

The background of the slide is a light gray gradient, decorated with numerous realistic water droplets of various sizes. Some droplets are large and prominent, while others are small and scattered. They are rendered with soft shadows and highlights, giving them a three-dimensional appearance.

PREGNANCY AND SYSTEMIC LUPUS ERYTHEMATOSUS

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SYSTEMIC LUPUS ERYTHEMATOSUS

- Systemic lupus erythematosus (SLE) is a systemic autoimmune disease with multiorgan involvement characterized by periods of remission and relapse. The clinical presentation varies considerably, but the disease tends to affect the joints, skin, kidneys, serous membranes, hematologic system, and nervous system.
- SLE disproportionately affects women of reproductive age, and these women are at increased risk for both maternal and fetal pregnancy complications.

PATHOGENESIS

- The production of autoantibodies is characteristic of SLE, and likely precedes the onset of disease by several years.
- Autoantibodies found in individuals with SLE include those to antinuclear antibodies [ANA]), cytoplasmic antigens, cell surface antigens, and soluble antigens in the circulation.
- Anti-double-stranded DNA (anti-dsDNA) antibodies are present in over three-fourths of patients with newly diagnosed SLE, and increasing levels precede symptomatic flare in many patients.

CLINICAL PRESENTATION, DIAGNOSIS, AND TREATMENT

- The initial presentation of SLE includes varying combinations of polyarthralgias, fatigue, photosensitive skin rash, and serositis. Up to one-half of patients present with evidence of lupus nephritis, and renal involvement eventually occurs in a majority of SLE cases.
- To be classified as having SLE a patient must satisfy at least 4 of 17 criteria, including at least 1 of 11 clinical criteria and 1 of the 6 immunologic criteria.
- Alternatively, biopsy-proven lupus nephritis plus positive ANA or anti-dsDNA is sufficient to fulfill SLE classification criteria.

TABLE
65.1**Systemic Lupus International Collaborating Clinics (SLICC) Criteria for the Classification of Systemic Lupus Erythematosus (SLE)**

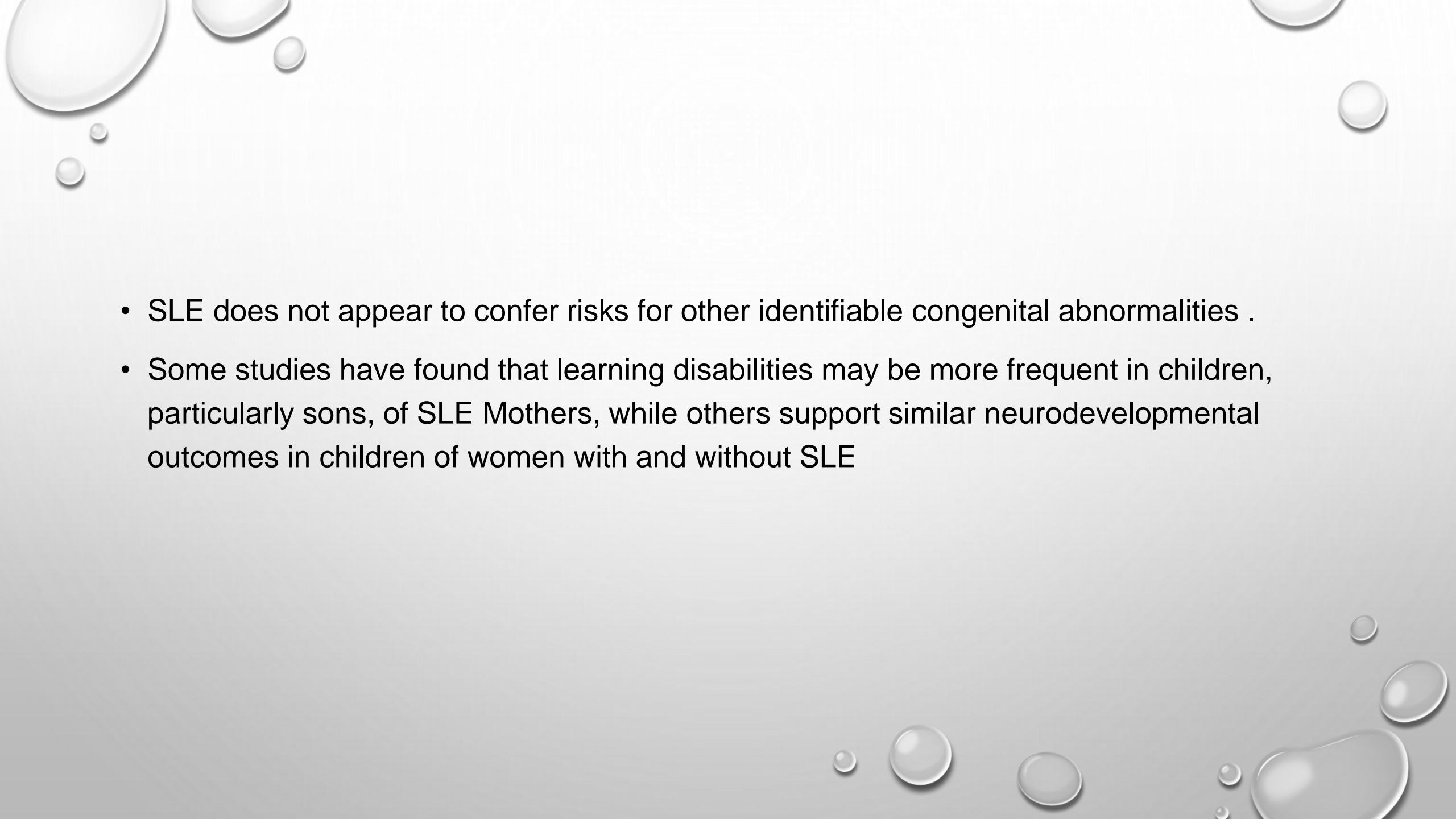
Clinical Criterion	Definition
Acute cutaneous lupus	Lupus malar rash (do not count if malar discoid); bullous lupus; toxic epidermal necrolysis variant of SLE; maculopapular lupus rash; photosensitive lupus rash (in the absence of dermatomyositis); or subacute cutaneous lupus (nonindurated psoriaform and/or annular polycyclic lesions that resolve without scarring, although occasionally with postinflammatory dyspigmentation or telangiectasias)
Chronic cutaneous lupus	Classic discoid rash; localized (above the neck); generalized (above and below the neck); hypertrophic (verrucous) lupus; lupus panniculitis (profundus); mucosal lupus; lupus erythematosus tumidus; chilblains lupus; or discoid lupus/lichen planus overlap
Nonscarring alopecia	Diffuse thinning or hair fragility with visible broken hairs (in the absence of other causes, such as alopecia areata, drugs, iron deficiency, and androgenic alopecia)
Oral or nasal ulcers	Palate, buccal, tongue, or nasal ulcers (in the absence of other causes, such as vasculitis, Behçet's disease, infection [herpesvirus], inflammatory bowel disease, reactive arthritis, and acidic foods)
Joint disease	Synovitis involving two or more joints, characterized by swelling or effusion or tenderness in two or more joints and at least 30 minutes of morning stiffness
Serositis	Typical pleurisy for more than 1 day, pleural effusions, or pleural rub, or typical pericardial pain (pain with recumbency improved by sitting forward) for more than 1 day, pericardial effusion, pericardial rub, or pericarditis by electrocardiography in the absence of other causes, such as infection, uremia, and Dressler syndrome
Renal	Urine protein-to-creatinine ratio (or 24-h urine protein) representing 500 mg protein/24 h, or red blood cell casts
Neurologic	Seizures; psychosis; mononeuritis multiplex (in the absence of other known causes, such as primary vasculitis); myelitis; peripheral or cranial neuropathy (in the absence of other known causes, such as primary vasculitis, infection, and diabetes mellitus); or acute confusional state (in the absence of other causes, including toxic/metabolic, uremia, drugs)
Hemolytic anemia Leukopenia or lymphocytopenia	Hemolytic anemia Leukopenia ($<4000/\text{mm}^3$ at least once) (in the absence of other known causes, such as Felty's syndrome, drugs, and portal hypertension), or lymphopenia ($<1000/\text{mm}^3$ at least once) (in the absence of other known causes, such as glucocorticoids, drugs, and infection)
Thrombocytopenia	Thrombocytopenia ($<100,000/\text{mm}^3$) at least once in the absence of other known causes, such as drugs, portal hypertension, and thrombotic thrombocytopenic
Laboratory Criterion	Definition
ANA	ANA level above laboratory reference range
Anti-dsDNA	Anti-dsDNA antibody level above laboratory reference range (or $>$ twofold the reference range if tested by ELISA)
Anti-Sm	Presence of antibody to Sm nuclear antigen
Antiphospholipid	Antiphospholipid antibody positivity as determined by any of the following: Positive test result for lupus anticoagulant; false-positive test result for rapid plasma reagin; medium- or high-titer anticardiolipin antibody level (IgA, IgG, or IgM); or positive test result for anti- β_2 -glycoprotein-1 (IgA, IgG, or IgM)
Low complement	Low C3; low C4; or low CH50
Direct Coombs	Direct Coombs test in the absence of hemolytic anemia

PREGNANCY PLANNING

- Ideally, disease should be quiescent for six months on medications compatible with pregnancy prior to systemic lupus erythematosus (SLE) patients attempting Conception.
- Active SLE at the time of conception is a strong predictor of adverse maternal and obstetrical outcomes . In spite of this risk, the majority of such pregnancies still result in live births.

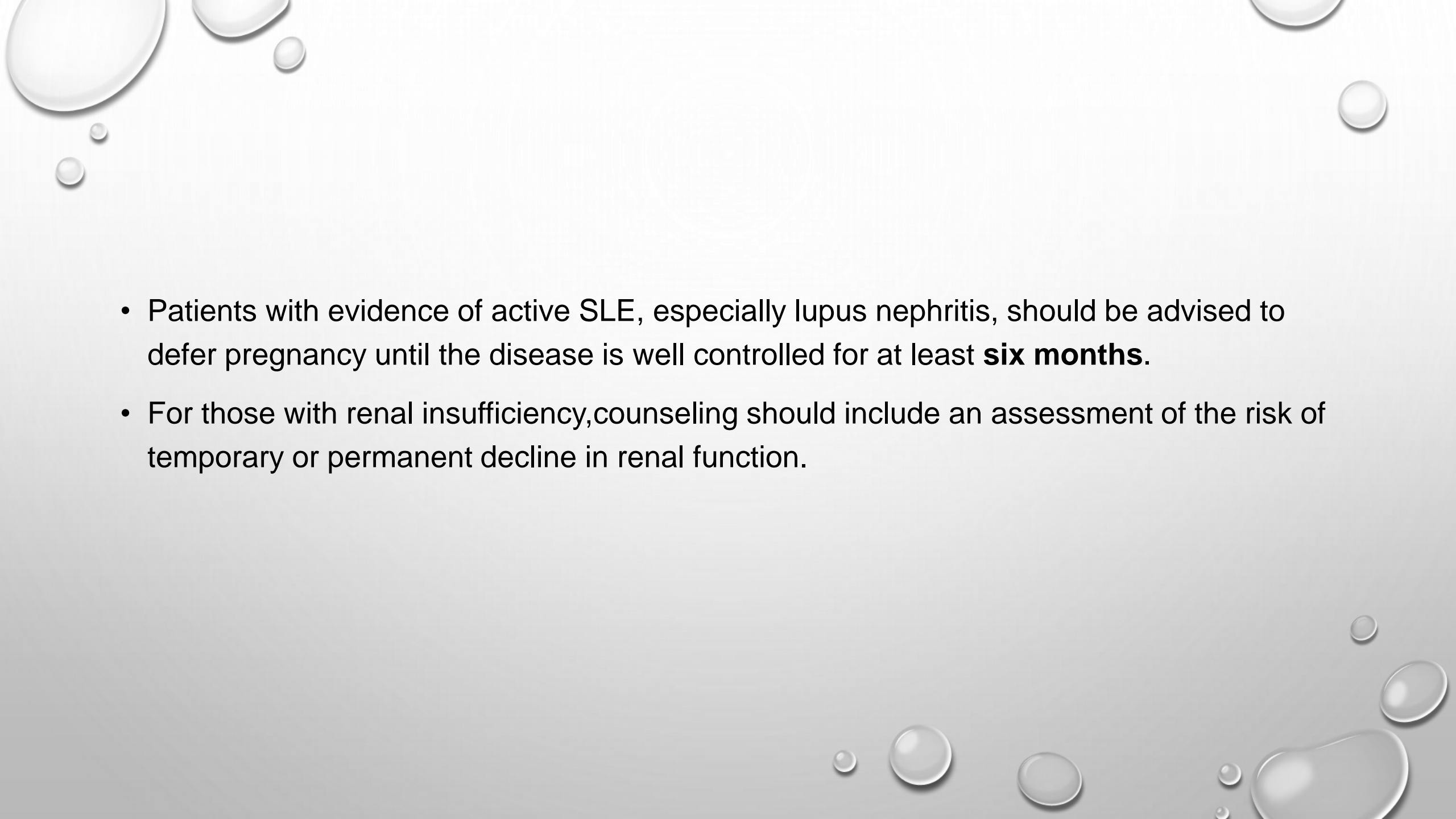
PRECONCEPTION EVALUATION

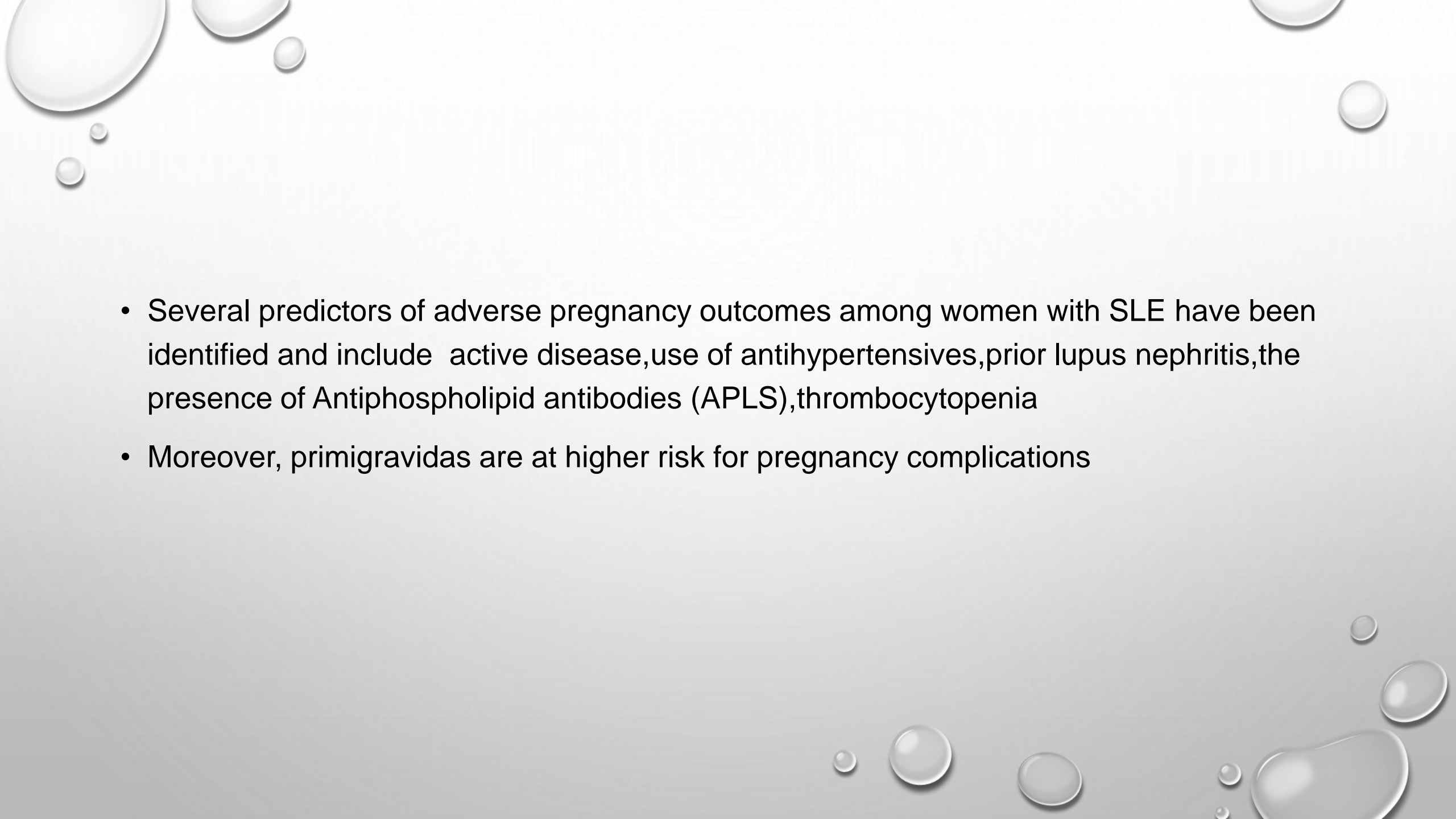
- Preconception assessment is essential in women with SLE to determine whether pregnancy may pose an unacceptably high maternal or fetal risk, to initiate Interventions to optimize disease activity, and to adjust medications to those that are least harmful to the fetus.
- Women should be advised that discontinuation of medications used to control disease activity increases the risk of lupus flare and pregnancy complications. Ideally, women considering conception Should be maintained on medications that are compatible with pregnancy and should continue these medications in pregnancy.

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- SLE does not appear to confer risks for other identifiable congenital abnormalities .
 - Some studies have found that learning disabilities may be more frequent in children, particularly sons, of SLE Mothers, while others support similar neurodevelopmental outcomes in children of women with and without SLE

IMPACT OF LUPUS ON PREGNANCY

- Pregnancy in the setting of SLE is associated with a higher risk of complications compared with healthy women.
- The largest study to evaluate maternal and pregnancy Complications associated with SLE included 13,555 pregnancies . Women with SLE also had a two- to fourfold increased rate of obstetric complications including preterm labor, unplanned Cesarean delivery, fetal growth restriction, preeclampsia, and eclampsia.
- Patients with SLE also had a significantly higher risk of thrombosis, infection, thrombocytopenia, and transfusion.

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- Patients with evidence of active SLE, especially lupus nephritis, should be advised to defer pregnancy until the disease is well controlled for at least **six months**.
 - For those with renal insufficiency, counseling should include an assessment of the risk of temporary or permanent decline in renal function.

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- Several predictors of adverse pregnancy outcomes among women with SLE have been identified and include active disease, use of antihypertensives, prior lupus nephritis, the presence of Antiphospholipid antibodies (APLS), thrombocytopenia
 - Moreover, primigravidas are at higher risk for pregnancy complications

SPECIFIC LABORATORY TESTING

- In addition to routine preconception labs the following should be reviewed during the Preconception evaluation
- Anti-Ro/SSA and anti-LA/SSB antibodies
- • Renal function (creatinine, urinalysis with urine sediment, spot urine protein/creatinine ratio)
- • Complete blood count (CBC)
- • Liver function tests
- • Anti-double-stranded deoxyribonucleic acid (dsDNA) antibodies
- • Complement (CH50, or C3 and C4)

SYSTEMIC LUPUS ERYTHEMATOSUS AND PREGNANCY

- **Risk for SLE flare.** Pregnancy has long been considered a high-risk state for SLE patients, caused in part by concern for increased risk for flare.
- Current reports, however, suggest that the majority of women with SLE can anticipate a successful pregnancy, although controversy continues as to the extent of flare risk
- Overall, patients with active disease during the 6 months before conception are at highest risk for flare during pregnancy. Flare rate in patients with active disease preconception has been estimated at 60%, while pregnancy flare rate may be as low as 10% in those with inactive disease

EXACERBATION OF SLE

- The following factors are associated with an increased risk of SLE flare during pregnancy
 - Active disease during the six months prior to conception
 - A history of lupus nephritis
 - Discontinuation of hydroxychloroquine (HCQ) or other medication
 - Primigravidas

- **Low C4** may also be a risk factor for SLE flare during pregnancy. In a multivariate analysis of 246 pregnancies in 172 patients with SLE, a low C4 prior to conception was associated with an increased Risk of relapse during pregnancy (76 versus 23 percent, odds ratio [OR] 13.8)
- Patients who experienced flare during pregnancy were more likely to have a low C4 during each trimester compared With patients who did not flare.
- However, there was considerable overlap in the complement levels between those who flared and those who did not, suggesting that while monitoring changes in Complement levels in an individual patient over the course of pregnancy may be useful, an absolute level of concerning complement level has not been established

PREGNANCY COMPLICATIONS

PREECLAMPSIA

- Preeclampsia is one of the most frequent complications of pregnancy in SLE, occurring in 16 to 30 percent of women with SLE, compared with 4.6 percent of pregnancies in the General obstetric population .
- . Additional risk factors for preeclampsia that are specific to SLE patients include an active or prior history of lupus nephritis, declining complement levels, and Thrombocytopenia. The data on whether APLS predispose to preeclampsia is unclear, although some studies suggest an association

PRETERM BIRTH

- Preterm birth is the most common obstetric complication in women with SLE. Rates of preterm birth from 15 to 50 percent are reported, with increased incidence in women with lupus Nephritis or high disease activity. This compares with 12 percent of pregnancies in the general united states obstetric population .
- In women with SLE, the majority of preterm births are Medically indicated due to preeclampsia or maternal SLE activity and The presence of lupus nephritis .
- The rates of preterm Birth are likely better among women without such risk factors.

ABORTION

- The effect of SLE on embryonic losses is controversial, with a possible slight increase in risk.
- Women with SLE are at increased risk of fetal death beyond 10 weeks, particularly in the presence of active SLE, lupus nephritis, and antiphospholipid syndrome (APS).

Fetal growth restriction

- about 10 to 30 percent of pregnancies in women with SLE are complicated by fetal growth restriction and small-for-gestational-age babies compared with about 10 Percent of pregnancies in the general obstetric population .
- As with the other complications, the risk is higher in the presence of active disease, hypertension, and lupus nephritis.

- **Presence of anti-RO and anti-LA antibodies** —a fetus exposed to anti-RO/SSA and/or anti-LA/SSB antibodies is at an increased risk of developing congenital complete heart Block or NL .
- In most cases, congenital heart block develops between 18 and 24 weeks of gestation. Thus, in some centers, women who have antibodies to ro/SSA and/or la/SSB undergo Fetal Echcardigraphy for diagnosis of heart block, with differing surveillance protocols at different sites. While there is no therapeutic intervention proven to prevent progression, early Detection allows for increased monitoring.

FETAL COMPLICATIONS

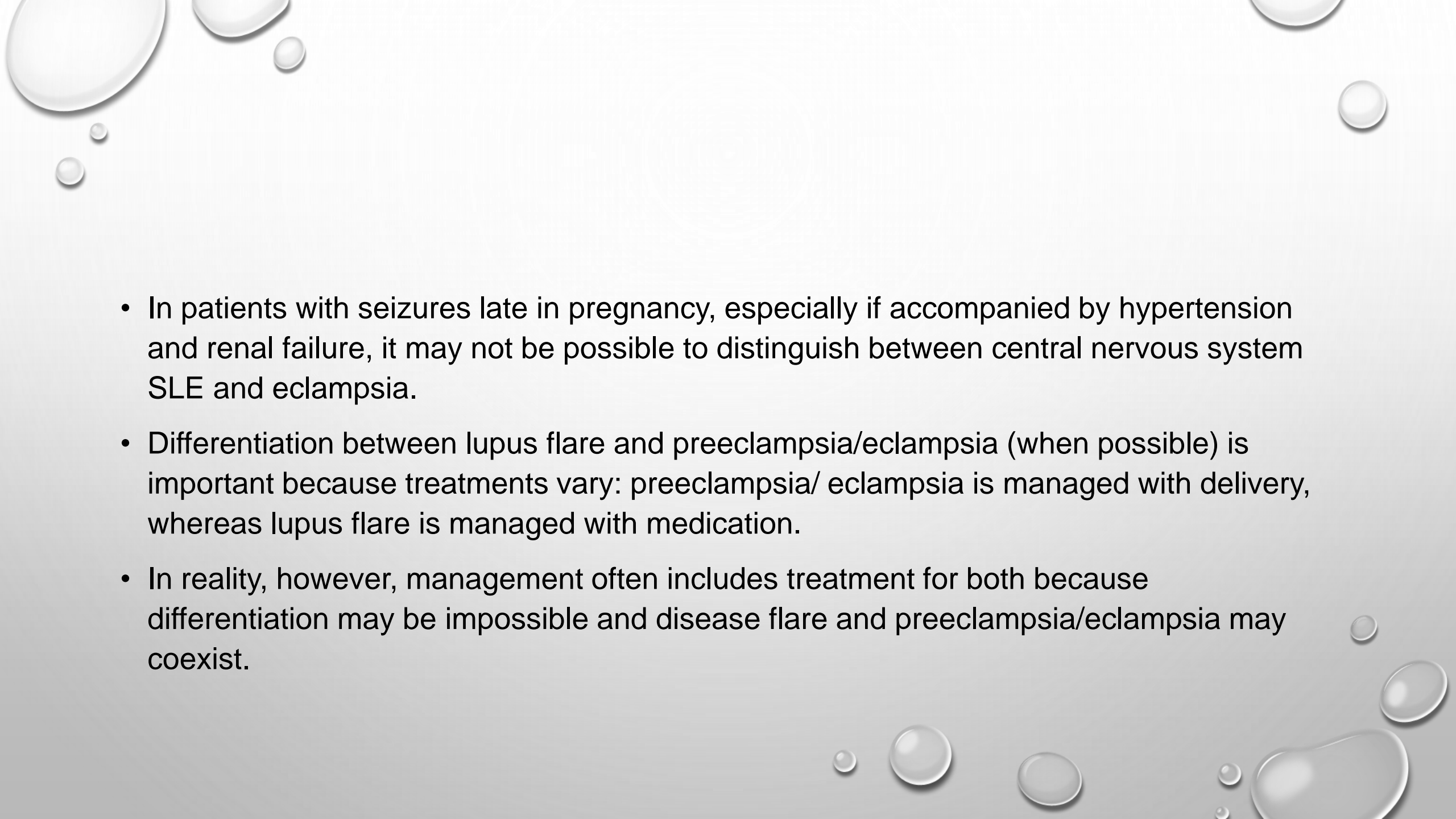
- Fetal complications during pregnancy in patients with SLE include
- Miscarriage
- Stillbirth
- growth restriction
- neonatal lupus (NL) syndromes
- congenital complete heart Block
- complications of prematurity.

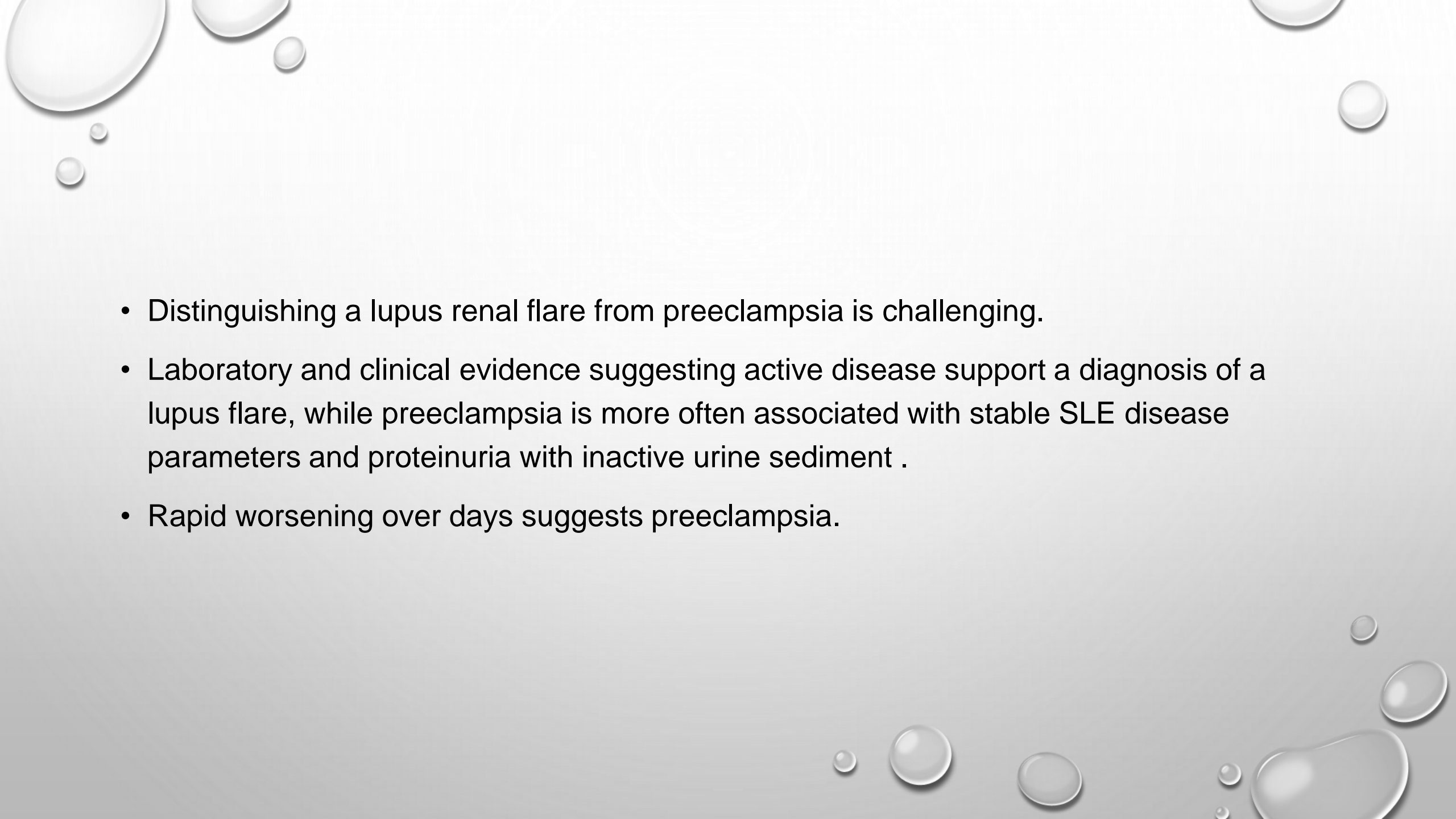
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SPECIAL CONSIDERATIONS

EFFECT OF LUPUS NEPHRITIS

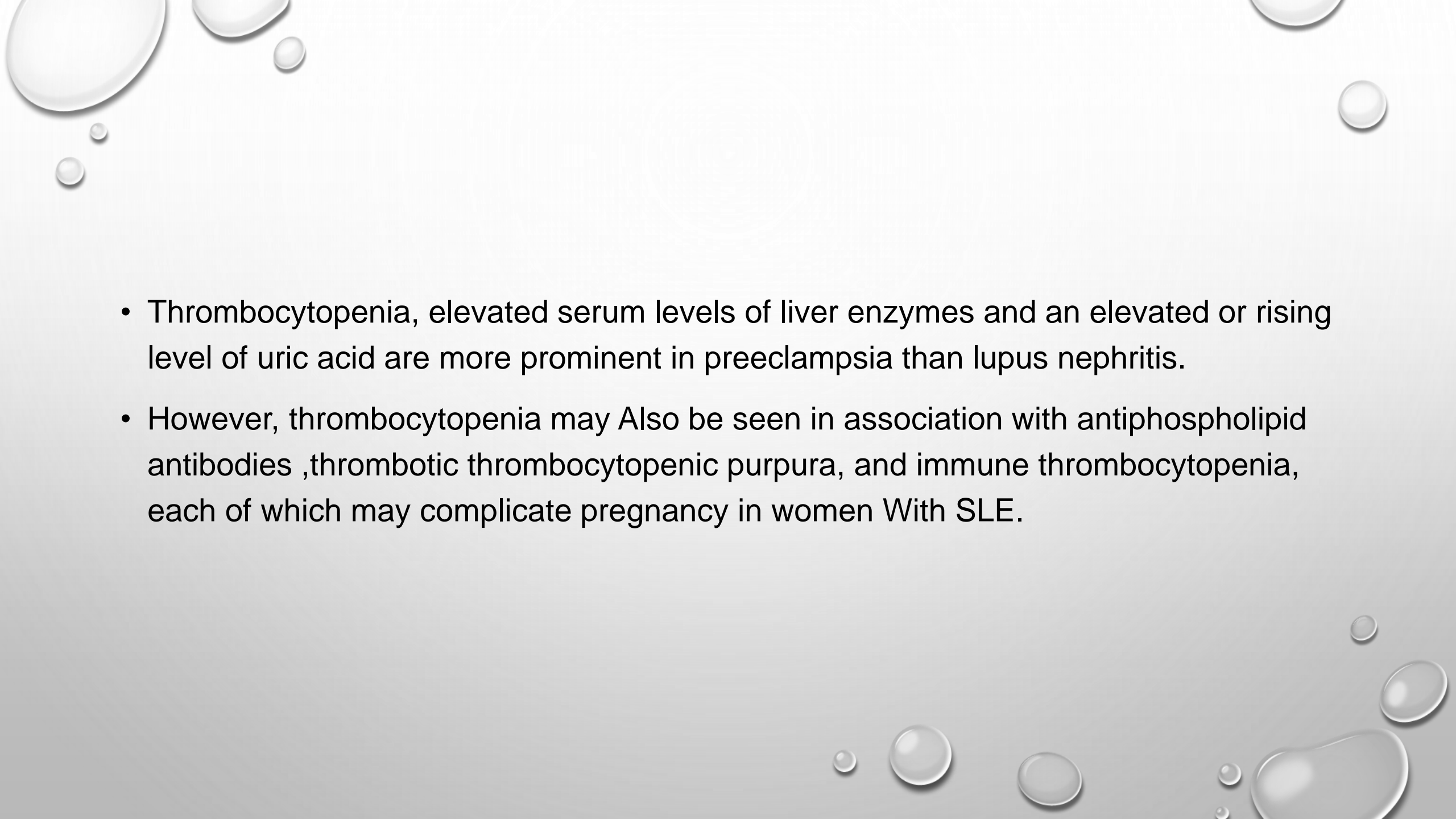
- Lupus nephritis is an important risk factor for pregnancy complications.
- Active lupus nephritis was associated with increased risk for premature birth, and history of nephritis was associated with increased risk for preeclampsia.
- In those women with preexisting renal disease who develop preeclampsia, renal function may not return to its prepregnancy baseline; however, progression to renal failure is unusual.

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- In patients with seizures late in pregnancy, especially if accompanied by hypertension and renal failure, it may not be possible to distinguish between central nervous system SLE and eclampsia.
 - Differentiation between lupus flare and preeclampsia/eclampsia (when possible) is important because treatments vary: preeclampsia/ eclampsia is managed with delivery, whereas lupus flare is managed with medication.
 - In reality, however, management often includes treatment for both because differentiation may be impossible and disease flare and preeclampsia/eclampsia may coexist.

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- Distinguishing a lupus renal flare from preeclampsia is challenging.
 - Laboratory and clinical evidence suggesting active disease support a diagnosis of a lupus flare, while preeclampsia is more often associated with stable SLE disease parameters and proteinuria with inactive urine sediment .
 - Rapid worsening over days suggests preeclampsia.

PREECLAMPSIA VERSUS LUPUS NEPHRITIS

- Lupus nephritis is often associated with proteinuria and/or an active urine sediment (red and white cells and cellular casts), whereas only proteinuria is seen in preeclampsia.
- Flares of SLE are likely to be associated with low or decreasing complement levels and increased titers of anti-dsDNA antibodies; by comparison, complement levels are usually, but not always, Normal or increased in preeclampsia

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- Thrombocytopenia, elevated serum levels of liver enzymes and an elevated or rising level of uric acid are more prominent in preeclampsia than lupus nephritis.
 - However, thrombocytopenia may Also be seen in association with antiphospholipid antibodies ,thrombotic thrombocytopenic purpura, and immune thrombocytopenia, each of which may complicate pregnancy in women With SLE.

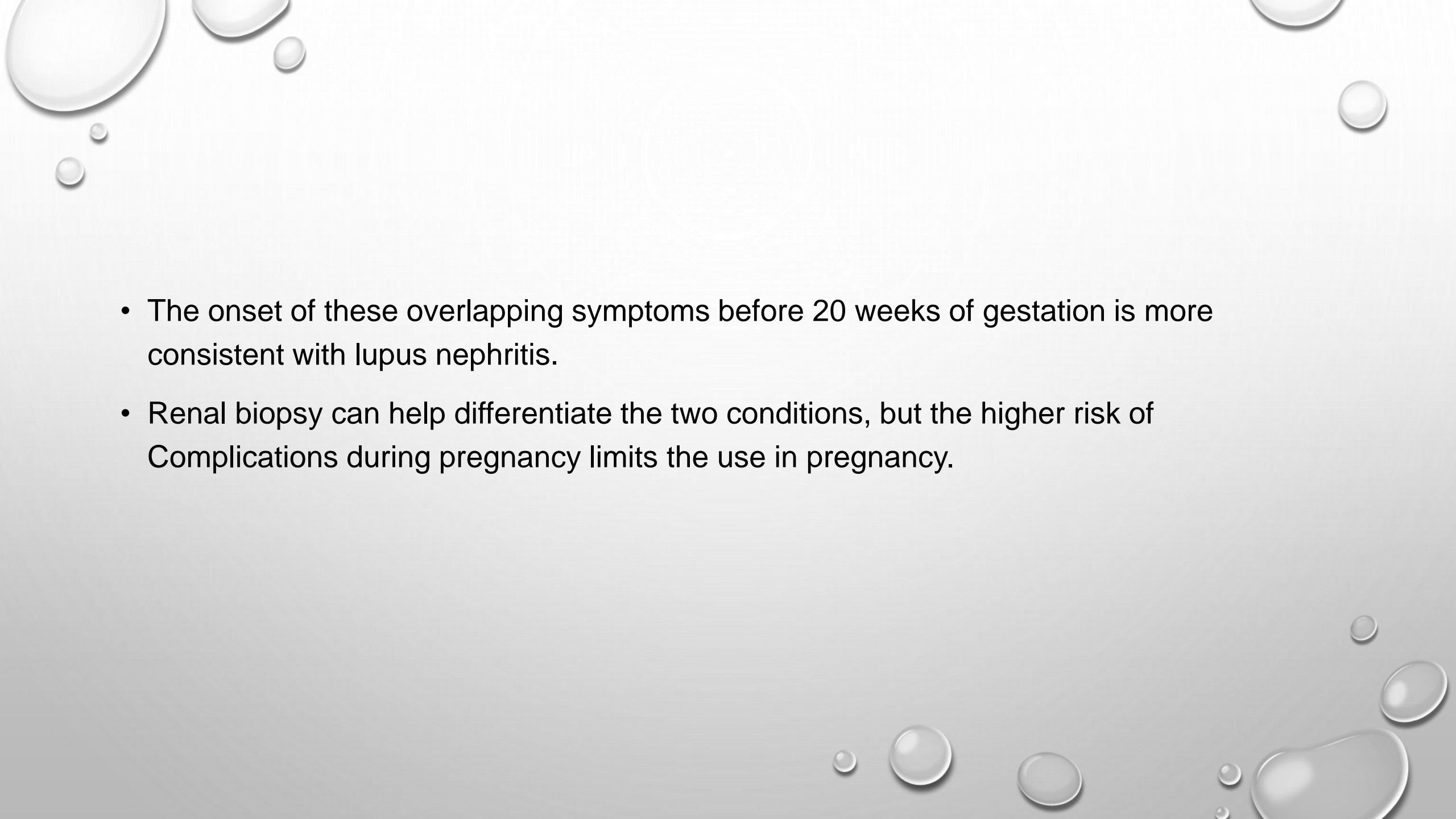
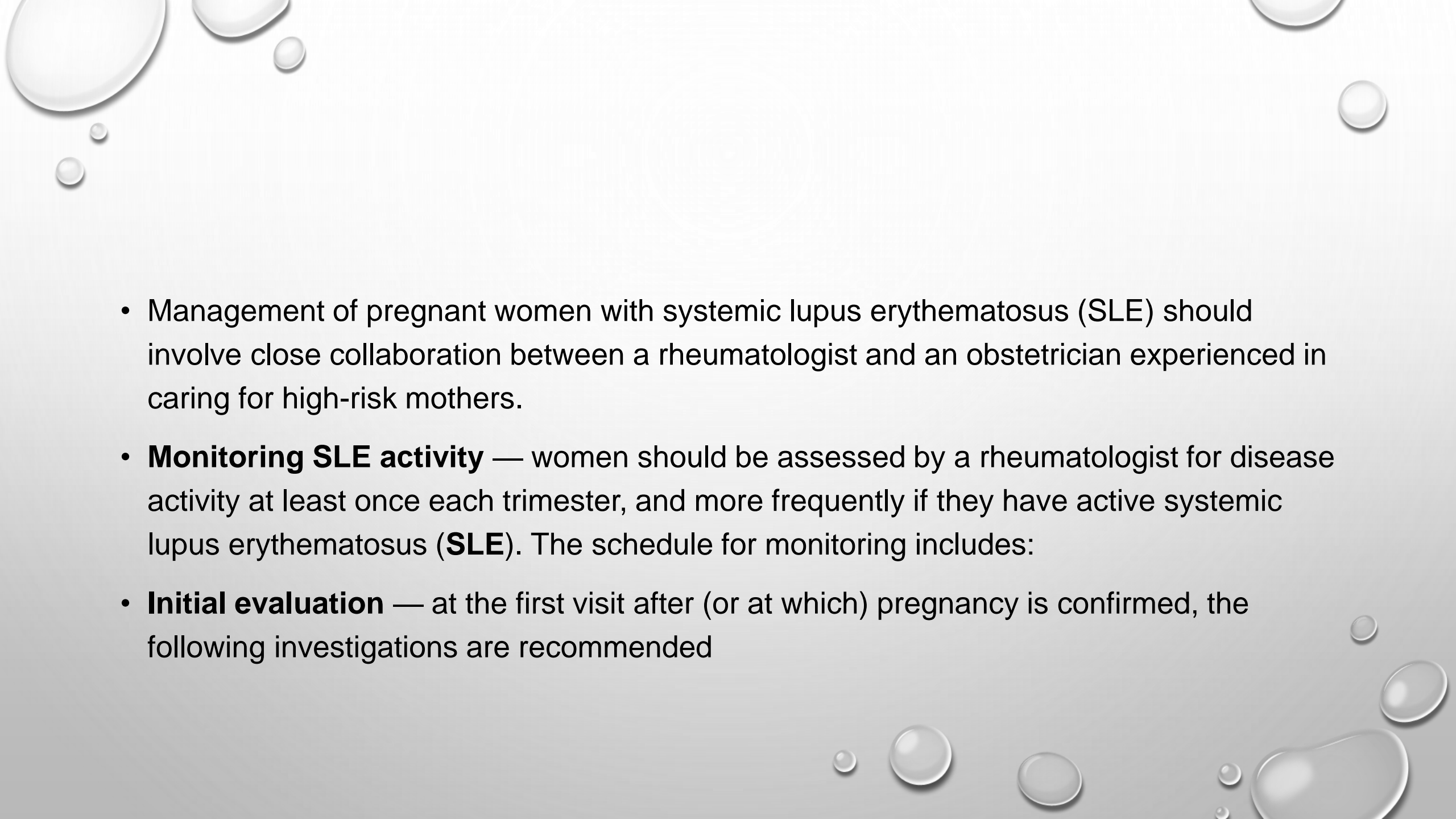
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- The onset of these overlapping symptoms before 20 weeks of gestation is more consistent with lupus nephritis.
 - Renal biopsy can help differentiate the two conditions, but the higher risk of Complications during pregnancy limits the use in pregnancy.

TABLE 59-4. Some Distinctions between Lupus Flare and Preeclampsia Syndrome

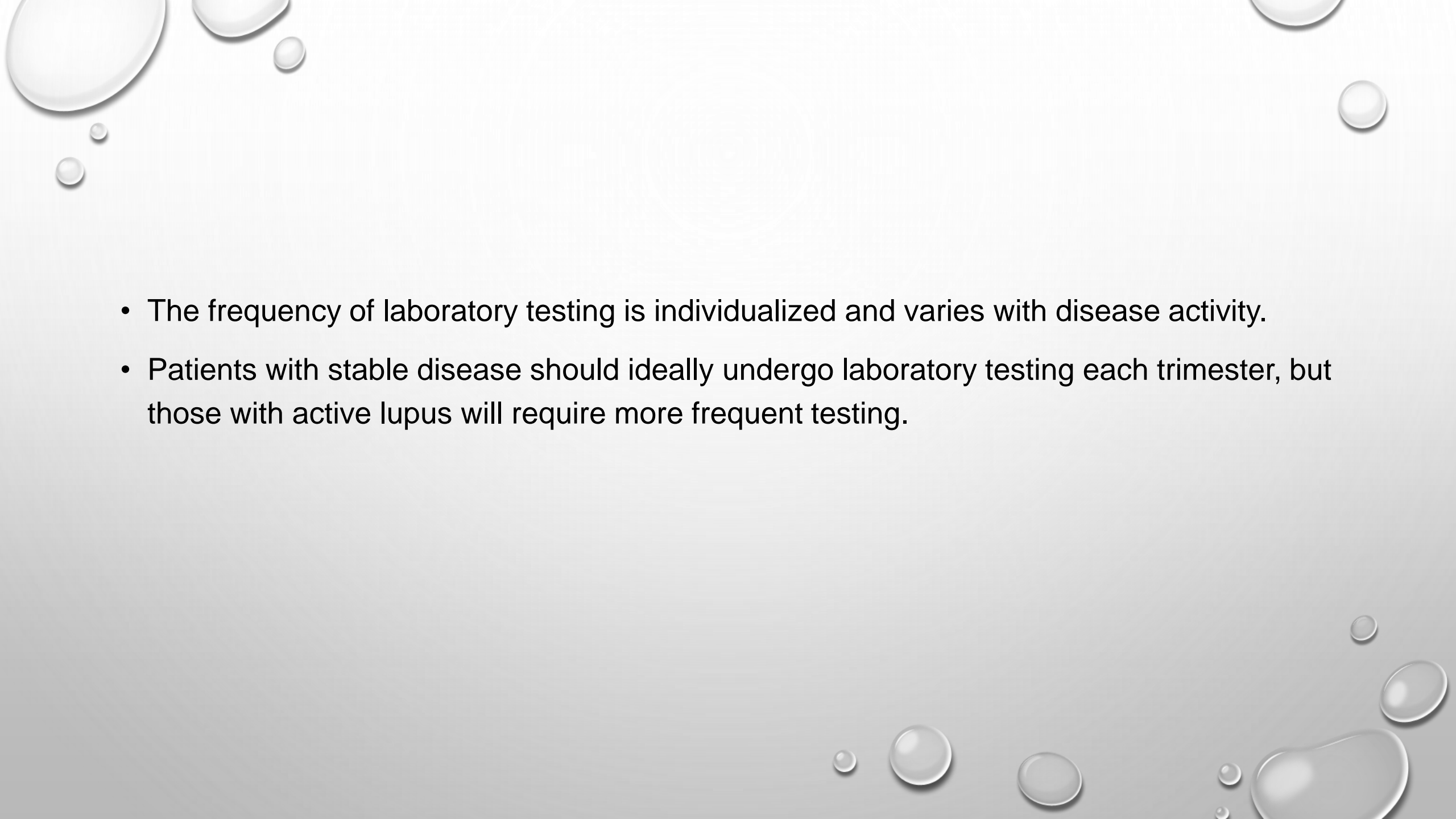
Factor	Lupus	Preeclampsia
Clinical findings	Fatigue, headache, extra-renal signs (rash, serositis, arthritis)	Headaches, confusion, visual changes, convulsions
Blood pressure	Normal or high	High
Anemia	Hemolytic	Absent
Proteinuria	Present	Present
Creatinine	Normal or high	Normal or high
Transaminases	Normal	Normal or high
Complement	Decreased	Normal

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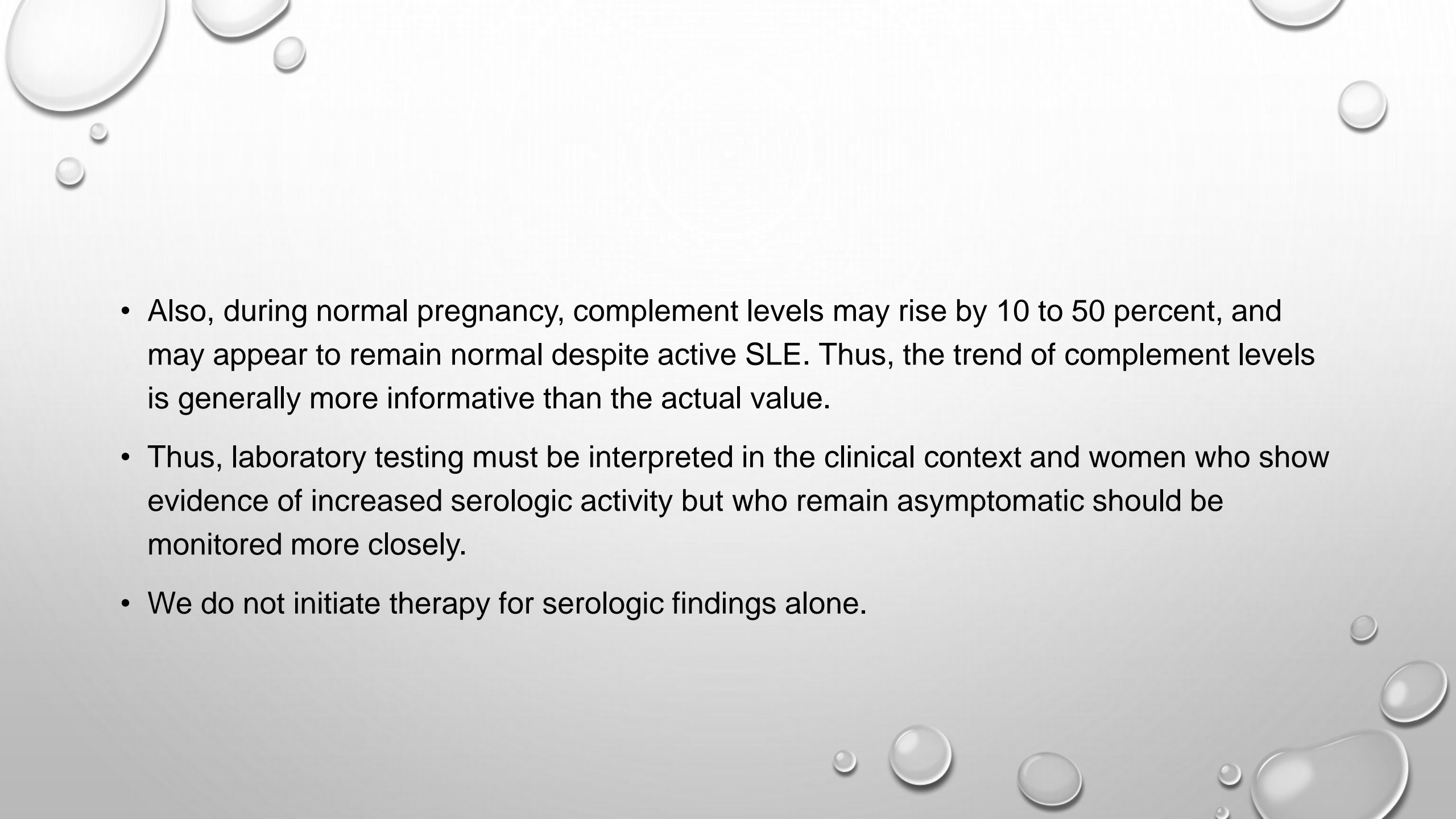
MANAGEMENT DURING PREGNANCY

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- Management of pregnant women with systemic lupus erythematosus (SLE) should involve close collaboration between a rheumatologist and an obstetrician experienced in caring for high-risk mothers.
 - **Monitoring SLE activity** — women should be assessed by a rheumatologist for disease activity at least once each trimester, and more frequently if they have active systemic lupus erythematosus (**SLE**). The schedule for monitoring includes:
 - **Initial evaluation** — at the first visit after (or at which) pregnancy is confirmed, the following investigations are recommended

- Physical examination, including blood pressure
- • Renal function (creatinine, urinalysis, spot urine protein/creatinine ratio)
- • Complete blood count (CBC)
- • Liver function tests
- • Anti-ro/SSA and anti-la/SSB antibodies if not previously evaluated
- • Antiphospholipid antibodies (lupus anticoagulant [LA], IgG and IgM anticardiolipin [ACL] antibodies, and IgG and IgM anti-beta2 glycoprotein [anti-beta2gpi] antibodies)
- • Anti-double stranded DNA (dsDNA) antibodies
- • Complement (CH50, or C3 and C4)

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- The frequency of laboratory testing is individualized and varies with disease activity.
 - Patients with stable disease should ideally undergo laboratory testing each trimester, but those with active lupus will require more frequent testing.

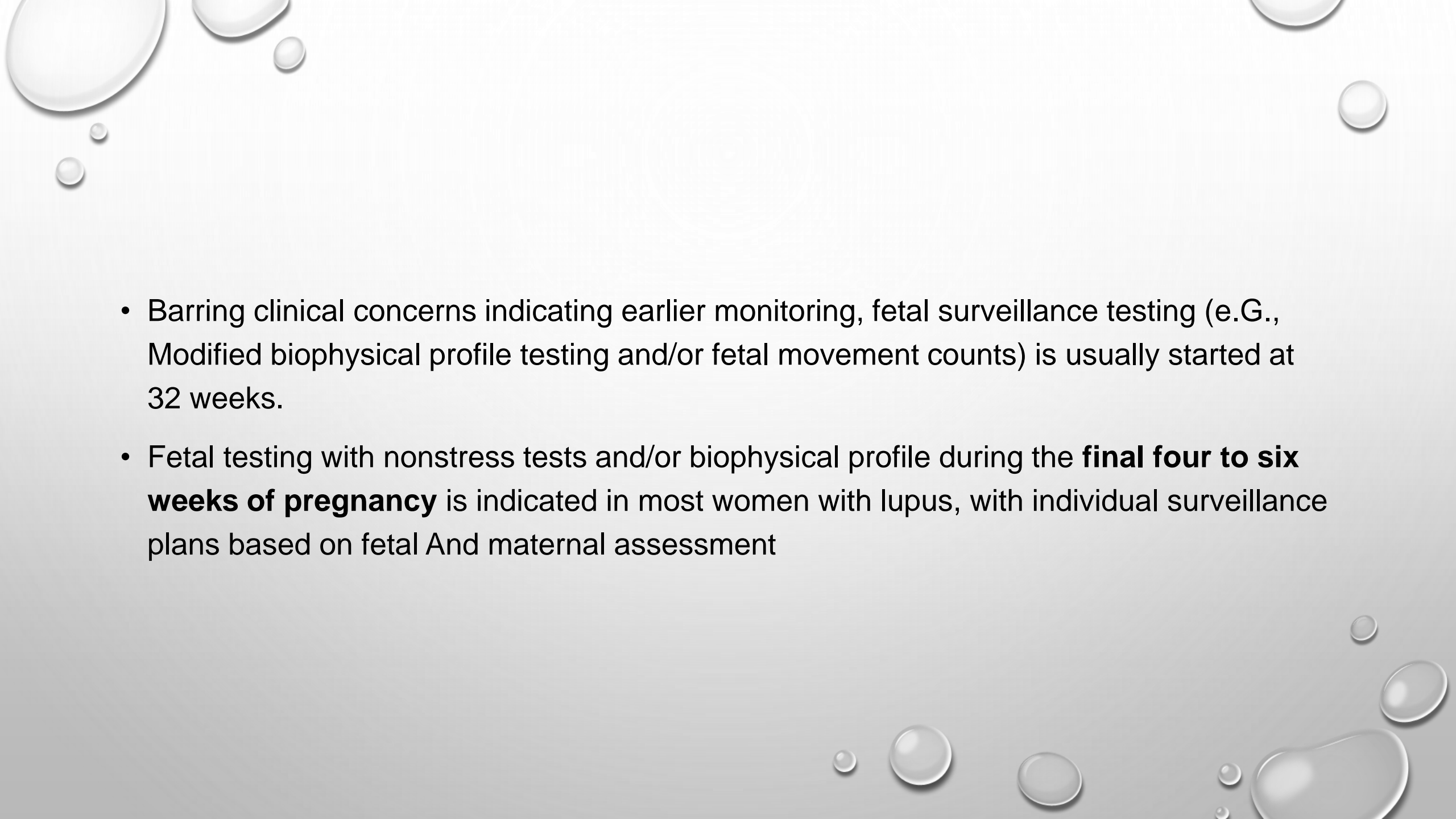
- Some physiological changes of pregnancy may overlap with features of active SLE, making differentiation difficult. As an example, laboratory findings that may be observed during a normal pregnancy include mild anemia, mild thrombocytopenia, elevated erythrocyte sedimentation rate (ESR), and proteinuria.
- Protein excretion increases in the course of normal pregnancy but should remain below 300 mg/24 hours. A baseline 24-hour urine collection or urine protein to creatinine ratio can be helpful in distinguishing lupus flare from preeclampsia and normal changes later in pregnancy

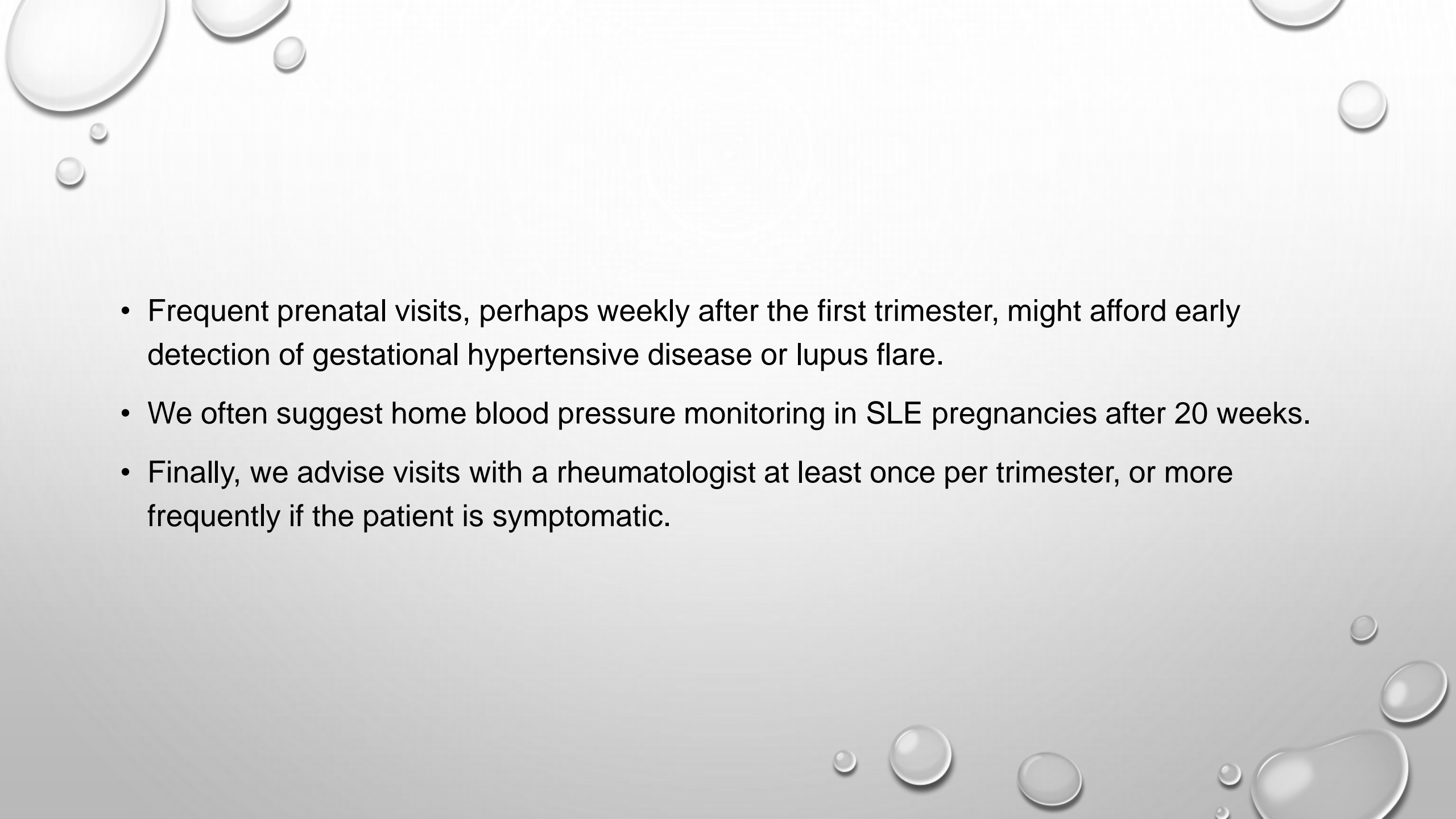
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- Also, during normal pregnancy, complement levels may rise by 10 to 50 percent, and may appear to remain normal despite active SLE. Thus, the trend of complement levels is generally more informative than the actual value.
 - Thus, laboratory testing must be interpreted in the clinical context and women who show evidence of increased serologic activity but who remain asymptomatic should be monitored more closely.
 - We do not initiate therapy for serologic findings alone.

MATERNAL-FETAL MONITORING

- First-trimester ultrasound evaluation to establish the estimated date of delivery. A fetal anatomic survey is performed at approximately 18 weeks of gestation.
- Ultrasound evaluation for fetal growth and placental insufficiency in the third trimester. Frequency of surveillance for fetal growth will depend upon maternal and fetal wellbeing, but typically will Be performed approximately **every four weeks**.
- More frequent monitoring, including doppler velocimetry, is also recommended if growth restriction or placental insufficiency is suspected.

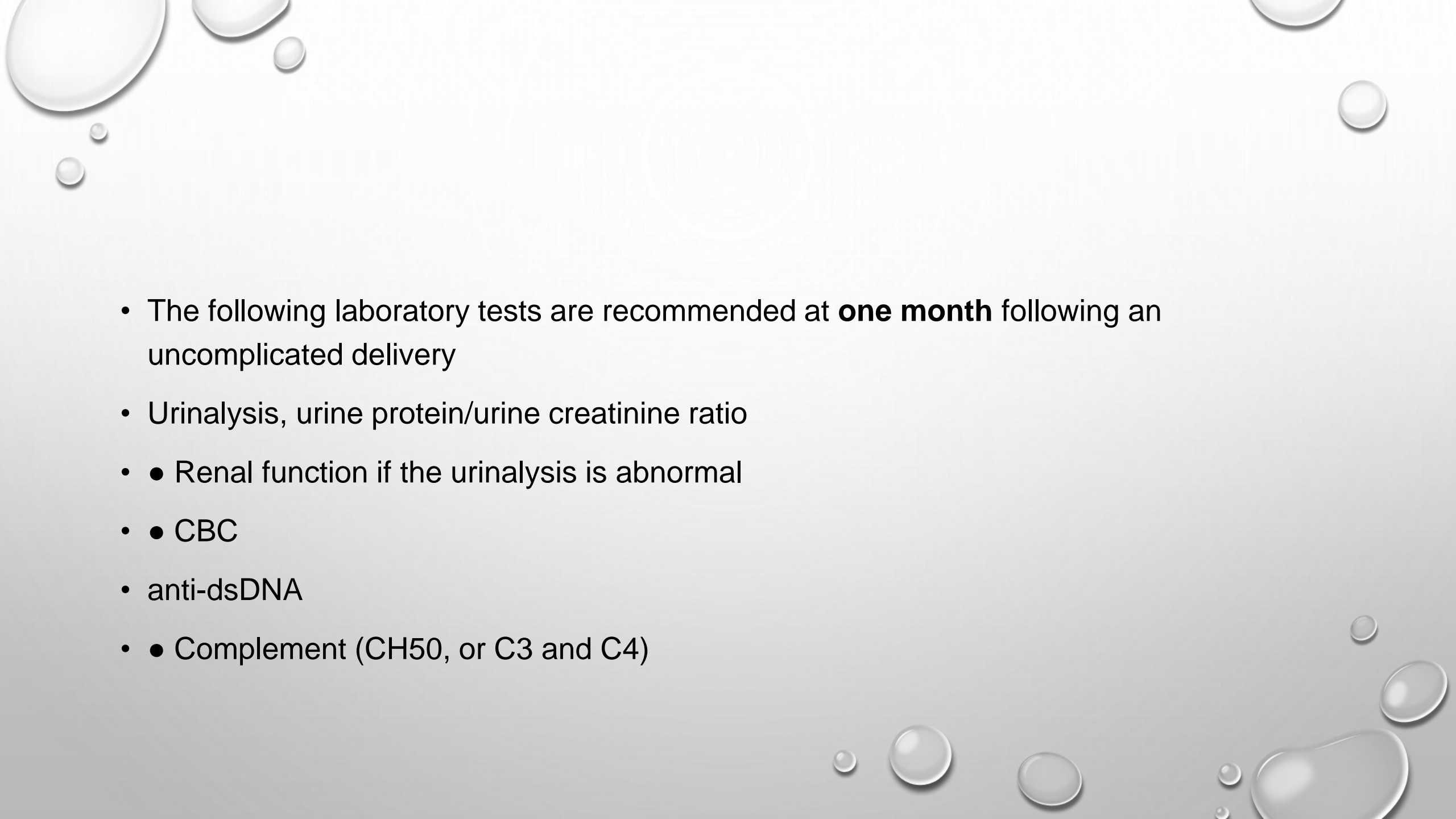
- The American Heart Association suggests serial assessment , starting at 16 w and continuing through 28 w of gestation with Echocardiography in women who have antibodies to RO/SSA and/or LA/SSB For diagnosis of congenital heart block

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- Barring clinical concerns indicating earlier monitoring, fetal surveillance testing (e.G., Modified biophysical profile testing and/or fetal movement counts) is usually started at 32 weeks.
 - Fetal testing with nonstress tests and/or biophysical profile during the **final four to six weeks of pregnancy** is indicated in most women with lupus, with individual surveillance plans based on fetal And maternal assessment

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- Frequent prenatal visits, perhaps weekly after the first trimester, might afford early detection of gestational hypertensive disease or lupus flare.
 - We often suggest home blood pressure monitoring in SLE pregnancies after 20 weeks.
 - Finally, we advise visits with a rheumatologist at least once per trimester, or more frequently if the patient is symptomatic.

Postpartum

- **Postpartum laboratory testing** — some women will experience exacerbations of SLE in the postpartum period.
- Those who have had active disease at conception and those with significant end organ damage are at greater risk of disease flares in the postpartum period compared with women with inactive disease . Thus, periodic assessment of disease activity is warranted postpartum.

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- The following laboratory tests are recommended at **one month** following an uncomplicated delivery
 - Urinalysis, urine protein/urine creatinine ratio
 - • Renal function if the urinalysis is abnormal
 - • CBC
 - anti-dsDNA
 - • Complement (CH50, or C3 and C4)

TREATING ACTIVE SLE


- The treatment of active SLE during pregnancy is guided by the severity and degree of organ involvement, similar to the approach for patients in the nonpregnant state.
- Treatment Should not be withheld due to pregnancy; however, some medications used to treat SLE may cross the placenta and cause fetal harm. Thus, the risks and benefits of treatment during pregnancy must be weighed against the risk of SLE activity having a deleterious effect on the mother and the fetus.

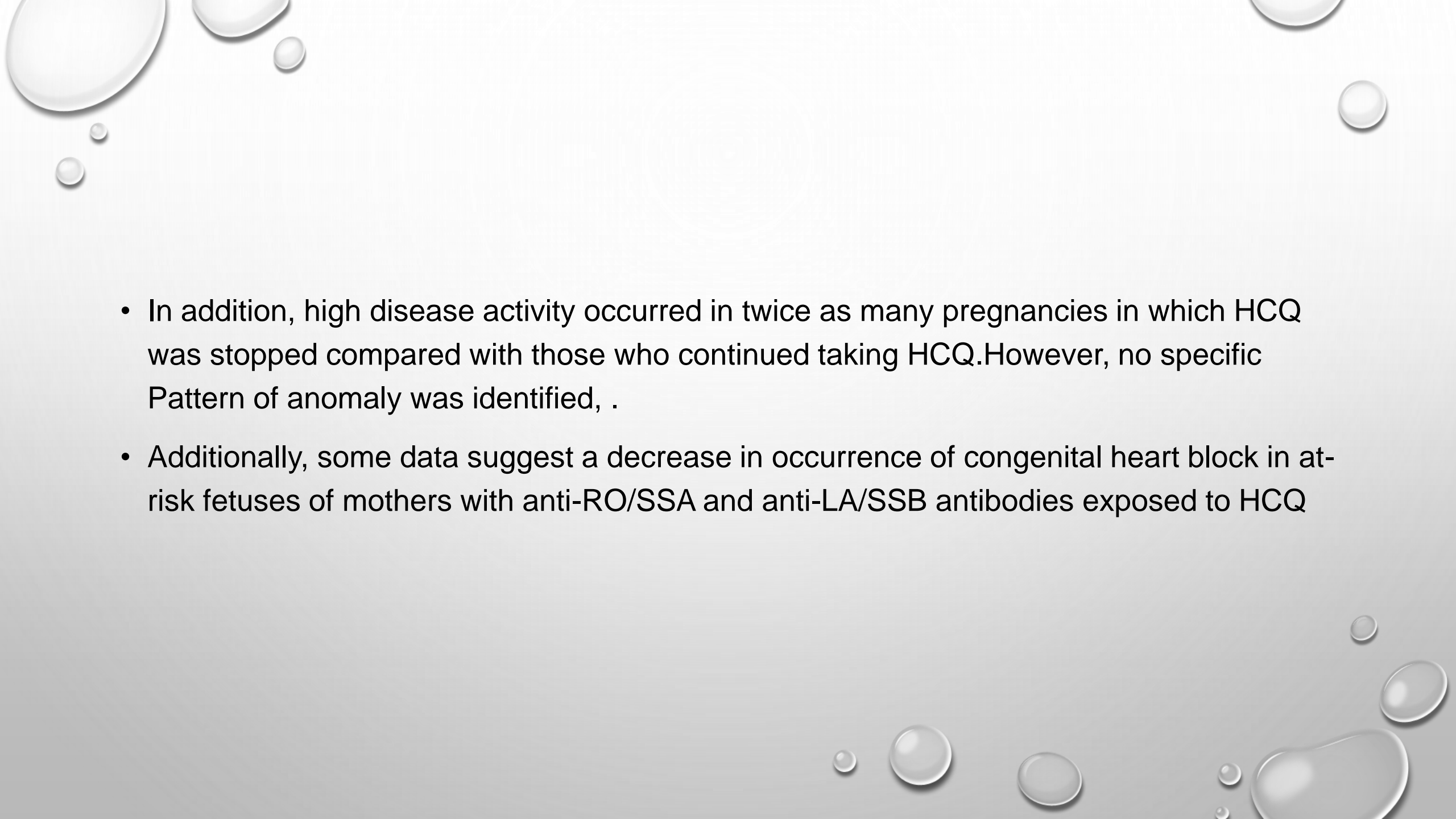
MANAGEMENT OF LUPUS IN PREGNANCY

- Review of the current medical regimen is critical. If lupus medications are contraindicated for use in pregnancy (e.G., Cyclophosphamide, mycophenolate mofetil, or methotrexate), they may be tapered and discontinued or changed to acceptable medications such as azathioprine.



RECOMMENDED DURING PREGNANCY

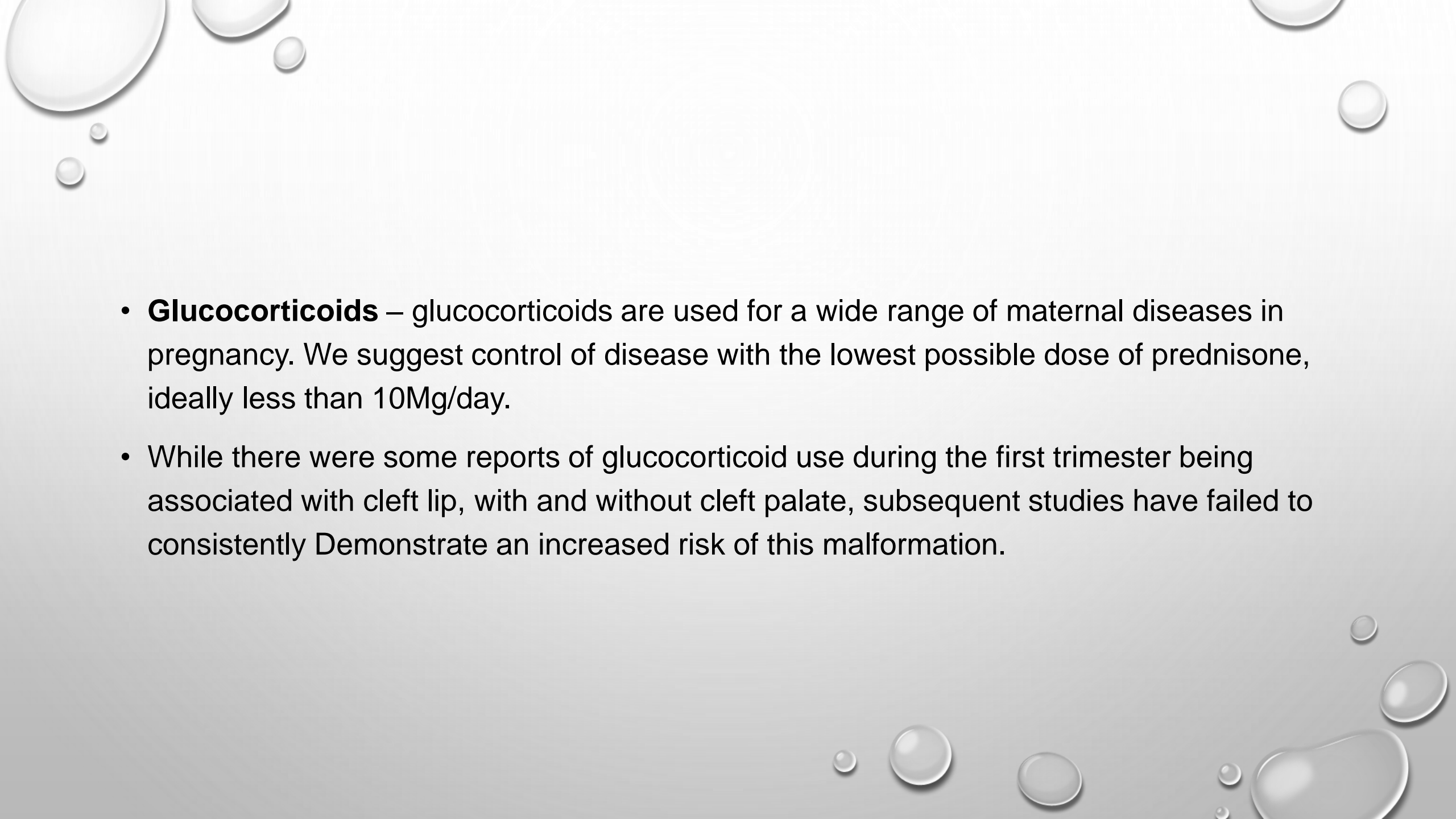
- **Hydroxychloroquine** – for most pregnant women with SLE, we suggest continuation of hydroxychloroquine (HCQ) to reduce the risk of SLE flares.
 - Several studies have demonstrated fewer disease flares and better outcomes in patients continuing HCQ during pregnancy .
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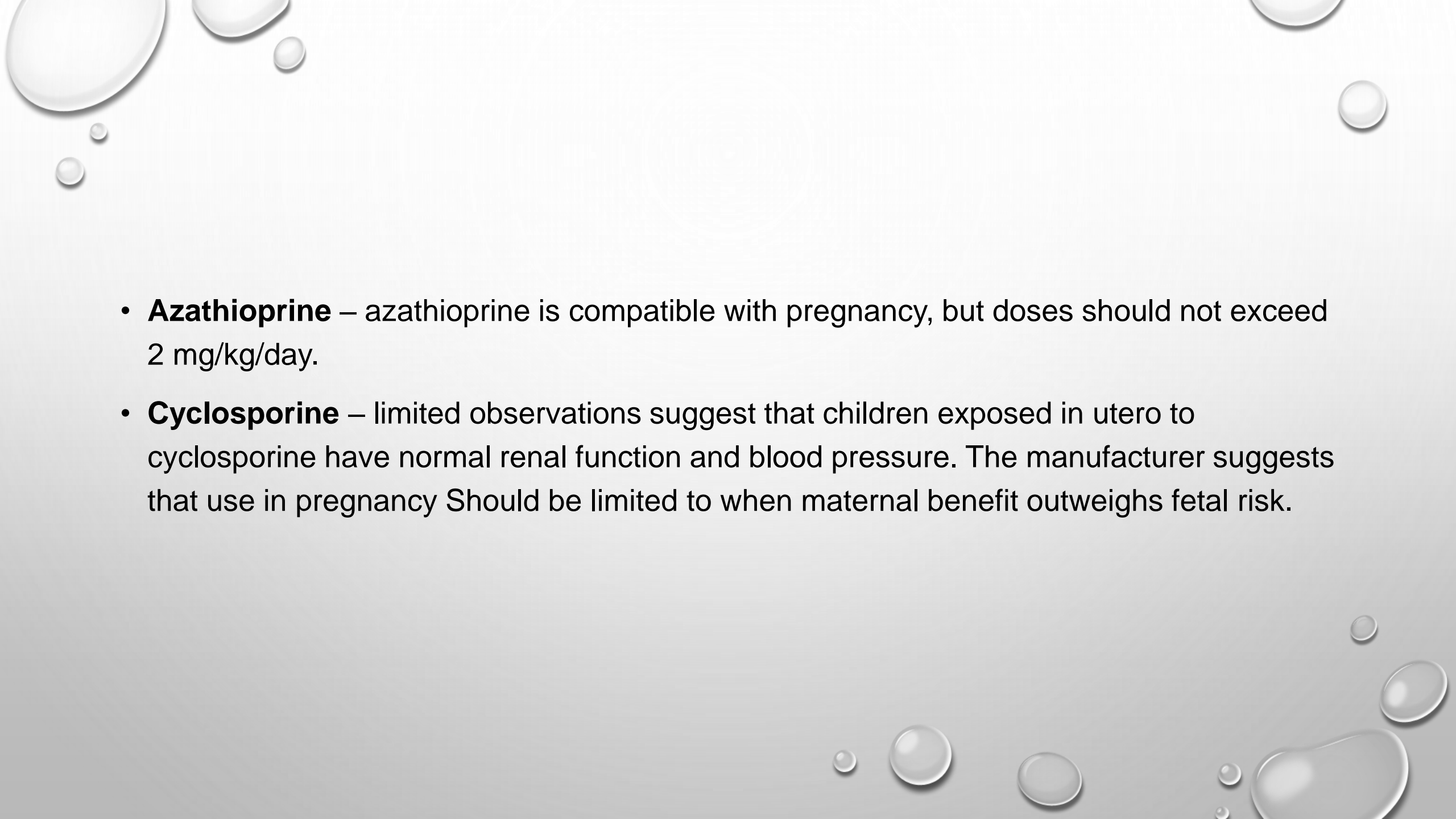
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- In addition, high disease activity occurred in twice as many pregnancies in which HCQ was stopped compared with those who continued taking HCQ. However, no specific Pattern of anomaly was identified, .
 - Additionally, some data suggest a decrease in occurrence of congenital heart block in at-risk fetuses of mothers with anti-RO/SSA and anti-LA/SSB antibodies exposed to HCQ

- **Low-dose aspirin** – we initiate low-dose aspirin in all women with SLE, unless contraindicated, starting from approximately 12 weeks gestation, to reduce the risk of preeclampsia and its sequelae (Eg, fetal growth restriction), regardless of the presence of APLS.
- This approach is consistent with the recommendation by the united states preventive services task force to use low-dose aspirin In women at high-risk of developing preeclampsia, which includes women with SLE

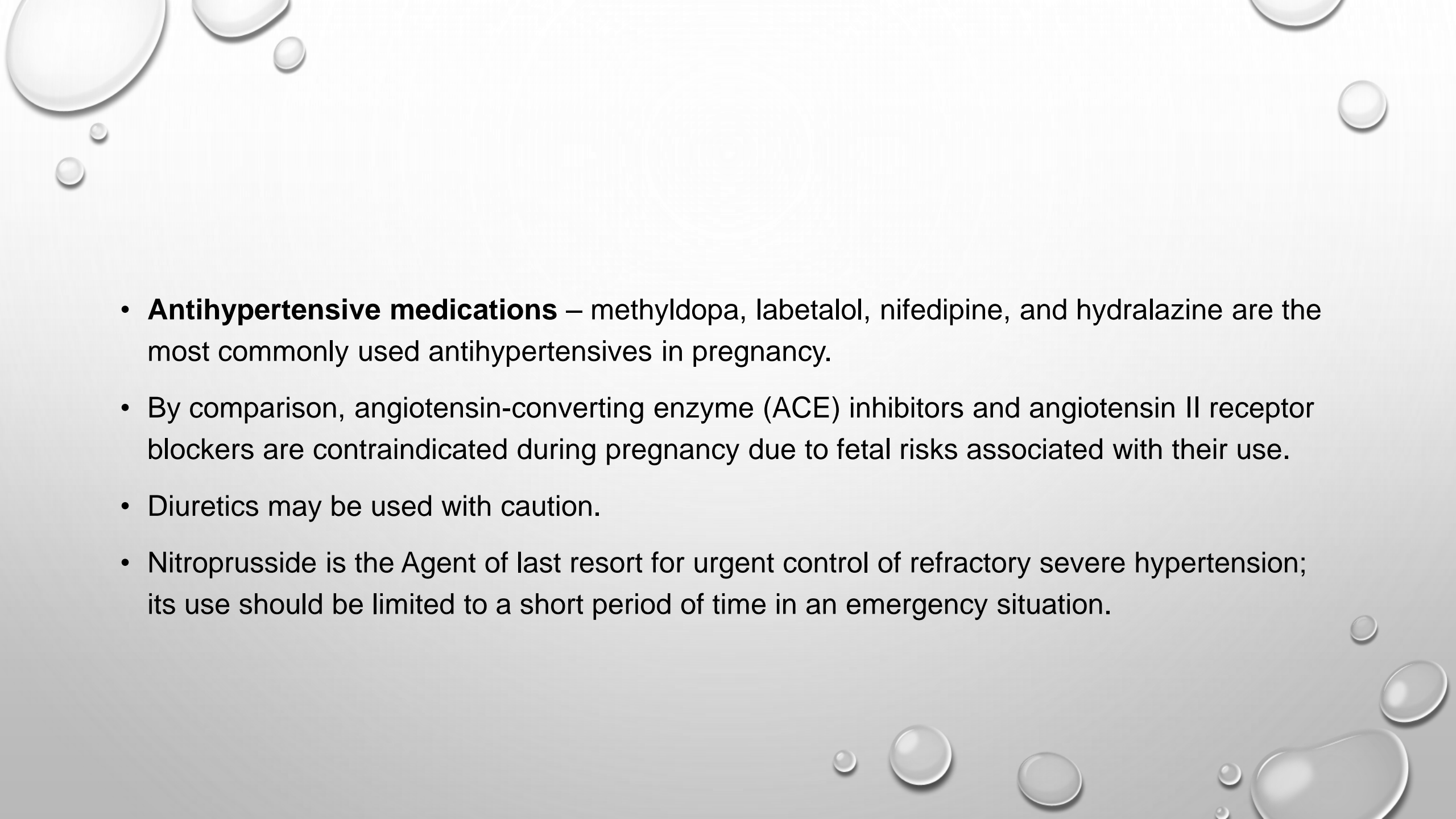
- **Selective use allowed during pregnancy** — the following drugs have a reasonable safety profile during pregnancy, but certain limitations apply to their use. Nonsteroidal antiinflammatory drugs (NSAIDs), glucocorticoids, azathioprine, and some antihypertensive medications are included in this category.
- They each have a small risk of causing fetal harm, but their use may be acceptable if Needed to control manifestations of SLE during pregnancy.

- **Nonsteroidal antiinflammatory drugs** – NSAID use is not associated with congenital anomalies. There is conflicting evidence as to whether exposure to NSAIDs during the first trimester increases The risk of spontaneous abortion; in women having difficulty conceiving, one can consider avoiding these medications during the first trimester.
- When NSAIDs are used beyond 20 weeks; the US food and drug administration (FDA) recommends that the lowest dose and shortest duration of NSAID be used between 20 and 30 weeks of Gestation.
- Use of NSAIDs after 30 weeks of gestation may cause premature closure of the ductus arteriosus, as well as other complications, and should be avoided altogether from the third Trimester on.

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- **Glucocorticoids** – glucocorticoids are used for a wide range of maternal diseases in pregnancy. We suggest control of disease with the lowest possible dose of prednisone, ideally less than 10Mg/day.
 - While there were some reports of glucocorticoid use during the first trimester being associated with cleft lip, with and without cleft palate, subsequent studies have failed to consistently Demonstrate an increased risk of this malformation.

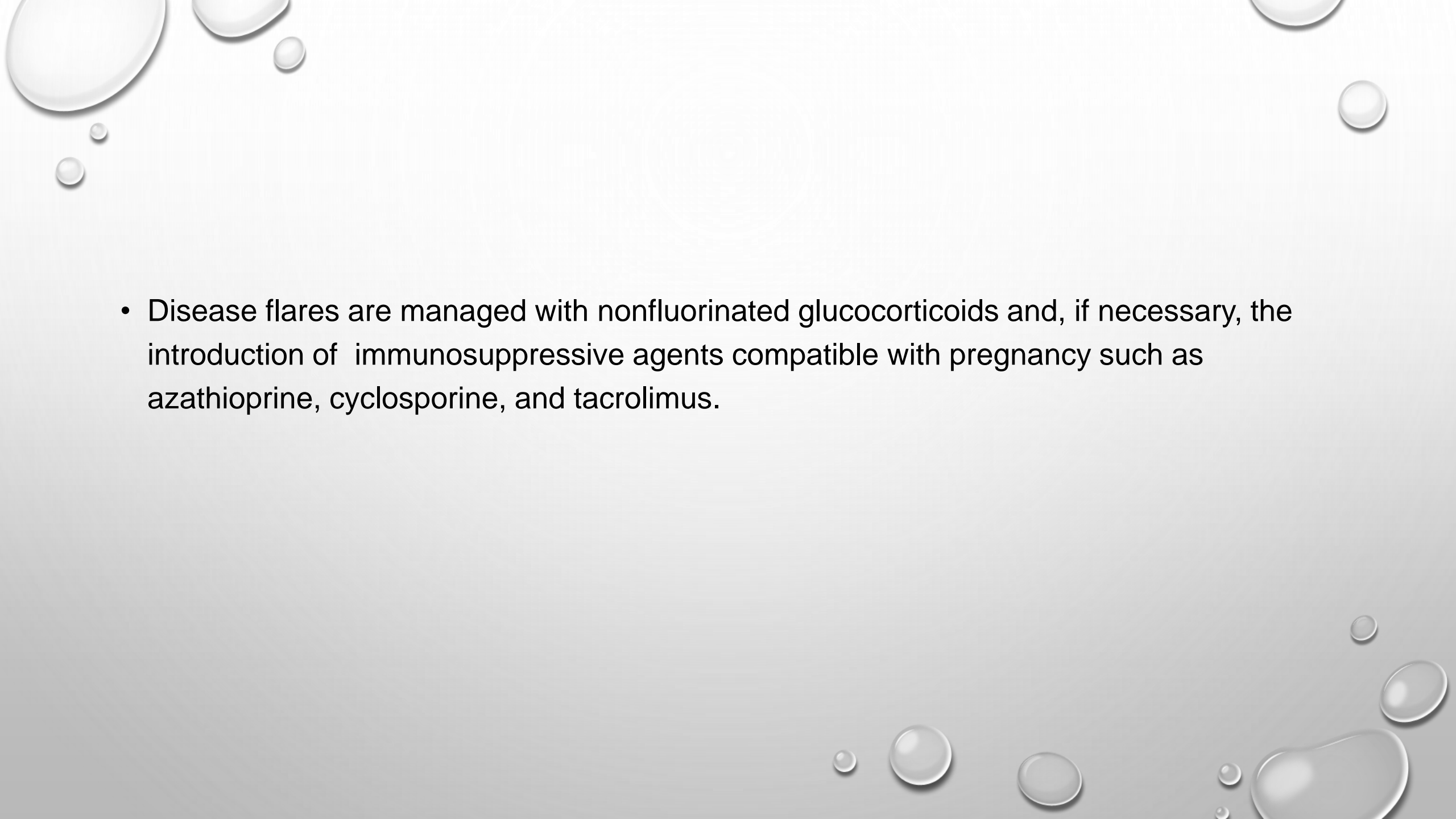
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- **Azathioprine** – azathioprine is compatible with pregnancy, but doses should not exceed 2 mg/kg/day.
 - **Cyclosporine** – limited observations suggest that children exposed in utero to cyclosporine have normal renal function and blood pressure. The manufacturer suggests that use in pregnancy Should be limited to when maternal benefit outweighs fetal risk.

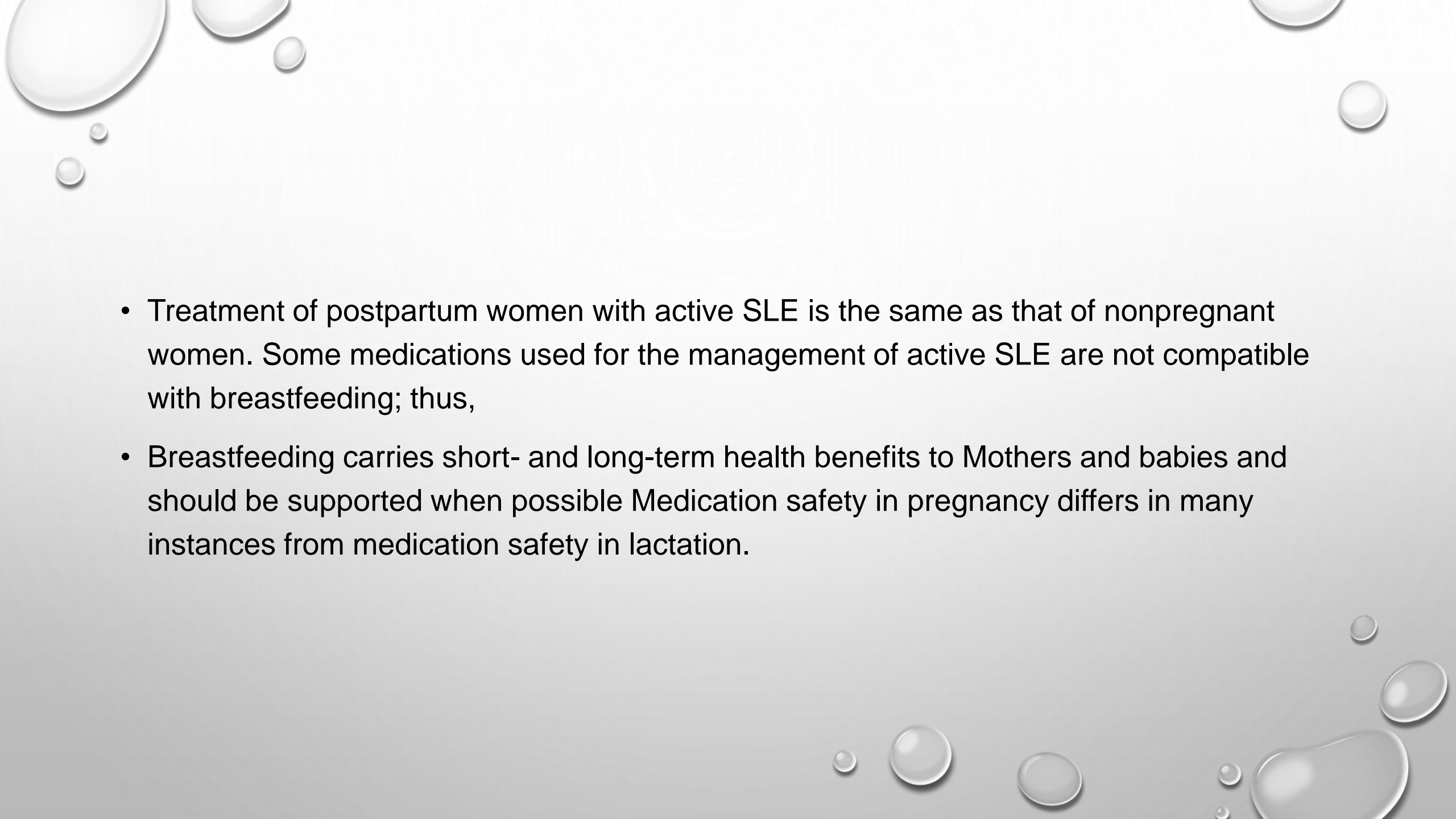
- **Tacrolimus** – tacrolimus has been used as induction and maintenance therapy in SLE nephritis .
- Tacrolimus use has been reported in over 200 pregnancies for varying indications. Overall pregnancy outcomes were normal; however, Hypertension, preeclampsia, and preterm birth occurred more frequently than would be expected. A causal relationship between tacrolimus use and congenital anomaly has not been found, Though the number of fetuses exposed in utero has been small.

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- **Antihypertensive medications** – methyldopa, labetalol, nifedipine, and hydralazine are the most commonly used antihypertensives in pregnancy.
 - By comparison, angiotensin-converting enzyme (ACE) inhibitors and angiotensin II receptor blockers are contraindicated during pregnancy due to fetal risks associated with their use.
 - Diuretics may be used with caution.
 - Nitroprusside is the Agent of last resort for urgent control of refractory severe hypertension; its use should be limited to a short period of time in an emergency situation.

SELECTIVE USE WITH CAUTION IN PREGNANCY

- **Biologic medications** – data regarding the use of biologic medications such as the b-cell depleting antibody, rituximab, or the BAFF inhibitor, belimumab, during pregnancy are limited.
- Given that IgG does not cross the placenta in significant amounts until week 15 of gestation, we continue these medications through conception (ie, the first missed menstrual period in a woman with regular cycles).

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- Disease flares are managed with nonfluorinated glucocorticoids and, if necessary, the introduction of immunosuppressive agents compatible with pregnancy such as azathioprine, cyclosporine, and tacrolimus.

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- Treatment of postpartum women with active SLE is the same as that of nonpregnant women. Some medications used for the management of active SLE are not compatible with breastfeeding; thus,
 - Breastfeeding carries short- and long-term health benefits to Mothers and babies and should be supported when possible Medication safety in pregnancy differs in many instances from medication safety in lactation.

BREASTFEEDING

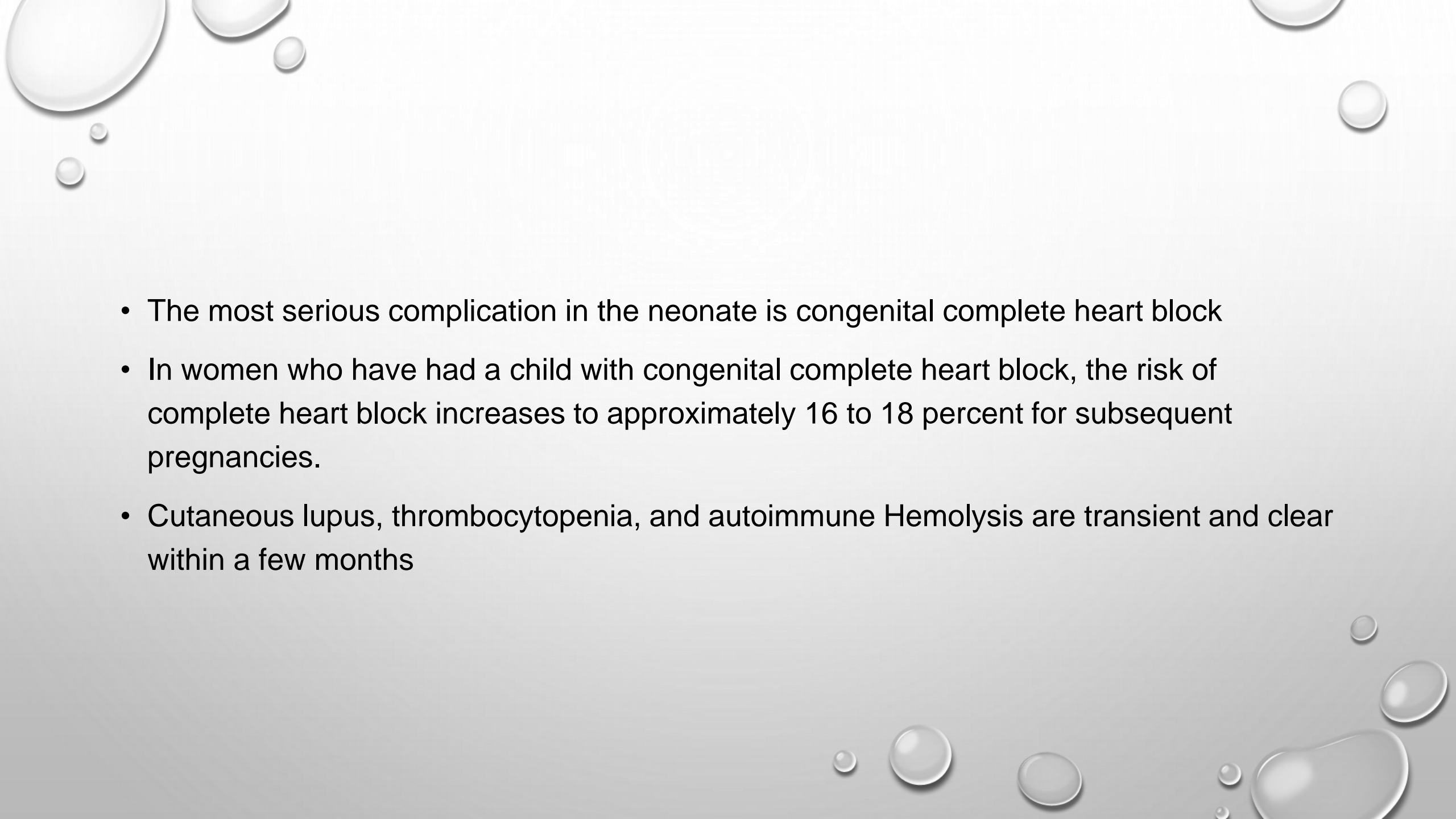
- Premature or ill infants may be at increased risk of some medication exposures.
- Hydroxychloroquine (hcq), prednisone, cyclosporine, azathioprine, and tacrolimus **are** considered compatible with breastfeeding.
- Methotrexate, mycophenolate mofetil, cyclophosphamide, and Leflunomide **are not** compatible with breastfeeding.

Neonatal lupus

- NL is a passively transferred autoimmune disease that occurs in some babies born to mothers with anti-RO/SSA or anti-LA/SSB antibodies, who may or may not carry the Diagnosis of SLE or sjögren's.
- The major manifestations of NL are either cutaneous or cardiac, but other manifestations of NL include hematologic and hepatic abnormalities.

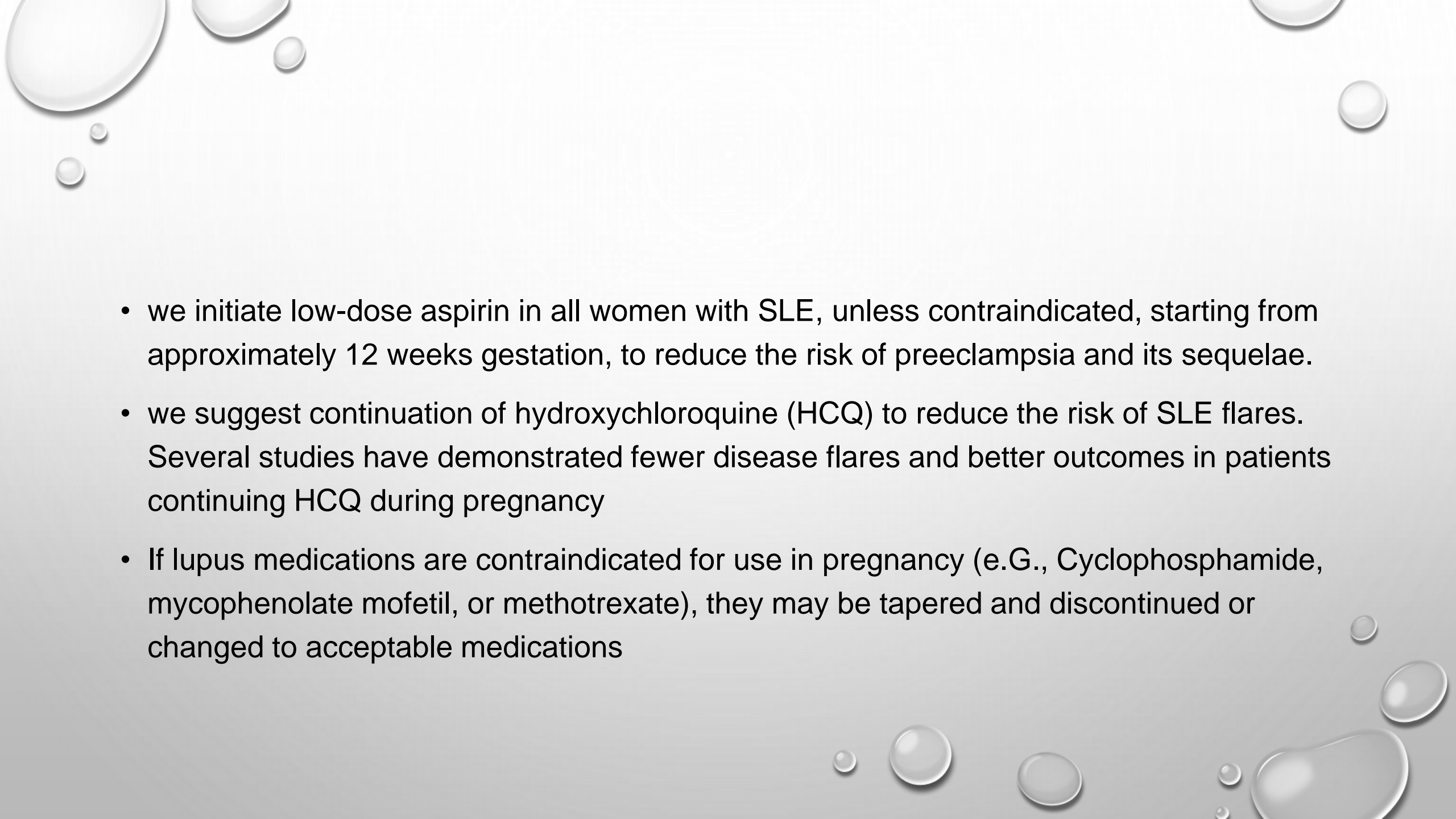
NEONATAL LUPUS SYNDROME

- This is characterized by newborn skin lesions—lupus dermatitis. Cutaneous manifestations can be present in 30 to 40 percent of Infants and appears at 4 to 6 weeks of age. These are usually Associated with anti-SS-A and SS-B antibodies, and approximately 40 percent of Women with SLE are positive for these
- Thrombocytopenia and Hepatic involvement are seen in 5 to 10 percent of affected infants.

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- The most serious complication in the neonate is congenital complete heart block
 - In women who have had a child with congenital complete heart block, the risk of complete heart block increases to approximately 16 to 18 percent for subsequent pregnancies.
 - Cutaneous lupus, thrombocytopenia, and autoimmune Hemolysis are transient and clear within a few months

TAKE HOME MASAGES

- Patients with evidence of active SLE, especially lupus nephritis, should be advised to defer pregnancy until the disease is well controlled for at least **six months**.
- Ultrasound evaluation for fetal growth and placental insufficiency in the third trimester every 4 weeks .
- fetal surveillance testing (e.G., Modified biophysical profile testing NST) is usually started at 32 weeks.
- serial assessment , starting at 16 w and continuing through 28 w of gestation with Echocardiography in women who have antibodies to RO/SSA and/or LA/SSB .For diagnosis of congenital heart block

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- we initiate low-dose aspirin in all women with SLE, unless contraindicated, starting from approximately 12 weeks gestation, to reduce the risk of preeclampsia and its sequelae.
 - we suggest continuation of hydroxychloroquine (HCQ) to reduce the risk of SLE flares. Several studies have demonstrated fewer disease flares and better outcomes in patients continuing HCQ during pregnancy
 - If lupus medications are contraindicated for use in pregnancy (e.G., Cyclophosphamide, mycophenolate mofetil, or methotrexate), they may be tapered and discontinued or changed to acceptable medications



THE END!

Thanks for your
attention.