RhAPP

RHEUMATOLOGY ADVANCED PRACTICE PROVIDERS

Inaugural National Conference

December 3 – 5, 2020

VIRTUAL CONFERENCE

RhAPP
RHEUMATOLOGY ADVANCED PRACTICE PROVIDERS

Surgery and Rheumatology Patients

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Disclosures

- Abbvie – speakers bureau, consultant
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- Janssen – speakers bureau, consultant
- Pfizzer – consultant
- Sanofi – speakers bureau, consultant
- UCB – consultant
- Novartis – speakers bureau, consultant
- Avion – consultant

Objectives

- Discuss how to best care for patients with rheumatic diseases undergoing surgery
- Identify medications that should be held during surgery and those that should be continued

It All Begins With a Phone Call, EMR Message or a Letter!

1. Patient calls…
2. Peri-operative center/surgeon's office calls…
3. A request for surgical clearance…

https://www.istockphoto.com/illustrations/nurse-on-phone.

Case Scenario

You receive a call from patient stating that she is planning on gastric bypass surgery. Surgeon will not proceed with surgery without surgical clearance from your office. She leaves the surgeon’s fax number for letter to be faxed over with clearance to proceed with surgery.

Why Is This Important?

- ⬆ 25% of those with rheumatic diseases will require an orthopedic procedure
- This generally occurs 10 to 20 years from time of diagnosis
- Many are older and prone to fatal complications

Spence S, Jamal B, Pillai A. Considerations in Pre-Operative Assessment of Rheumatoid Patients. *MOJ Orthop Rheumatol.* 2014;1(1):00005. http://medcraveonline.com/MOJOR/MOJOR-01-00005.pdf.

2017 American College of Rheumatology/ American Association of Hip and Knee Surgeons Guideline for the Perioperative Management of Antirheumatic Medication in Patients With Rheumatic Diseases Undergoing Elective Total Hip or Total Knee Arthroplasty

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

What Is Addressed in This Guideline?

The Use of:

- Traditional DMARD's
- Biologic DMARD's
- Tofacitinib
- Glucocorticoid (optimal perioperative dosing)
- When to continue, stop and when to resume

In Adults with:

- RA
- SpA
- JIA
- SLE

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

Outcomes Considered

Potential risk of infection added by the medications

Vs

The risk of disease flare by withholding medications

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

Recommendations

Continue the current dose of methotrexate, leflunomide, hydroxychloroquine, and/or sulfasalazine for patients undergoing elective THA or TKA

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

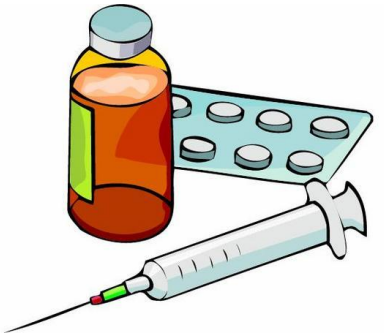
Recommendations

Withhold all current biologic agents prior to surgery in patients undergoing elective THA or TKA, and plan the surgery at the end of the dosing cycle for that specific medication

https://www.rheumaology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

Dosing Examples

- Adalimumab q2 wk, plan surgery for 3rd wk
- Infliximab q8 wk, plan surgery for 9th wk
- Rituximab q6 mo, plan surgery for 7th mo
- Belimumab q4 wk, plan surgery for 5th wk



https://www.rheumaology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf;
https://wildsidezambia.wordpress.com/2011/07/22/confusing-messages-regarding-yellow-fever-jabs/.

Recommendations

Withhold tofacitinib for at least 7 days prior to surgery in patients with RA, SpA including AS and PsA, or JIA undergoing THA or TKA

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

Recommendations Specific for SLE

SLE includes patients with severe or not severe SLE (defined below), and who are in optimal condition for surgery:

Severe SLE Currently treated (induction or maintenance) for severe organ manifestations: lupus nephritis, central nervous system lupus, severe hemolytic anemia (hemoglobin, 9.9), platelets 50,000/ml, vasculitis (other than mild cutaneous vasculitis), including pulmonary hemorrhage, myocarditis, lupus pneumonitis, severe myositis (with muscle weakness, not just high enzymes), lupus enteritis (vasculitis), lupus pancreatitis, cholecystitis, lupus hepatitis, protein-losing enteropathy, malabsorption, orbital inflammation/myositis, severe keratitis, posterior severe uveitis/retinal vasculitis, severe scleritis, optic neuritis, anterior ischemic optic neuropathy (derived from the SELENA–SLEDAI Flare Index and BILAG 2004) (22–24).

Not severe SLE Not currently treated for manifestations listed under Severe SLE

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

Recommendations Severe SLE

Continue the current dose of methotrexate, mycophenolate mofetil, azathioprine, cyclosporine, or tacrolimus through the surgical period in all patients undergoing THA or TKA

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

Recommendations Not Severe SLE

- Withhold the current dose of mycophenolate mofetil, azathioprine, cyclosporine, or tacrolimus 1 week prior to surgery in all patients undergoing THA or TKA
- Resume these medications 3 to 5 days post op to prevent flare

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

Recommendations

Continue the current daily dose of glucocorticoids in adult patients with RA, SpA including AS and PsA, or SLE who are receiving glucocorticoids for their rheumatic condition and undergoing THA or TKA, rather than administering perioperative supra-physiologic glucocorticoid doses (so-called “stress dosing”)

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

Recommendations

Restart biologic therapy in patients for whom biologic therapy was withheld prior to undergoing THA or TKA once the wound shows evidence of healing (typically ~14 days), all sutures/staples are out, there is no significant swelling, erythema, or drainage, and there is no clinical evidence of non-surgical site infections

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

DMARDs: CONTINUE these medications through surgery	Dosing Interval	Continue/Withhold
Methotrexate	Weekly	Continue
Sulfasalazine	Once or Twice daily	Continue
Hydroxychloroquine	Once or Twice daily	Continue
Leflunomide (Arava)	Daily	Continue
Doxycycline	Daily	Continue
BIOLOGIC AGENTS: STOP these medications prior to surgery and schedule surgery at the end of the dosing cycle. RESUME medications at minimum 14 days after surgery in the absence of wound healing problems, surgical site infections, or systemic infection	DOSING Interval	Schedule Surgery (relative to last biologic agent dose administered) during
Adalimumab (Humira)	Weekly or every 2 weeks	Week 2 or 3
Entanercept (Enbrel)	Weekly or Twice weekly	Week 2
Golimumab (Simponi)	Every 4 weeks (SQ) or every 8 weeks (IV)	Week 5 Week 9
Infliximab (Remicade)	Every 4, 6, or 8 weeks	Week 5,7,9
Abatacept (Orencia)	Monthly (IV) or weekly (SQ)	Week 5 Week 2
Certolizumab (Cimzia)	Every 2-4 weeks	Week 3 or 5
Rituximab (Rituxan)	2 doses 2 weeks apart every 4-6 months	Month 7
Tocilizumab (Actemra)	Every week (SQ) or every 4 weeks (IV)	Week 2 Week 5
Anakinra (Kineret)	Daily	Day 2
Secukinumab (Cosentyx)	Every 4 weeks	Week 5
Ustekinumab (Stelara)	Every 12 weeks	Week 13
Belimumab (Benlysta)	Every 4 weeks	Week 5
Tofacitinib (Xeljanz): STOP this medication 7 days prior to surgery	Daily or twice daily	7 days after last dose
SEVERE SLE-SPECIFIC MEDICATIONS: CONTINUE these medications in the perioperative period	DOSING Interval	Continue/Withhold
Mycophenolate mofetil	Twice daily	Continue
Azathioprine	Daily or twice daily	Continue
Cyclosporine	Twice daily	Continue
Tacrolimus	Twice daily (IV and PO)	Continue
NOT-SEVERE SLE: DISCONTINUE these medications 1 week prior to surgery	DOSING Interval	Continue/Withhold
Mycophenolate mofetil	Twice daily	Withhold
Azathioprine	Daily or twice daily	Withhold
Cyclosporine	Twice daily	Withhold
Tacrolimus	Twice daily (IV and PO)	Withhold

Adapted from *Arthritis Care and Research*. Vol, 69, No 8, August 2017. pp 1111-1124. DOI 10.1002/acr.23274 Vc2017. American College of Rheumatology.

What to Do With Medications Prior and Following Surgery?

- NSAIDS – antiplatelet effect, should be held from 1 to 5 days pre op
- Glucocorticoids – Continue stable doses <20 mg
- DMARDSs – risk of flare increased when these meds are stopped; studies have shown no increase risk of infection if continued through perioperative period
- Biologics – Hold prior to surgery, plan surgery at end of the dosing cycle. Resume when wound is healed/no risk of infections

ACR Project plan. https://www.uptodate.com.

Associated Risks of Stopping Medications

- Increase risk associated with long term disease control
- Risk is not associated with the use of anti-rheumatic therapy
- Discontinuing DMARD’s can cause flares- unable to participate in rehab, increase risk of infection

ACR Project plan. https://www.uptodate.com.

Surgical Clearance

Do you provide surgical clearance for you patients who may require surgery?

https://clipground.com/images/surgical-team-clipart-13.jpg.

We Do Not Provide Surgical Clearance!

Dear Dr. [insert surgeon name]

You have requested preoperative instructions regarding a mutual patient. In general, the safety, utility and necessity of surgery should be made by the surgeon. As specialists, we cannot provide “preoperative clearance” for patients. We are happy to assist with medication optimization in the peri and post-operative period to reduce the risk of disease flares while minimizing the risk of perioperative infection. We recommend minimizing corticosteroid doses prior to surgery whenever possible. We recommend *continuing* conventional DMARDs such as methotrexate, leflunomide, and hydroxychloroquine through the perioperative period except when NPO, and *withholding* biologic medications such as etanercept, adalimumb, and infliximab for 1 cycle (one dose) before surgery for patients scheduling non-urgent invasive procedures. Most patients can resume all medications about 2 weeks after surgery if there are no complications or infections. A detailed table of instructions for common medications, endorsed by the American College of Rheumatology and the American Association of Hip and Knee Surgeons, is enclosed. For other major orthopedic or non-orthopedic surgery, we generally recommend the same approach to peri-operative medication management. If this patient needs urgent surgery, is on necessary medium or high dose steroids, has severe rheumatologic disease, or if you have specific questions regarding a unique situation please contact our office staff at xxx-xxx-xxxx to review the case with the rheumatologist.

Sincerely,

General Considerations

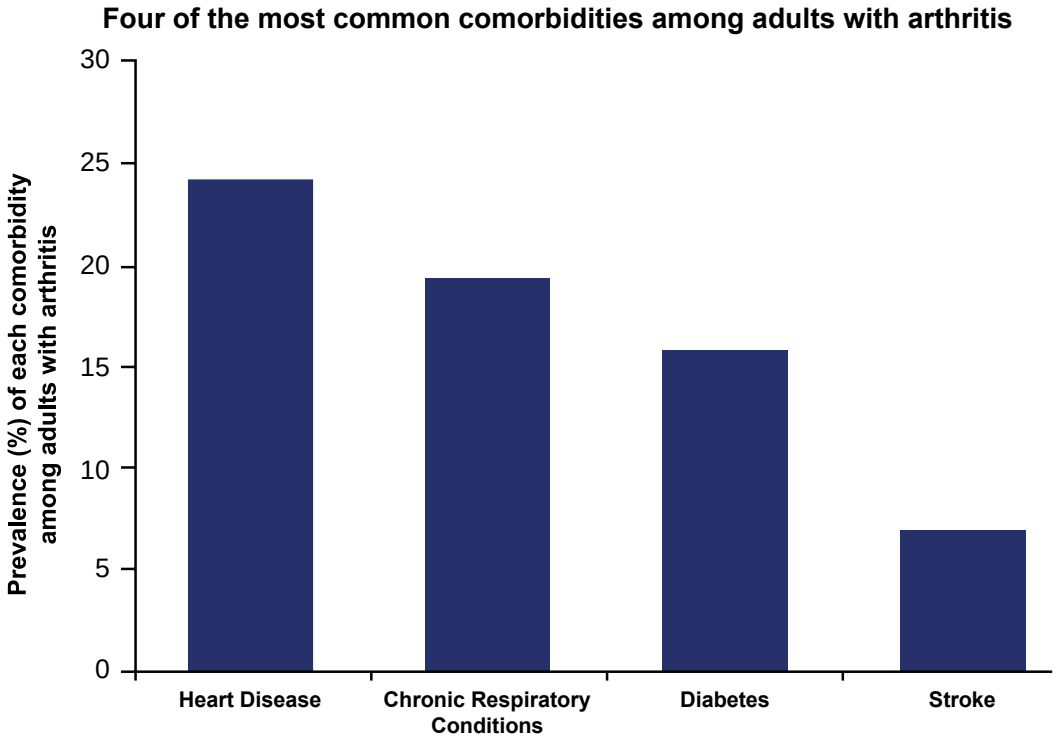
- Anemia of chronic disease is common, may require blood transfusion
- Higher risk of infection – need to consider this when thinking about urinary catheters, IV lines, etc
- Good physical exam should include assessing for dental caries, pharyngitis, cystitis, skin infections and other potential sources of infection which should be treated prior to elective surgery
- Be aware of pts who have been on long term steroids, may require supplementation post op/resume usual doses
- Optimizing pre op medical condition with PT/wt reduction may help prevent post op problems – especially joint replacement pts

Anesthetic Concerns in RA Patients

- Increased cardiovascular risk
- Likely pre-existing anemia
- Fragile Skin
- Deformity and rigidity of joints
- Extreme pain in joints
- Poor peripheral venous access
- Difficult airway management
- Glucose replacement if on long term steroids
- High spinal blocks
- Risk of perioperative neurological damage
- Extended post op intubation if Myopathy

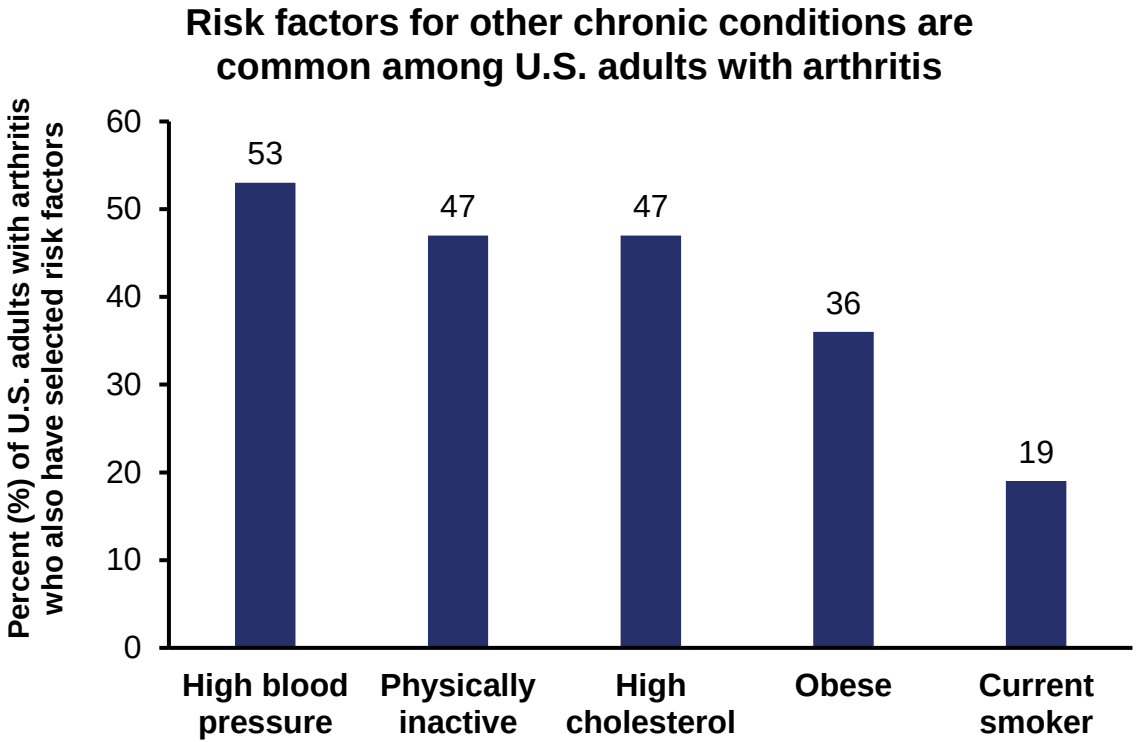
https://medcraveonline.com/MOJOR/considerations-in-pre-operative-assessment-of-rheumatoid-patients.html.

Comorbidities Associated With Rheumatic Diseases



https://www.cdc.gov/arthritis/data_statistics/comorbidities.htm.

Chronic Conditions



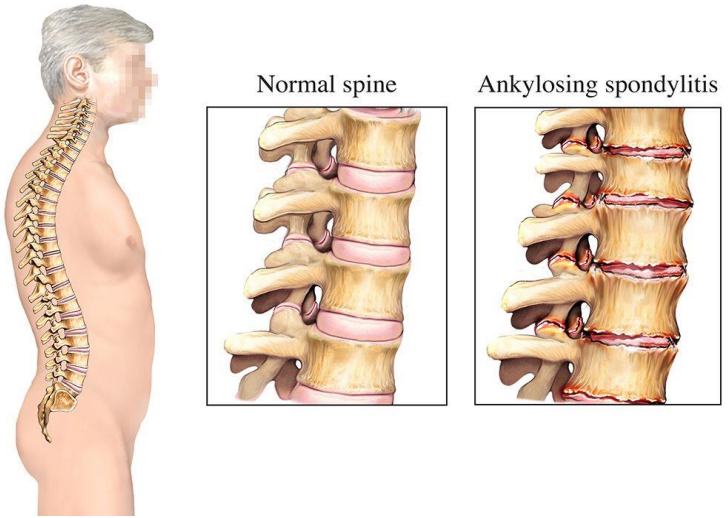
https://www.cdc.gov/arthritis/data_statistics/comorbidities.htm.

Disease Specify Risks

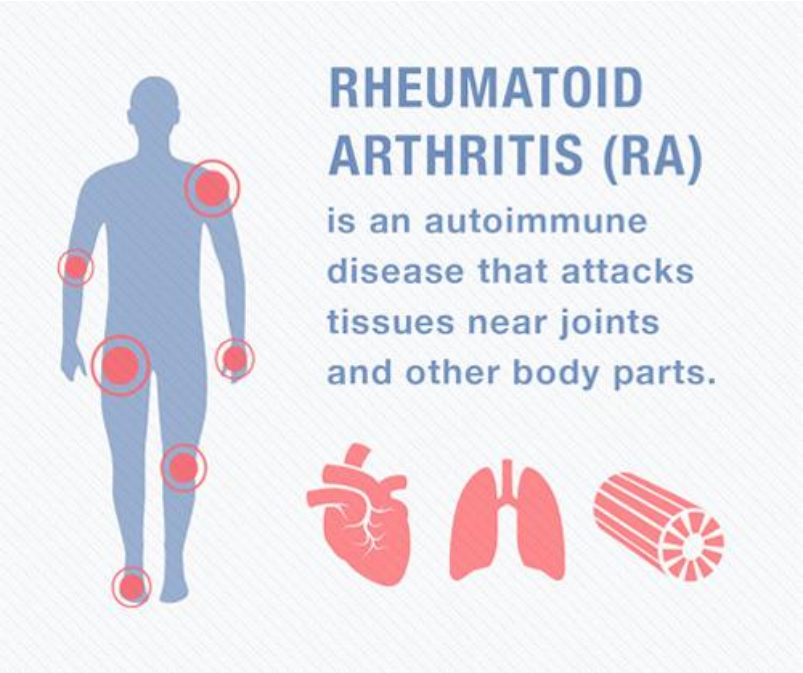
- Sjogren's syndrome – avoid pilocarpine during perioperative period, use lubricating gel/artificial tears during and after anesthesia, avoid anticholinergic medications

http://www.coloradoarthritis.com/sjogrens-autoimmune-disorders-colorado-arthritis-center-pc-rheumatology.html; https://www.uptodate.com.

- **Ankylosing spondylitis** increases risk of intubation due to spinal involvement
- Pts may have restricted chest expansion – increasing risk of intro and post op infections



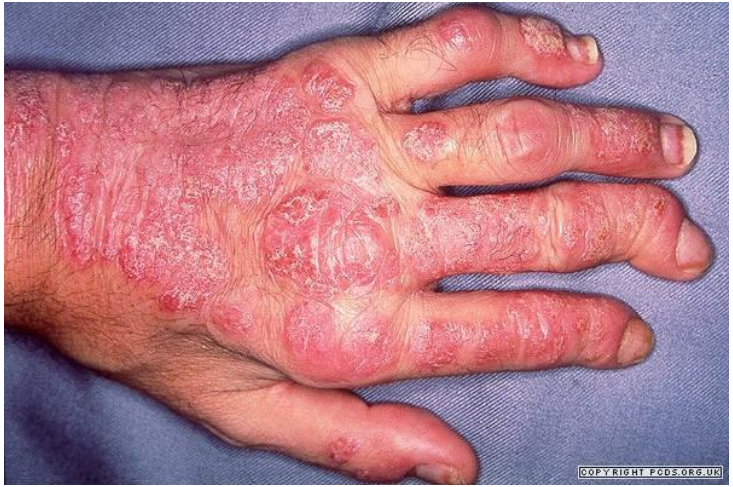
- C1,C2 instability – obtain cervical x-ray pre op if pt. has neck pain, consider soft collar – reminds staff to be gentle
- Anemia is common – may require blood transfusion
- Neutropenia – usually resolves without intervention



http://www.healthline.com/health/rheumatoid-arthritis/facts-statistics-infographic; https://www.uptodate.com/.

Psoriatic Arthritis

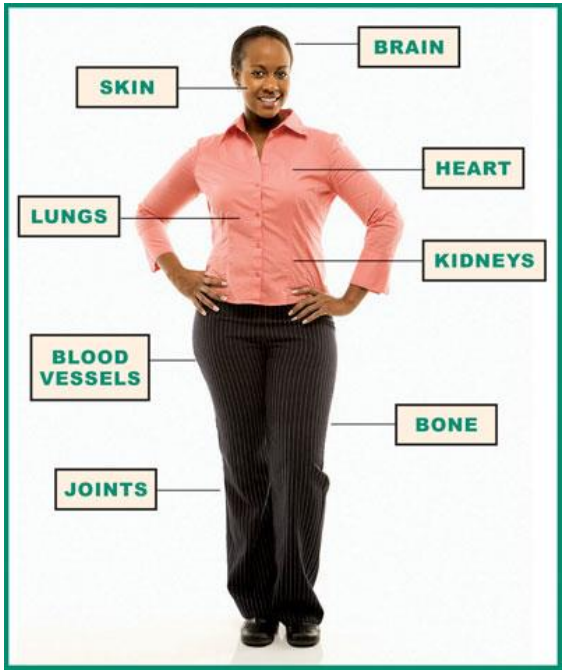
- Spondylitis
- Stress of surgery increases risk of psoriasis flare
- Increase risk of infection



http://www.pcds.org.uk/clinical-guidance/psoriatic-arthropathy; https://www.uptodate.com.

SLE

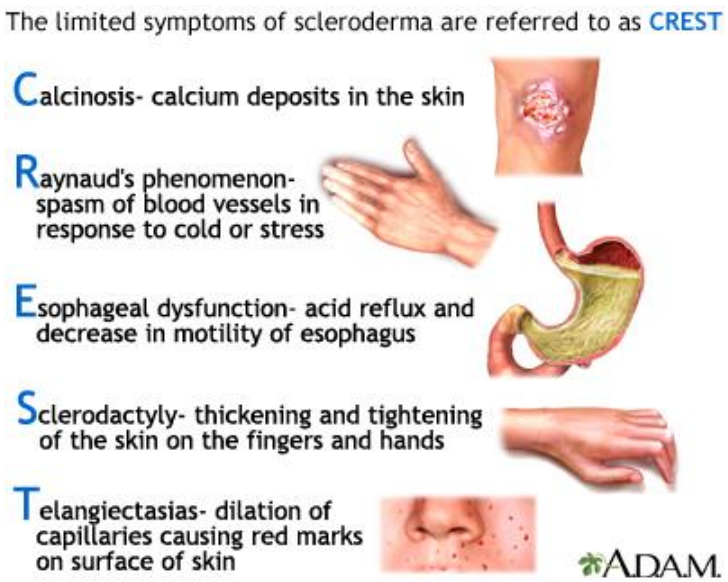
- Multisystem disease
- Increase wound infection
- Renal insufficiency
- PE
- Low plts counts
- Antiphospholipid antibodies – increase risk of thrombosis



http://www.pic2fly.com/Lupus+Symptoms+In+Women.html; https://www.uptodate.com.

Scleroderma

- Difficult intubation
- Prolonged response to anesthesia
- Reduced IV access
- Pulmonary hypertension
- Heart failure, arrhythmias from fibrosis
- MI
- Renal disease, HTN
- Increase risk of aspiration



http://www.physio-pedia.com/Scleroderma; https://www.uptodate.com.

Case Study 1

- YM is a 66 year old female with erosive RA
- Chronic deformities
- Disease has recently been very difficult to manage
- Finally off steroids
- On triple therapy – sulfasalazine, MTX and anakinara
- Scheduled for left shoulder replacement
- Plan – hold anakinara a few days prior to surgery – short half life
- Hoping to get through with out a flare or need for steroids

Case Study 2

- 56 yo with SLE
- Open choley – acute
- Discharge instructions did not indicate that pre op meds should be resumed
- Seen several months later for routine f/u
- c/o fatigue, rashes, joint pains
- Resumed HCQ and bridged with prednisone

Summary

- Appropriate management of antirheumatic medication in the perioperative period may provide an important opportunity to mitigate risk.
- Nonbiologic disease-modifying antirheumatic drugs may be continued throughout the perioperative period in patients with rheumatic diseases who are undergoing elective THA and TKA.
- Biologic medications should be withheld as close to 1 dosing cycle as scheduling permits prior to elective THA and TKA and restarted after evidence of wound healing, typically 14 days, for all patients with rheumatic diseases.
- Complex set of pt's, require a good history and physical, review and guidance of all medications including OTC's, cardiac risk assessment and disease specific considerations prior to an elective surgery.

https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf.

References

- Spence S, Jamal B, Pillai A. Considerations in Pre-Operative Assessment of Rheumatoid Patients. *MOJ Orthop Rheumatol.* 2014;1(1):00005. http://medcraveonline.com/MOJOR/MOJOR-01-00005.pdf
- https://www.rheumatology.org/Portals/0/Files/ACR-AAHKS-Perioperative-Management-Guideline.pdf
- *Arthritis Care and Research*. Vol, 69, No 8, August 2017, pp 1111-1124 . DOI 10.1002/acr.23274 Vc2017, American College of Rheumatology.
- https://www.cdc.gov/arthritis/data_statistics/comorbidities.htm
- https://medcraveonline.com/MOJOR/considerations-in-pre-operative-assessment-of-rheumatoid-patients.html