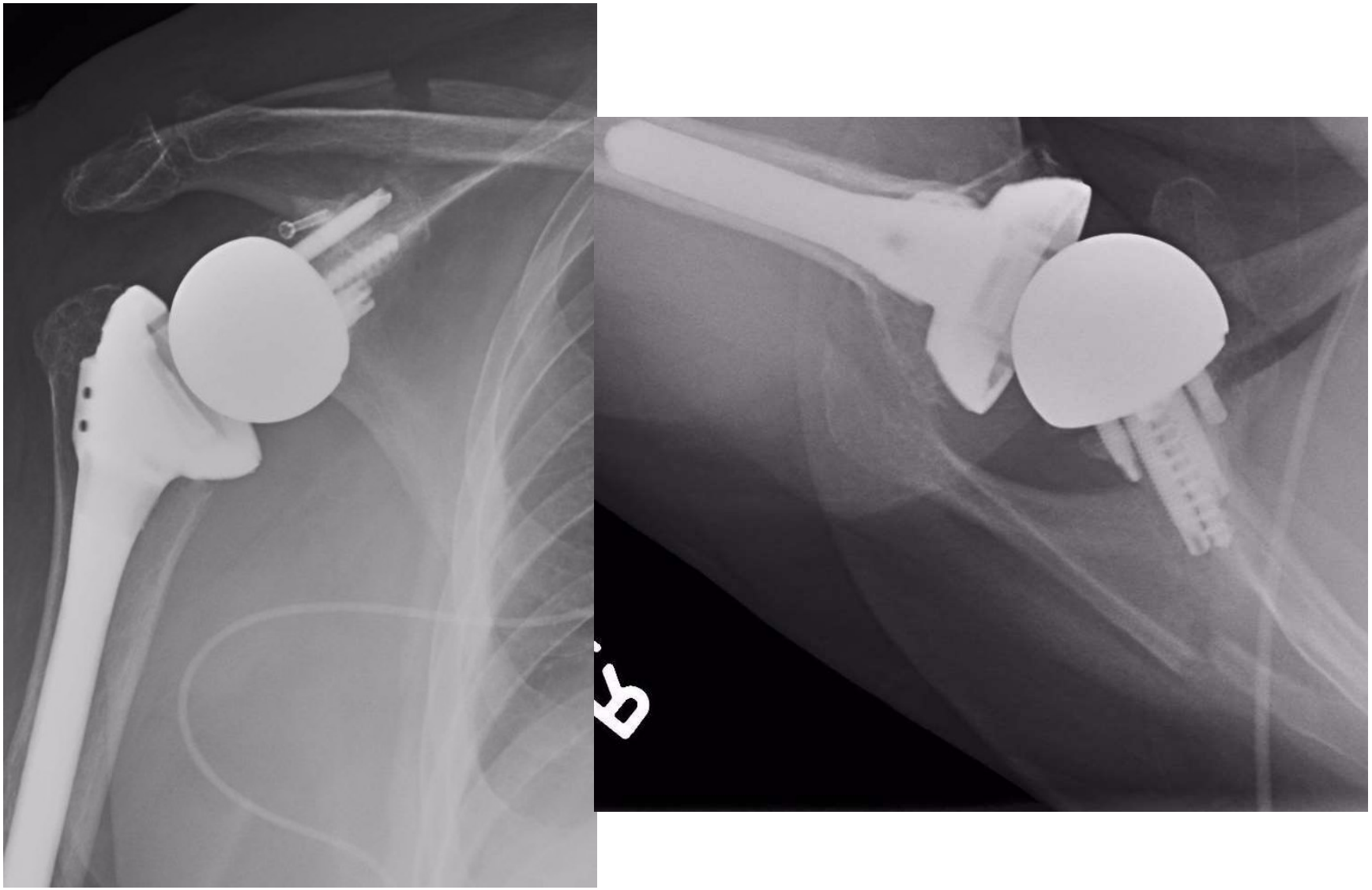
Case 2

History

- 65 yo female with OA treated with RSA and ORIF Glenoid



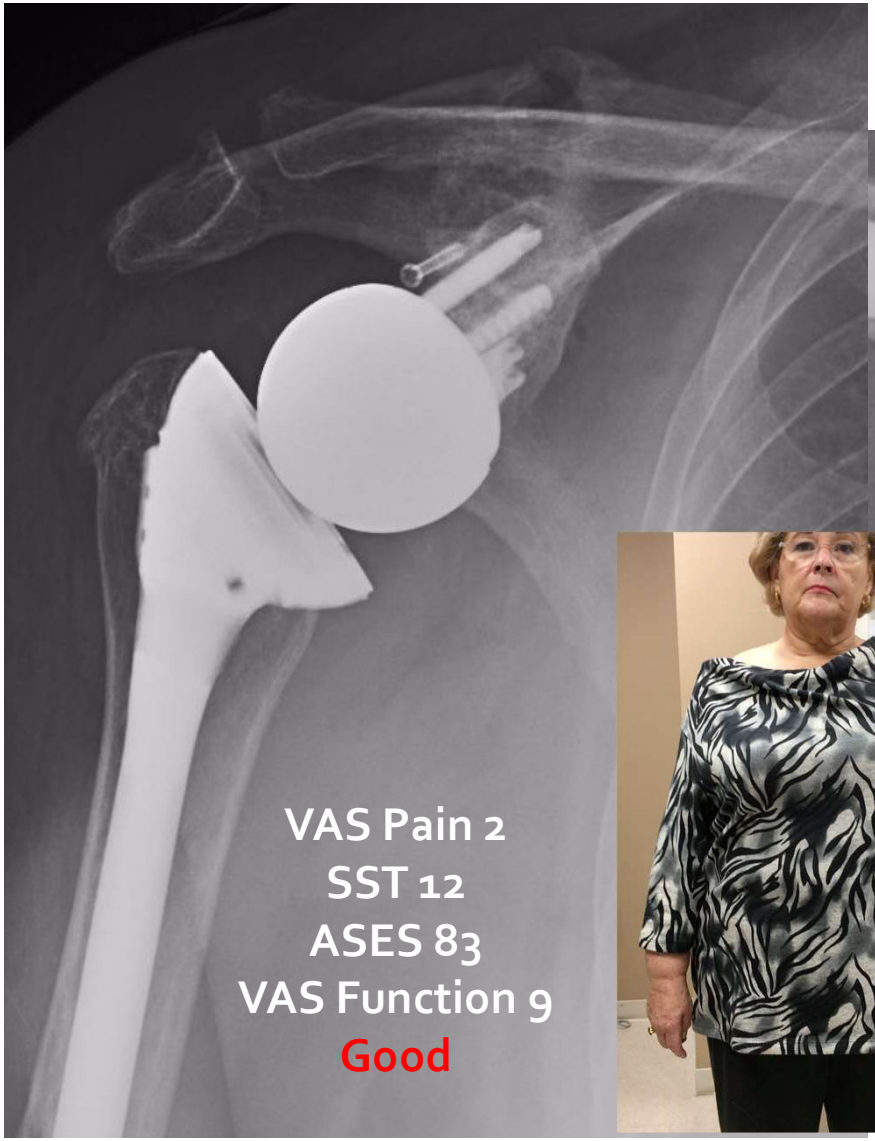
2 months post-op PAIN

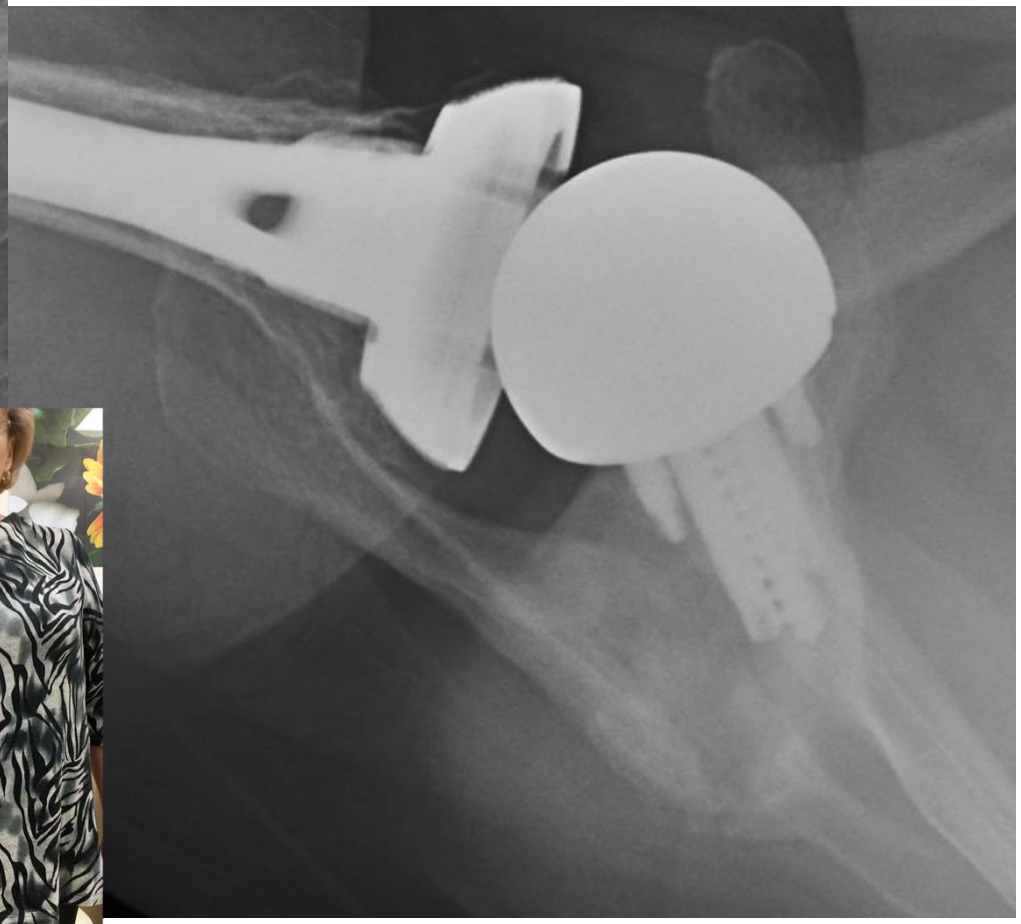


What is your next step?

- Ignore
- Immobilize and wait
- Order Additional Tests?
  - MRI
  - CT
  - PET-CT
- Medicate
  - Calcitonin
  - Teriparatide (Forteo)
- Bone Stimulator

1 year





VAS Pain 2
SST 12
ASES 83
VAS Function 9
Good

My Results of Non-op Treatment SUCK

- All Acromion Fracture patients do significantly worse than those without fractures
  - Type 1 & 2 improved from pre-op
  - Type 3 **DID NOT** improve from pre-op
- No differences in Final PROMs between acromion fracture subtypes
  - **VAS Pain around 5 not good**
  - **SANE score of 50-55 not good**

We need a better widget to help these patients!!

	Type I/II			Type III		
	Pre-Operative	Post-Operative	p-value	Pre-Operative	Post-Operative	p-value
PROM						
SST score	1.59 ± 1.92	4.81 ± 2.91	**<0.0001**	2.00 ± 1.91	3.71 ± 3.58	0.132
ASES score	29.86 ± 17.32	46.04 ± 23.53	**0.008**	31.08 ± 23.80	39.37 ± 23.81	0.353
VAS pain score	6.86 ± 2.55	4.68 ± 3.57	**0.017**	6.46 ± 2.96	5.29 ± 3.24	0.319
Active Range of Motion						
External Rotation	15.21 ± 29.43	30.16 ± 18.95	**0.001**	11.67 ± 22.01	20.29 ± 19.64	0.250
Forward Elevation	60.17 ± 32.69	84.03 ± 28.82	**0.005**	55.67 ± 19.99	72.35 ± 37.46	0.134

PROM, patient-reported outcome measures; SST, Simple Shoulder Test; ASES, American Shoulder and Elbow Surgeons; VAS, visual analog scale.

	No Acromial Fx (N=415) Av F/U 52mths	**Type I/II (N=31) Av. F/U 30mth**	**Type III (N=17) Av F/U 24mths**	p-value
PROM				
SST score	7.67 ± 3.14	4.81 ± 2.91	3.71 ± 3.58	0.255
ASES score	73.60 ± 23.13	46.04 ± 23.53	39.37 ± 23.81	0.354
VAS pain score	1.72 ± 2.61	4.68 ± 3.57	5.29 ± 3.24	0.558
SANE score	74.34 ± 26.21	56.03 ± 29.87	49.00 ± 32.68	0.454
Active Range of Motion				
External Rotation	36.85 ± 18.30	30.16 ± 18.95	20.29 ± 19.64	0.095
Forward Elevation	125.48 ± 28.16	84.03 ± 28.82	72.35 ± 37.46	0.234

PROM, patient-reported outcome measures; ROM, range of motion; SST, Simple Shoulder Test; ASES, American Shoulder and Elbow Surgeons; VAS, visual analog scale; SANE, Single Assessment Numeric Evaluation.

Thank You

opaedic
INSTITUTE