

LO44**Birth cohort hepatitis C screening in an academic emergency department in Canada: preliminary results**

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Introduction: Epidemiologic and modeling studies suggest that between 45 and 70% of individuals with chronic hepatitis C virus (HCV) infection in Canada remain undiagnosed. The Canadian Association for the Study of the Liver (CASL) recommends one-time screening of baby boomers (1945-1975). Screening programs in the US have shown a very high prevalence of previously undiagnosed HCV among patients seen in the emergency department (ED). We sought to assess the feasibility of implementing a targeted birth-cohort HCV screening program in a Canadian ED setting. **Methods:** Patients born from 1945 to 1975 presenting to the ED of a downtown Toronto hospital were offered HCV testing. Patients with life-threatening conditions, unable to provide verbal consent in English or intoxication were excluded. Blood samples were collected by finger prick on Dried Blood Spot (DBS) collection cards and tested for anti-HCV antibody with reflex to HCV RNA. Patients with positive HCV RNA were referred to a liver specialist. **Results:** During a 27-month period (July 2017 - Sept 2019), 8363 patients in the birth cohort presented to the ED during daytime hours. 80% (6714) met eligibility criteria, and 48.4% (3247) were offered testing. Screening was performed by non-medical staff (mean 8/day, median spots on DBS 4). 345 (10.6%) had been previously tested, and 639 (19.7%) declined. 2136 (65.8%) patients underwent testing: median age 58.4 years (40-82), 1117 male (52.3%). Of these, 45 patients (2.1%; 95% CI 1.5%-2.7%) were anti-HCV positive: 32 (76.2%) were HCV RNA positive, 10 (23.8%) negative and 3 not done due to inadequate DBS sample. 26 patients (81.3%) were linked to care and 3 (9.4%) lost to follow-up. HCV prevalence in the ED was significantly higher than the general Canadian population (2.1% vs 0.7%; $p < 0.0001$) but much lower than reported rates in American EDs (2.1% vs 10.3%; $p < 0.0001$). **Conclusion:** Acceptance of HCV screening in the ED birth cohort was high and easily performed using DBS to ensure the majority of positive samples were tested for HCV RNA. Challenges included implementation that limited number of people tested, and linkage to care for HCV positive patients. HCV prevalence among this ED birth cohort was higher than the general population but lower than seen in the ED in the US. This may in part be due to exclusion of individuals with more severe medical issues, refusal by higher risk subgroups, or population and healthcare system differences between countries.

Keywords: hepatitis C, screening

LO45**Women's perspectives on early pregnancy complications and supportive care needs: a qualitative multi-site study**

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Introduction: Women experiencing early pregnancy loss or threatened loss frequently seek care in emergency departments (ED) or early pregnancy clinics (EPC). The dearth of existing qualitative studies has left understudied questions about how these women perceive their healthcare and which strategies best meet their supportive care

needs, particularly in the Canadian context. The objective of this study was to deepen our understanding of these women's experiences and gain insight into how clinicians and healthcare services can lessen the impact of this traumatic event on patients and their families.

Methods: We conducted a descriptive qualitative study of women who presented to the ED or EPC at an urban tertiary care hospital and an urban community hospital for early pregnancy loss or threatened loss. Purposive sampling was used to recruit patients for in-depth, one-on-one telephone interviews conducted 4-6 weeks after the index visit. Data collection and analysis were concurrent and continued until thematic saturation had occurred. Data analysis was led by two qualitative researchers with support from a multi-disciplinary research team following standard thematic analysis techniques. **Results:** Interviews were completed with 59 women between July 2018 and August 2019. Participants ranged in age from 22 to 47 years and reflect the diversity of the multicultural city where the study occurred. Our analysis revealed that the medicalization and normalization of early pregnancy complications among ED and EPC clinicians is at odds with women's general lack of knowledge about the frequency, personal risk, causation, duration, and physical intensity of the miscarriage experience. Women identified the value of rapid access to appointments, point of care ultrasound, detailed care plans, and knowledgeable advice as key to lessening the physical and emotional trauma related to early pregnancy loss. **Conclusion:** This research highlights the physical, emotional, and psychological complexity of a medical situation frequently minimized within the current healthcare system. The results impart important knowledge about which aspects of ED and EPC care are most valued by women experiencing early pregnancy loss or threatened loss and demonstrate the clear need for women and their families to be provided with more education about the totality of the early pregnancy experience, including the possibility of pregnancy complications and loss.

Keywords: early pregnancy loss, miscarriage, patient experience

LO46**Prognostic value of single serum progesterone in the evaluation of symptomatic pregnant patients: a systematic review and meta-analysis**

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Introduction: Pain and bleeding complicate 30% of pregnancies threatening viability. The objective of this systematic review is to evaluate the role of a single progesterone level in predicting viability.

Methods: We comprehensively searched MEDLINE, Embase (OVID), CINAHL and Cochrane databases from inception to July 2019. We included English language studies that enrolled symptomatic first trimester pregnant patients, measured progesterone and reported viability (miscarriage, ectopic or viable). We excluded studies with patients who had progesterone treatment, or conception after induced ovulation/invitro fertilization. We extracted patient characteristics, study setting, mean progesterone, the cut off value and outcome (viability). The quality of the included studies was assessed using Quality Assessment of Diagnostic Accuracy Studies-2 (QUADAS-2) tool. We extracted data for 2X2 tables and report mean, standard deviation (SD), sensitivity, specificity, positive and negative predictive values (PPV, NPV). **Results:** Of the 689 studies screened, 51 studies with 15783 patients were included (1 randomized control trial, 36 prospective, 9 retrospective, 5 prospective case control studies) and 7553

were viable pregnancies. Of the 31 studies ($n = 10998$) that reported ectopic, 1661 patients were diagnosed with ectopic pregnancy. In 35 studies ($n = 6003$) that reported mean and SD, the levels were higher in viable (26.7 ± 11.2 ng/ml) than non-viable (9.5 ± 5.9 ng/ml; $p < 0.001$) or ectopic pregnancy (9.5 ± 6.8 ng/ml ($p < 0.001$)). The pooled diagnostic characteristics at different cut-off values were: < 6.3 ng/mL (9 studies; $N = 6033$) sensitivity 65.0% (95% CI 63.5, 66.5), specificity 97.3% (95% CI 95.5, 98.5), PPV 99.4% (95% CI 99.1, 99.7) and NPV 27.4 (95% CI 26.6, 28.4); < 10 ng/mL (12 studies with 5743 participants) sensitivity 65.0% (95% CI 63.5, 66.5), specificity of 97.3% (95% CI 95.5, 98.5), PPV 99.4% (95% CI 99.1, 99.7) and NPV 27.4% [95% CI 26.5, 29.4]; 11–20 ng/mL (24 studies with 7141 participants) sensitivity 77.3% (95% CI 76.2, 78.4), specificity 64.6% (95% CI 63.2, 65.9), PPV 73.2% [95% CI 72.3, 73.9] and NPV 69.5% (95% CI 70.7, 72.5). There was low risk of bias for patient selection, index test and low concern regarding applicability. The highest risk (82% of studies) was due to outcome ascertainment bias due to non-blinding of index and additional tests. **Conclusion:** A single progesterone value is useful in predicting viability of pregnancy among symptomatic patients.

Keywords: ectopic pregnancy, pregnancy viability, progesterone

LO47

Hematochezia in children with acute gastroenteritis in the emergency department: clinical phenotype, etiologic pathogens, and resource utilization

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Introduction: Acute bloody diarrhea obligates rapid and accurate diagnostic evaluation; few studies have described such cohorts of children. **Methods:** We conducted a planned secondary analysis employing the Alberta Provincial Pediatric EnTeric Infection TEam (APPETITE) acute gastroenteritis study cohort to describe the characteristics of children with acute bloody diarrhea, compared to a cohort of children without hematochezia. Children < 18 years of age presenting to 2 pediatric tertiary care emergency departments (EDs) in Alberta, with ≥ 3 episodes of diarrhea and/or vomiting in the preceding 24 hours and < 7 days of symptoms were consecutively recruited. Stools were tested for 17 viruses, bacteria and parasites. Primary outcomes were clinical characteristics and pathogens identified. Secondary outcomes included interventions and resource utilization. **Results:** Of 2257 children enrolled between October 2015 and August 2018, hematochezia before or at the index ED visit was reported in 122 (5.4%). Compared to children with nonbloody diarrhea, children with hematochezia had longer illness duration [59.5 vs. 41.5 hrs, difference 10.6, 95% CI 3.5, 19.9], more diarrheal episodes in a 24-hour period [8 vs. 5, difference 3, 95% CI 2, 4], and less vomiting [55.7% vs. 91.1%; difference -35.3%; 95% CI -44.7, -26.3]. They received more intravenous fluids [32.0% vs. 18.3%; difference 13.7%, 95% CI 5.5, 23.0], underwent non-study stool testing [53.7% vs. 4.8%; difference 49.0%, 95% CI 39.6, 58.0], experienced longer ED visits [4.1 vs. 3.3 hours, difference 0.9, 95% CI 0.3, 1.0] and were more likely to have repeat healthcare visits within 14 days [54.8% vs. 34.2%; difference 20.6%, 95% CI 10.8, 30.1]. A bacterial enteric pathogen was found in 31.9% of children with hematochezia versus 6.6% without bloody diarrhea (difference 25.4%, 95% CI

17.2, 34.7). In children with hematochezia, the most commonly detected bacteria were *Salmonella* spp. ($N = 15$), Shiga toxin-producing *E. coli* ($N = 9$), *Campylobacter* spp. ($N = 7$), and *Shigella* spp. ($N = 5$). Viruses were detected in 32.8% of children with bloody diarrhea, most commonly adenovirus ($N = 15$), norovirus ($N = 14$), sapovirus ($N = 8$) and rotavirus ($N = 7$). **Conclusion:** Children with hematochezia differed clinically from those without hematochezia and required more healthcare resources. While bacterial etiologies are common, several viruses were also detected.

Keywords: acute bloody diarrhea, enteric pathogens, paediatrics

LO48

Pediatric cannabinoid hyperemesis syndrome in the emergency department: a 5-year retrospective review

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Introduction: Cannabinoid Hyperemesis Syndrome (CHS) in pediatric patients is poorly characterized. Literature is scarce, making identification and treatment challenging. This study's objective was to describe demographics and visit data of pediatric patients presenting to the emergency department (ED) with suspected CHS, in order to improve understanding of the disorder. **Methods:** A retrospective chart review was conducted of pediatric patients (12–17 years) with suspected CHS presenting to one of two tertiary-care EDs; one pediatric and one pediatric/adult (combined annual pediatric census 40,550) between April 2014–March 2019. Charts were selected based on discharge diagnosis of abdominal pain or nausea/vomiting with positive cannabis urine screen, or discharge diagnosis of cannabis use, using ICD-10 codes. Patients with confirmed or likely diagnosis of CHS were identified and data including demographics, clinical history, and ED investigations/treatments were recorded by a trained research assistant. **Results:** 242 patients met criteria for review. 39 were identified as having a confirmed or likely diagnosis of CHS (mean age 16.2, SD 0.85 years with 64% female). 87% were triaged as either CTAS-2 or CTAS-3. 80% of patients had cannabis use frequency/duration documented. Of these, 89% reported at least daily use, the mean consumption was 1.30g/day (SD 1.13g/day), and all reported ≥ 6 months of heavy use. 69% of patients had at least one psychiatric comorbidity. When presenting to the ED, all had vomiting, 81% had nausea, 81% had abdominal pain, and 30% reported weight loss. Investigations done included venous blood gas (30%), pregnancy test in females (84%), liver enzymes (57%), pelvic or abdominal ultrasound (19%), abdominal X-ray (19%), and CT head (5%). 89% of patients received treatment in the ED with 81% receiving anti-emetics, 68% receiving intravenous (IV) fluids, and 22% receiving analgesics. Normal saline was the most used IV fluid (80%) and ondansetron was the most used anti-emetic (90%). Cannabis was suspected to account for symptoms in 74%, with 31% of these given the formal diagnosis of CHS. 62% of patients had another visit to the ED within 30 days (prior to or post sentinel visit), 59% of these for similar symptoms. **Conclusion:** This study of pediatric CHS reveals unique findings including a preponderance of female patients, a majority that consume cannabis daily, and weight loss reported in nearly one third. Many received extensive workups and most had multiple clustered visits to the ED.

Keywords: cannabinoid hyperemesis syndrome, nausea and vomiting, pediatrics