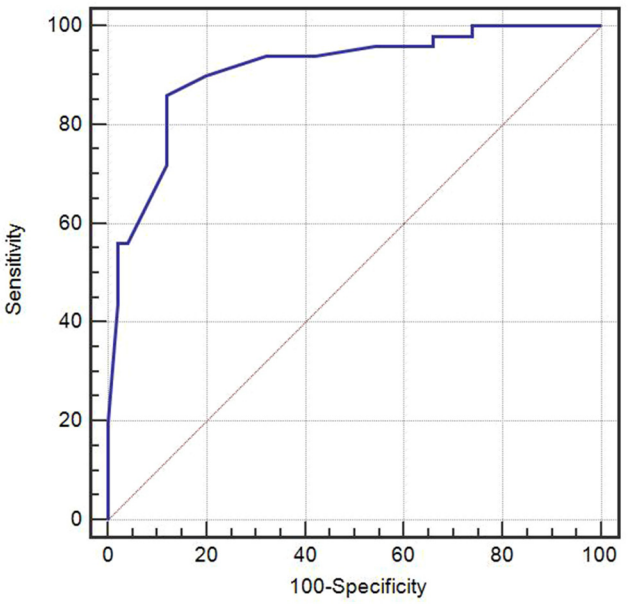

817 Correlation of bile acids and aspartate-aminotransferase with adverse perinatal outcomes in intrahepatic cholestasis of pregnancy

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OBJECTIVE: To identify laboratory data that correlate with a non-reassuring prognosis and poor obstetrical and neonatal outcomes.

STUDY DESIGN: A retrospective review of women with intrahepatic cholestasis of pregnancy (ICP), admitted for delivery between January 1, 2013 and December 31, 2017, was performed.

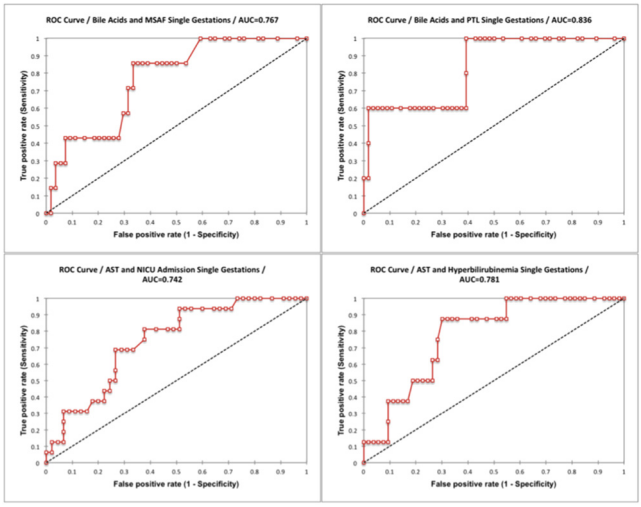
Chi-square and Student's T-test statistical analysis was performed, and receiver-operator characteristic curves were plotted for the prediction of each category of perinatal outcome and the areas under the curves were determined. All p-values were two-sided, and P <0.05 was considered statistically significant.

RESULTS: Examination of the pregnancy outcomes and clinical features of the 61 patients diagnosed with ICP showed no occurrence of IUFD, stillbirth, abruption, or neonatal demise. In our cohort, no single factor was identified that correlated with a reassuring outcome and would permit expectant management of pregnancy beyond 37 weeks gestation.

ROC curve analysis revealed a statistically significant correlation between bile acid and AST levels and perinatal outcomes. A bile acid level equal to or greater than 37 μmol/L strongly predicted spontaneous preterm labor in women affected by ICP with a sensitivity of 100% and specificity of 60.70% (P value 0.002). A bile acid level equal to or greater than 42 μmol/L strongly predicted meconium-stained amniotic fluid with a sensitivity of 85.70% and specificity of 66.70% (P value 0.006). AST levels equal to or greater than 62 IU/L strongly predicted NICU admission with a sensitivity of 81.30% and specificity of 62.20% (P value 0.002). AST levels equal to or greater than 75 IU/L strongly predicted hyperbilirubinemia in the neonates with a sensitivity of 87.50% and specificity of 69.80% (P value 0.001).

CONCLUSION: There is a statistically significant correlation between elevated bile acid and AST levels and adverse perinatal outcomes. Given this statistically significant correlation, patients with ICP should undergo serial liver function tests, specifically AST levels, along with serial bile acid levels.

Although we had positive correlations between adverse perinatal outcomes and bile acid level and aspartate- aminotransferase levels, we investigated short-term outcomes, and whether long-term sequellae exist has yet to be elucidated. As per our data analysis, a subcategory of patients with ICP and abnormal LFTs also need to be separately studied.



818 Correlation of self-reported depressed mood using telehealth and 6-week EPDS in postpartum women with hypertension

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OBJECTIVE: To determine if a depression screening question administered via telehealth (TH) correlates with rates of postpartum depression (PPD) captured at the 6-week postpartum visit the Edinburgh Postnatal Depression Scale (EPDS)

STUDY DESIGN: This was a secondary analysis of a TH program for a postpartum hypertension: non-randomized control trial. TH patients were asked twice weekly for 6 weeks if their mood "has been more depressed this week compared to a normal week," along with taking routine vitals. The controls received routine care after discharge, which included an EPDS questionnaire at the 6-week postpartum visit. EPDS scores were collected from the EMR at the visit for all study participants.

RESULTS: 214 TH participants and 214 concurrent controls were included in this analysis. Maternal demographics were similar between groups, though TH participants had more severe HTN disorders and were more likely to have undergone CD. Among both groups, the rate of a previous mental health diagnoses was similar at 32%. During postpartum week 1, 29 (16%) participants reported a more depressed mood based on the TH screening question. These rates decreased weekly, with only 3 (5%) participants reporting depressed mood by week 6. This did not correlate well with the 6-week EPDS in which 22 (12.7%) of TH patients screened positive.

However, among TH participants and controls, depression scores based on the 6-week EPDS were similar with 22 (12.7%) and 20 (12.4%) screening positive, respectively. At 6 weeks postpartum, the most commonly reported depression symptoms based on the EPDS were feeling anxious, worried, self-blame, and "things getting on top of me."

CONCLUSION: Utilizing the EPDS, our rates of depression in women with diagnosed hypertensive disorders during pregnancy are similar to national postpartum rates at 13%. Our results demonstrated that depressed mood is most common during the first week postpartum. Self-reported depressed mood may not predict actual depression. However, TH could provide a promising approach in identifying PPD earlier by utilizing more sensitive questions based on EPDS commonly reported feelings, prompting earlier intervention and treatment. This is an approach that warrants future investigation.

Table 1. Edinburgh Postnatal Depression Scale (EPDS) score at 6-week postpartum visit for patients with positive depression screens (≥10)

Question	Telehealth	Control	*P*-value
I have been anxious or worried for no good reason	2.40	2.40	1.00
I have blamed myself unnecessarily when things went wrong	2.05	1.90	0.56
Things have been getting on top of me	1.85	1.75	0.63
I have felt scared or panicky for no very good reason	1.75	2.05	0.27
I have felt sad or miserable	1.45	1.53	0.70
I have been so unhappy that I have been crying	1.45	1.10	0.10
I have been so unhappy that I have had difficulty sleeping	0.95	1.40	0.13
I have looked forward with enjoyment to things	1.05	0.93	0.65
I have been able to laugh and see the funny side of things	0.65	0.75	0.69
The thought of harming myself has occurred to me	0.20	0.05	0.25

819 Care of the pregnant cardiac patient – the importance of a multidisciplinary approach

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OBJECTIVE: Cardiac disease is a significant contributor to severe maternal morbidity (SMM). The objective of our study was to assess obstetric and cardiac outcomes among pregnant women with cardiac disease managed by a multidisciplinary care team.

STUDY DESIGN: This retrospective cohort study was conducted in a single-center over a 6-year period (2012-2018). At our center, all pregnant patients with congenital and acquired cardiac disease are cared for by a multidisciplinary team of perinatologists, cardiologists, anesthesiologists, and nurses. Monthly in-person meetings are held to coordinate the care of pregnant patients and develop detailed delivery and postpartum care plans including intrapartum monitoring, labor analgesia, and postpartum location. Peripartum SMM at the time of delivery was defined based on CDC criteria.

RESULTS: Among 136 pregnancies in 117 women, 41 (35%) had arrhythmias, of which 26% were defibrillator or pacemaker dependent. Forty-five women (38%) had undergone open cardiac surgery with 44% of those receiving anticoagulation. Ten women (7%) developed pre-eclampsia, 10 (7%) had PPROM, and 36 (26 %) had preterm birth. Fifty-four women (39%) were induced, 26% of those for worsening cardiac function. Twenty women (14%) experienced an intrapartum cardiac or thrombotic event including one woman with pulmonary edema, three with arrhythmia, and two with cardiomyopathy/heart failure. Seventy-seven women (57%) were delivered vaginally. Of the 58 cesarean sections, 26 (45%) were scheduled per interdisciplinary cardiac care team planning. All unscheduled cesarean sections were performed for obstetric or neonatal indications; none were for worsening intrapartum cardiac function. Twenty women (15%) developed a postpartum cardiac event (pulmonary edema, arrhythmia, cardiomyopathy, acute heart failure, or stroke), and 8 women (6%) were readmitted within 6 weeks. Sixteen women (12%) experienced SMM at the time of delivery with a variable annual SMM rate, ranging from 0-20% (Table 1).

CONCLUSION: Peripartum severe maternal morbidity and obstetric complications among women with cardiac disease are higher than the rate described in the general population. Given the increased morbidity, such pregnancies mandate multidisciplinary comprehensive pregnancy care and planning.

Table 1. Severe maternal morbidity by year (N=136)	
2012	1 (20%)
2013	0
2014	4 (19%)
2015	6 (19%)
2016	1 (3%)
2017	4 (15%)
2018	0

820 "You can't get pregnant:" Contraceptive counseling by non-gynecologic specialties

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OBJECTIVE: Unintended pregnancies can be life-threatening for women with complex medical conditions, yet MFMs typically do not meet the patient until after conception. We sought to better understand the contraceptive counseling provided by non-gynecologic specialists who care for medically complex women.

STUDY DESIGN: Providers across 10 non-gynecologic specialties at a single tertiary center in 2016-2017 completed an anonymous survey. The survey assessed provider demographics, counseling rates, and comfort with counseling about contraception and pregnancy risks.

We then performed a retrospective cohort study to evaluate the extent of contraceptive counseling women with 20 high-risk comorbidities received. We selected comorbidities that are frequently encountered (e.g. diabetes, hypertension), associated with high morbidity (e.g. pulmonary hypertension), or put a woman at high risk of exposure to teratogenic medications (e.g. acne, lupus). We compared comorbidities using low-, moderate-, and high-maternal morbidity classifications. We considered teratogenic medications to be those previously classified as FDA category X.

RESULTS: Of 200 providers approached, 158 responded (79%). Of respondents, 77% felt that it was the responsibility of all providers (primary care, gynecologist, and specialist) to counsel the patient about the risks of pregnancy; 60% felt that these same providers were responsible for counseling about contraceptive options. Over 40% of respondents reported providing contraceptive counseling "always" or "most of the time," and over 35% reported offering contraception "always" or "most of the time." Additionally, 40% of respondents reported counseling women about the risks of pregnancy; however, contraception was documented for only 36% of all