Pregnancy Care ECHO: Rheumatic diseases in pregnancy

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Maternal Fetal Medicine Fellow
OUTLINE

• Systemic Lupus Erythematosus
• Antiphospholipid Syndrome
• Rheumatoid Arthritis
• Sjögren Syndrome
• Medications
CLINICAL CASE—SF

- 25y G2P1 @24w presenting for anatomy US found to have fetal heart rate of 50 BPM
- PMH: Sjogren syndrome, Raynaud’s, ?SLE
- PSH: None
- Meds: On hydroxychloroquine in last pregnancy, discontinued by rheumatology
SYSTEMIC LUPUS ERYTHEMATOSUS

• Autoimmune disease; multiorgan involvement

• Loss of immune tolerance and persistent autoantibodies

• Variable presentation involving:
  – Joints, skin, kidneys, serous membranes, hematologic system, nervous system

• Pregnancy complications:
  – Lupus flares with organ dysfunction or failure
  – Neonatal lupus; CHB
SYSTEMIC LUPUS ERYTHEMATOSUS

Diagnosis:

- **SLICC criteria (≥ 4/17 criteria):**
  - 1 clinical, 1 immunologic

<table>
<thead>
<tr>
<th>Clinical Criteria</th>
<th>Immunologic Criteria</th>
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</thead>
<tbody>
<tr>
<td>Acute cutaneous lupus (e.g. Malar Rash)</td>
<td>ANA</td>
</tr>
<tr>
<td>Chronic cutaneous lupus (e.g. Discoid Rash)</td>
<td>Anti-dsDNA</td>
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<tr>
<td>Non-scarring alopecia</td>
<td>Anti-Sm</td>
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<td>Oral &amp; nasal ulcers</td>
<td>Low complement</td>
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<tr>
<td>Joint disease</td>
<td>Direct coombs</td>
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<tr>
<td>Serositis</td>
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<tr>
<td>Renal</td>
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<tr>
<td>Neurologic</td>
<td></td>
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<tr>
<td>Hemolytic anemia</td>
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<tr>
<td>Leukopenia or lymphopenia</td>
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<td>Thrombocytopenia</td>
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PRECONCEPTION ASSESSMENT

• Antiphospholipid antibodies (LAC, aCL αβ2GP1)
• Anti-SS-A, anti-SS-B
• Baseline CBC & renal function panel
PRECONCEPTION CONSIDERATIONS

Discourage pregnancy if:

- Cardiomyopathy or valvular disease
- PAH
- Interstitial lung disease
- Serious neurologic manifestations
- Moderate-to-severe renal insufficiency
PREGNANCY TIMING

• Conception during period of inactive disease

• SLE activity within 6 months increases pregnancy risk
  – Four-fold increased risk of pregnancy loss
  – Four-fold increased risk of flare (8% vs 53%)*

NEONATAL LUPUS & CONGENITAL HEART BLOCK

• 33% of patients with SLE have anti-SS-A (Ro) and/or anti-SS-B (La)
  – 1-2% risk of CHB
  – Recurrence risk: 15-20%
  – Individualized plans for women with h/o pregnancy affected by CHB
PREGNANCY MANAGEMENT

- Co-management with rheumatology & MFM
- Serial growth US at 18w
- Home BP monitoring at 20w
- Antenatal testing at 32w
ANTIPHOSPHOLIPID SYNDROME

• Autoimmune disease; antibodies against cell-membrane bound glycoproteins

• Characterized by thrombosis and/or adverse pregnancy outcomes

• APS-associated pregnancy complications, related to abnormal placental function
  – FGR
  – PreE/Placental Insufficiency
  – Fetal Death
ANTIPHOSPHOLIPID SYNDROME

Diagnosis:
- Sapporo criteria (> 2/5 criteria):
  - 1 clinical, 1 immunologic

<table>
<thead>
<tr>
<th>Clinical Criteria</th>
<th>Immunologic Criteria*</th>
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<tbody>
<tr>
<td>1. Prior vascular thrombosis</td>
<td>LAC present</td>
</tr>
<tr>
<td>2. Pregnancy morbidity</td>
<td>aCL IgG or IgM ≥ 40 GPL or MPL</td>
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<tr>
<td>• 1+ fetal deaths ≥10w (normal morphology)</td>
<td>aβ2GP1 IgG or IgM ≥ 99%ile</td>
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<td>• 1+ PTB &lt;34w from preeclampsia or placental insufficiency</td>
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<tr>
<td>• 3+ unexplained, consecutive SABs &lt;10w</td>
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*Must be present on 2 separate occasions, >12 weeks apart
PRECONCEPTION ASSESSMENT

• Delivery of viable infant >70% with treatment

• LAC & "triple positivity" – best predictors of pregnancy morbidity
  – Greater than 40% will have fetal loss or PTD for PreE or placental insufficiency

• Baseline CBC & renal function panel

• Start ASA 81mg preconceptionally
TREATMENT

ASA 81mg

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Heparin Product
<table>
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<tr>
<th>Clinical Manifestation</th>
<th>Treatment Options</th>
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<tr>
<td>History of thrombosis</td>
<td>Long-term tx: therapeutic LMWH + LDA.</td>
</tr>
<tr>
<td>No history of thrombosis</td>
<td>No long-term tx: intermediate or therapeutic LMWH + LDA.</td>
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</table>

Recurrent early miscarriage:
- LDA or prophylactic LMWH + LDA

H/o fetal death or h/o PTD for severe preeclampsia or placental insufficiency:
- Prophylactic LMWH + LDA
PREGNANCY MANAGEMENT

• Co-management with MFM
• Serial growth US
• Antenatal testing at 32w
RHEUMATOID ARTHRITIS

• Inflammatory disease; predominant chronic symmetrical arthritis

• Extraarticular manifestations: serositis, vasculitis, subcutaneous nodules

• Pregnancy Complications:
  – Increased risk of PTB, ?SGA, ?preeclampsia
  – Near universal postpartum flare
RHEUMATOID ARTHRITIS

Diagnosis:
- ACR/EULAR Criteria (≥6 points/10):
  - Must include synovitis in 1 joint

1. Number and site of involved joints
2. Serological abnormality (RF or ACPA)
3. Elevated acute phase response
4. Symptom duration
PRECONCEPTION ASSESSMENT

• Stabilize disease activity
• Coordinate medication management with rheumatology
PREGNANCY MANAGEMENT

- Routine PNC for women with inactive disease
- Active disease: comanage
- Monitor for hypertensive diseases
- Serial US q4-8w after anatomy US
- Uncertain benefit of antenatal testing
SJÖGREN SYNDROME

• Keratoconjunctivitis, sicca, & arthritis. Often secondary to SLE or RA

• Pregnancy Complications:
  – Neonatal lupus (60-80% of patients with anti-SS-A or anti-SS-B)
  – Metanalysis (1586 pregnancies): higher rate of neonatal death (OR 1.77, 95%CI 1.28-1.46)
# Anti-Rheumatic Medications

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<tr>
<th>Acceptable risk</th>
<th>Uncertain or increased risk</th>
<th>Contraindicated</th>
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<tbody>
<tr>
<td>Azathioprine</td>
<td>Cyclophosphamide</td>
<td>Leflunomide</td>
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<tr>
<td>Cyclosporine A</td>
<td>TNF-α inhibitors</td>
<td>Methotrexate</td>
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<tr>
<td>Glucocorticoids</td>
<td>Biologic agents</td>
<td>Mycophenolate</td>
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<tr>
<td>Hydroxychloroquine</td>
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<td>Aspirin</td>
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<td>Sulfasalazine</td>
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CONCLUSIONS

• Multiple related pregnancy complications

• Most anti-rheumatic medications are safely continued in pregnancy

• Teratogenicity of some meds should be stressed to patients

• Co-management with rheumatology & MFM
QUESTIONS?