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Results: Among 5,982,945 eligible live births, 1,035,003 (17.3%) underwent induction of labor, third degree tear, fourth-degree tear.

Methods: We conducted a population-based, retrospective cohort study using the United States' Nationwide Inpatient Sample to evaluate the risk of third- and fourth-degree perineal tears in women who underwent IOL at term between 2005 and 2014. We included all term livebirths and excluded, preterm births, previous cesarean deliveries, multifetal gestations, and non-cephalic presentation. Women who underwent an IOL at term were identified using ICD-9 coding. Patient characteristics were compared between those women being induced at term with those who weren’t, and logistic regression analysis were carried out to estimate the adjusted effect of IOL at term with risk of 3rd and 4th perineal tears.

Results: Among 5,982,945 eligible live births, 1,035,003 (17.3%) underwent an IOL at term, increasing from 15.7% to 18.5%. Women with an IOL were more likely to be older, Caucasian, and with comorbid illnesses. Compared with women who did not undergo an IOL, women in the IOL group had lower risk of cesarean deliveries, 0.89 (0.88–0.89), 2nd degree tears, 0.89 (0.89–0.90), 3rd degree tears, OR 0.81 (95% CI 0.79–0.82) and 4th degree tears, OR 0.84 (95% CI 0.82–0.87).

Conclusions: Induction of labor at term results in significantly lower risk of third- and fourth-degree perineal tears among all deliveries as well as among vaginal deliveries.

Keywords: induction of labor, third degree tear, fourth-degree tear

Unwanted pregnancies: Publicly available information for women seeking abortion care in Ontario

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Objectives: Although abortion is common, the inability to obtain a referral and social stigma often lead women to search online for abortion information. Searches may yield relevant services but may also include Crisis Pregnancy Centres (CPCs), whose mission is to dissuade women from seeking abortions. The objective of this study was to determine the type of abortion-related resources women searching for services near their community might find.

Methods: We included communities in Ontario with a population over 15,000 or a general hospital. Between, 07/27/2019 and 08/06/2019, we searched the community name followed by “abortion” on the anonymous Google proxy server StartPage. The first 5 Canadian resources were categorized as: sexual health resource (<200 km, ≥200 km), abortion resource (<200 km, ≥200 km), CPC or Irrelevant/Other. Descriptive statistics were generated for search results by category and the number and percent of communities with each result category.

Results: There were 130 communities included. Searches yielded 648 discrete results which related to abortion services (41.9%), sexual health (10.3%) and CPCs (10.2%); 37.5% were irrelevant (news articles, unrelated services). Overall, 11.5% of communities had no sexual health or abortion resource within 200km, and 29.2% had no abortion specific resource within 200km. CPCs were among the top 5 results for 41.5% of communities.

Conclusions: Although relevant sexual health and abortion resources comprised almost half the search results, over 10% of communities had no local resources listed and over 40% had a listed resource that could hinder timely access to abortion care.

Keywords: abortion, sexual health, crisis pregnancy centre

Early versus late onset of hypertensive disorders in twins—The placental perspective

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Objectives: Early and late hypertensive disorders in pregnancy (HDP) are different entities in singleton gestations, with earlier onset associated with higher rates of placental maternal vascular malperfusion lesions (MVMs). It is still not known if this distinction apply for twin gestations as well.

Methods: Retrospective study of women with DCDA twin gestations and HDP (2001–2015), with a placental pathology evaluation. Placental lesions were classified according to the Amsterdam criteria. Pregnancy with early onset HDP (≤34 weeks) were compared with pregnancies with late onset HDP (>34 weeks).

Results: Out of 1655 twin deliveries, 161 (9.7%) were complicated by HDP. 77 (47.8%) had preeclampsia, and 84 (52.2%) had gestational hypertension. Forty patients (24.8%) had early onset HDP. Early HDP was associated with a higher rate of 1 MVMs (p=0.01), 2 MVMs (p=0.009) and with a lower rate of chronic villitis (p=0.02). In multivariable analysis, using late HDP as reference, early HDP was associated with a higher prevalence of ≥1 MVMs (aOR 1.9, 95% CI 1.1–3.5, p=0.03) and ≥2 MVMs (aOR 2.6, 95% CI
Conclusions: While the mechanism underlying HDP in singleton and twins' gestations may be different, similar to singleton pregnancies, early onset (≤34 weeks gestation) of HDP in twins' gestation is associated with a higher prevalence of MVM's, suggesting of reduced placental perfusion in early onset HDP in twins.

Keywords: maternal vascular malperfusion, preeclampsia, gestational hypertension, placental pathology

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Differences in placental findings between pregnancies complicated by gestational hypertension versus preeclampsia

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Objectives: Gestational hypertension (GHTN) and preeclampsia (PE) share common characteristics. Yet, are there any dissimilarities in the presence of multiple maternal vascular malperfusion lesions (MVM's), which are considered a hallmark of hypertensive disorders in pregnancy? We aimed to answer this question by examining the differences between placental findings in singleton gestations complicated by GHTN and PE.

Methods: A retrospective study of all women with singleton gestations and GHTN/PE, who delivered at a single, referral medical center (2001–2015) and had a placental pathology evaluation. Placental lesions were classified according to the Amsterdam Criteria. Pregnancies complicated by PE were compared to pregnancies complicated by GHTN.

Results: Overall 2,286 (4.5% of the deliveries during the study period) were complicated by GHTN/PE, out of which 913 (40.0%) had pathology data: 412 (45.1%) with GHTN and 501 (54.9%) with PE. Patient with PE were slightly younger, with lower rate of GDM, and delivered on average 5 weeks earlier with higher rate of cesarean deliveries. Neonates of parturients with PE had lower birth weight and were more prone for NICU admission (Table). Differences in placental pathology are depicted in the figure. On multivariable logistic regression model (including gestational age, maternal age, GDM and GHTN/PE), PE was associated with higher likelihood of marginal/velamentous insertion of the cord (aOR 1.9, 95% CI 1.5–2.6), and lower likelihood of ≥1 MVM's (aOR 0.64, 95% CI 0.5–0.9) and chronic villitis (aOR 0.5, 95% CI 0.3–0.9). There were no significant differences in the presence of ≥2 or more MVM's.

Conclusions: Several differences exist in placental pathology between PE and GHTN. However, no differences in the presence of multiple MVM's were found, which may suggest that at the placental ischemic injury level, the two disorders share similar etiopathology.

Keywords: placental pathology, maternal vascular malperfusion, preeclampsia, gestational hypertension

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Pregnancy, delivery, and neonatal outcomes among women with celiac disease

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Objectives: To investigate the association between celiac disease and pregnancy, delivery, and neonatal outcomes, using a population database cohort.

Methods: We conducted a retrospective cohort study utilizing the Health Care Cost and Utilization Project-Nationwide Inpatient Sample database over 11 years from 2004 to 2014. A delivery cohort was created using ICD-9 codes, and ICD-9 code number 579.0 was used to extract the cases of celiac disease. Pregnancies complicated with celiac disease (cases) were compared to pregnancies without celiac diseases (control). A multivariate logistic regression model was used to adjust for statistically significant variables (P value <0.05).

Results: There were 9,094,499 deliveries during the study period. 2289 pregnant women were found to have celiac disease. Compared to the control group, the cases were more likely to be white, older at the time of pregnancy, had higher income, and had a private insurance plan (P <0.001). Also, they were more likely to have pregestational diabetes, autoimmune disorders, and had multiple gestations (P <0.001). There was no significant difference between the groups concerning pregnancy-induced hypertension and preterm birth. At birth, 3.8% and 2.2% of the neonates were found to be small for gestational age (SGA) in the cases and control groups respectively (aOR 1.49 95% CI 1.01–2.22). Congenital anomalies were encountered in 1.9% of the celiac group compared to the control group (0.4%) (aOR 2.4 95% CI 1.46–3.95).

Conclusions: Celiac disease is associated with small gestational age and increased congenital malformation.

Keywords: celiac disease and pregnancy