Rheumatologist's Primer on Pregnancy and Reproductive Health

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Background:
Rheumatic diseases predominantly affect females, many of these disease entities are diagnosed in childbearing years or in childhood but persist into adulthood. Many of our patient’s pregnancies are high risk but successful pregnancies can be had.

Rheumatic diseases during pregnancy and postpartum:
- Relative contraindications to pregnancy in rheumatic diseases include: 1. Pulmonary hypertension 2. Severe valvular heart disease or advanced heart failure 3. Severe restrictive lung disease 4. Significant renal disease 5. Cerebral vascular event in the past 6 months 7. Severe pre-eclampsia or HELLP on aspirin and heparin.
- SLE: ~50% of SLE patients flare during pregnancy, up to 30% flare in the first 6 months postpartum. Predictors of flare: 1. Active SLE 6 mo prior to conception 2. Primigravida 3. History of lupus nephritis 4. Hypertension 5. Laboratory evidence of active SLE around conception. SLE pregnancies have increased stillbirth, preterm delivery, low birth weight infants, C-section. Significantly increased rates of maternal death, fetal loss, pre-eclampsia incidence, correlates with disease activity.
- Inflammatory Arthritis: 60-80% of RA and JIA patients improve during pregnancy with less improvement in PsA and AS. Postpartum, a large majority of Inflammatory arthritis flare. These flares tend to be difficult to control and are associated with higher disease activity scores than at diagnosis. There is an increase in RA diagnosis postpartum. Active arthritis in pregnancy associated with miscarriage, lower birth weight, preterm delivery, pre-eclampsia. Hip disease correlates with c-section delivery.
- Inflammatory myopathies: Initial disease can be triggered by pregnancy/postpartum period. Disease flare during pregnancy is associated with increased miscarriage and c-section rate, as well as poor neonatal outcomes. Even inactive disease is associated with lower birth weights, IUGR and preterm delivery.
- Vasculitis: Up to 40% w/ small to medium vessel vasculitis flare during pregnancy; large vessel vasculitis is associated with a lower flare rate but have poorer maternal outcomes. Contraindications to pregnancy in patients with vasculitis include: 1. New diagnosis 2. Severe pulmonary or renal disease 3. Thoracic or abdominal aneurysms 4. Aortic root diameter > 40 mm 5. Retinal artery aneurysms.
- Systemic Sclerosis: Up to 1/3 of patients miscarry or deliver preterm, this rate is higher when compared to other rheumatic diseases. Worse pregnancy outcomes are seen in patients with < 4 years from diagnosis, extensive skin disease, antibody positivity, rapidly progressive disease, significant organ involvement (renal, PAH, ILD).
- Sarcoidosis: Increased risk of preeclampsia and DVT/PE. Like RA tends to improve during pregnancy and flare postpartum. Anticoagulation is recommended due to increased risk of thromboembolic events.

Rheumatic medications and contraception in rheumatic diseases:
- Contraindicated rheumatic medications due to teratogenicity or abortive potential in pregnancy include: Methotrexate, Leflunomide, Mycophenolate Mofetil, Cyclophosphamide, Warfarin, ACE inhibitors, and Lenalidomide/Thalidomide.
- Growing number of safe medications including azathioprine, sulfasalazine, plaquenil, tacrolimus, cyclosporine, colchicine, aspirin, NSAIDs (1/2 trimester), all TNF biologics; likely other biologics to follow as more data is collected.
- Prednisone safe in pregnancy but should be used as needed and at lowest dose.
- Active medicine is better than active disease in pregnancy. Controlled/inactive disease during pregnancy improves outcomes for baby and mother.
- Rheumatologists have a role in reproductive health, particularly assessing for pregnancy intentions
- Contraception allows for pregnancy at the right time for patient, their disease, and on the appropriate medication
- Rheumatic diseases including SLE and APS are not a contraindication to effective contraception. Safe options exist, such as IUDs and hormonal implants. Potential risks of thrombosis outweigh risk of no/ineffective contraception.

Resources:
- The 2020 American College of Rheumatology Guideline for the Management of Reproductive Health in Rheumatic and Musculoskeletal Diseases offer rheumatology-specific, evidence-based guidelines on rheumatic disease management in pregnancy, rheumatic medications in pregnancy and lactation, contraception, and other reproductive health topics
- Other resources include: MotherToBaby for medication safety www.mothersbaby.org, HOP-STEP for contraception and pregnancy planning in lupus patients www.lupuspregnancy.org, and Bedsider for easy-to-use contraception information www.bedsider.org