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Emergency Department Visits During the Postpartum Period: A Canadian Cohort Study

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Study objective

Challenges in transitioning from obstetric to primary care in the postpartum period may increase emergency department (ED) visits. This study described the frequency, characteristics, and predictors of maternal ED visits in the postpartum period.

Methods

Retrospective cohort study of all live-birth pregnancies occurring in Alberta (Canada) between 2011 and 2017. Individual-level health and ED utilization data was linked across 5 population health databases. We calculated age-standardized ED visit rates in the postpartum period and used negative binomial regression models to assess the outcome of any ED visit in the postpartum period associated with relevant sociodemographic and clinical factors.

Results

In Data on 255,929 pregnancies from 193,965 individuals were analyzed. During the study period, 44.7% of pregnancies had 1 or more ED visits; 29.7% of visits occurred within 6 weeks after delivery. Increased postpartum ED visits were associated with living in remote (RR, 2.8; 95% CI 2.6–2.9) or rural areas (RR, 2.3; 95% CI 2.3–2.4), age less than 20 years (RR, 2.5; 95% CI 2.4–2.6), mental (RR, 1.6; 95% CI 1.6–1.7) and major/moderate health conditions (RR, 1.5; 95% CI 1.5–1.6), multiparity 4 or more (RR, 2.0; 95% CI 1.9–2.1), cesarean delivery (RR, 1.4; 95% CI 1.4–1.4), and intensive prenatal care (RR, 1.4; 95% CI 1.4–1.5).
Conclusion

Almost one third of ED visits in the postpartum occurred within 6 weeks immediately after delivery. Potential gaps in equitable access and quality of prenatal care should be bridged by appropriate transitions to primary care in the postpartum period.

African journal of emergency medicine

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The official journal of the African Federation for Emergency Medicine, the Emergency Medicine Association of Tanzania, the Emergency Medicine Society of South Africa, the Egyptian Society of Emergency Medicine, the Libyan Emergency Medicine Association, the Ethiopian Society of Emergency Medicine Professionals, the Sudanese Emergency Medicine Society, the Society of Emergency Medicine Practitioners of Nigeria and the Rwanda Emergency Care Association

Paediatric emergency care at an academic referral hospital in Mozambique

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Background

Improved emergency care of children with acute illness or injuries is needed for countries in Africa to continue to reduce childhood mortality rates. Quality improvement efforts will depend on robust baseline data, but little has been published on the breadth and severity of paediatric illness seen in Mozambique.

Methods

This was a retrospective review of routinely collected provider shift summary data from the Paediatric Emergency Department (PED) at Hospital Central de Maputo (HCM), the principal academic and referral hospital in the country. All children 0–14 years of age seen in the 12-month period from August 2018 to July 2019 were included. Descriptive statistical analyses were performed.

Results

Data from 346 days and 64,966 patient encounters were analyzed. The large majority of patients (96.4%) presented directly to the PED without referral from a lower level facility. An average of 188 patients was seen per day, with significant seasonal variation peaking in March (292 patients/day). The most common diagnoses were upper respiratory infections (URI), gastroenteritis, asthma, and dermatologic problems. The highest acuity diagnoses were neurologic problems (59%), asthma (57%), and neonatal diagnoses (50%). Diagnoses with the largest proportion of admissions included neurologic problems, malaria, and neonatal diagnoses. Rapid malaria antigen tests were the most commonly ordered laboratory test across all diagnostic categories; full blood count (FBC) and chemistries were also commonly ordered. Urinalysis and HIV testing were rarely done in the PED.

Conclusion

This epidemiologic profile of illness seen in the HCM PED will allow for improved resource utilisation. We identified opportunities for evidence-based care algorithms for common diagnoses such as respiratory illness to improve patient care and flow. The PED may also be able to optimize laboratory and radiology evaluation for patients and develop standardized admission criteria by diagnosis.

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E-scooter incidents in Berlin: an evaluation of risk factors and injury patterns

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Background

E-scooters have emerged as a frequently used vehicle in German cities due to their high availability and easy access. However, investigations about the causes and mechanisms of E-scooter incidents and their trauma-specific consequences are rare.

Methods

We analysed all patients involved in E-scooter incidents from June to December 2019 who presented to four inner-city EDs in Berlin. The prospective data included patient-related and incident-related data, information on injury patterns and therapy, responses in a voluntary questionnaire concerning E-scooter use and general traffic experience.

Results

248 patients (129 males; median age 29 years (5–81)) were included: 41% were tourists and 4% were children. Most incidents (71%) occurred between July and September 2019, the majority occurring at weekends (58%). The injury pattern was mostly multifocal, affecting the lower (42%) and upper limbs (37%) and the head (40%). Traumatic brain injury was associated with alcohol consumption. Inpatient admission was recorded in 25%, surgery in 23%.

Conclusion

This study has defined the incidence of injury related to E-scooter use in a major European city. Stricter laws governing the use of E-scooters, the wearing of helmets and technical modifications to the E-scooter platforms might decrease E-scooter-associated incidents and resulting injuries in the future.
Factors associated with in-hospital mortality and readmission in a cohort of patients treated with noninvasive ventilation during emergency department or out-of-hospital emergency care: the VentilaMadrid study

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http://emergencias.portalsemes.org/descargar/factores-asociados-a-la-mortalidad-intrahospitalaria-y-reingreso-en-una-cohorte-tratada-con-ventilacin-no-invasiva-en-urgen-cias-extrahospitalarias-y-hospitalarias-estudio-ventilamadrid/

Objective

To describe clinical, outcome, and risk factors in a cohort of patients treated with noninvasive ventilation (NIV) in a hospital emergency department (ED) or by out-of-hospital emergency medical services (OHEMSs).

Methods

Multicenter, prospective cohort study enrolling consecutive patients with acute pulmonary edema and/or exacerbated chronic obstructive pulmonary disease who were treated with NIV between November 2018 and November 2020 in a hospital ED or OHEMS setting in Madrid. We recorded baseline data, variables related to the acute episode, and outcome variables, including in-hospital mortality and 30-day readmission.

Results

A total of 317 patients were included; 132 (41.6%) were treated in an OHEMS setting and 185 (58.4%) in a hospital ED. Forty-seven (16.3%) in-hospital deaths occurred, and 78 patients (28.8%) were readmitted within 30 days. Mortality in the hospital ED and OHEMS subsamples did not differ, but the patients who received NIV in an OHEMS setting had a lower 30-day readmission rate. On multivariate analysis, in-hospital mortality was associated with prior dependence in activities of daily living (odds ratio [OR], 2.4; 95% CI 1.11–5.27) and a low-moderate score on the Simplified Acute Physiology Score II (SAPS II) versus a high-very high one (OR, 2.69; 95% CI 1.26–5.77). Mortality after OHEMS ventilation was associated with discontinuation of NIV during transfer (OR, 8.57; 95% CI 2.19–33.60). Readmission within 30 days was associated with group (in-hospital ED application of NIV) (OR, 3.24; 95% CI 2.62–6.45) and prior dependence (OR, 2.08; 95% CI 1.02–4.22).

Conclusion

Patients treated in the hospital ED and OHEMS setting have similar baseline characteristics, although acute episodes were more serious in the OHEMS group. No significant differences were found related to in-hospital mortality. Higher mortality was associated with dependence, a SAPS II score greater than 52, and discontinuance of NIV. Readmission was associated with dependence and NIV treatment in the hospital ED setting.

Keywords: Noninvasive ventilation. Respiratory insufficiency. Emergency health services. Mortality. Chronic obstructive pulmonary disease (COPD). Pulmonary edema. out-of-hospital emergency care
Optic nerve sheath diameter measurement for predicting raised intracranial pressure in pediatric patients: A systematic review and meta-analysis

Lee SH, Yun SJ, Kim DH
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Introduction

No previous studies have investigated the relationship between the optic nerve sheath diameter and raised intracranial pressure in pediatric patients or have evaluated the usefulness of optic nerve sheath diameter in ocular ultrasound and brain computed tomography/magnetic resonance imaging. This study aimed to meta-analyze the diagnostic performance of optic nerve sheath diameter for the diagnosis of raised intracranial pressure in pediatric patients.

Methods

A database search of PubMed and EMBASE was performed to identify relevant studies. Bivariate modeling and hierarchical summary receiver operating characteristics modeling were performed to evaluate diagnostic performance. A pooled diagnostic odds ratio with a 95% confidence interval, not including 1, was considered informative. Subgroup analysis was performed according to the modality (ocular ultrasound vs brain computed tomography/magnetic resonance imaging). We performed meta-regression analyses for heterogeneity exploration.

Results

Eleven studies involving 546 patients were included. According to pooled diagnostic odds ratios, optic nerve sheath diameter was informative for the evaluation of raised intracranial pressure (diagnostic odds ratio, 47; 95% confidence interval, 11–206). Optic nerve sheath diameter showed a pooled sensitivity of 0.88 (95% confidence interval, 0.79–0.94), a pooled specificity of 0.86 (95% confidence interval, 0.70–0.95), and an area under the hierarchical summary receiver operating characteristics curve of 0.93 (95% confidence interval, 0.91–0.95) for the diagnosis of raised intracranial pressure. According to the subgroup analysis, ocular ultrasound (sensitivity, 0.91 (95% confidence interval, 0.81–0.96); specificity, 0.86 (95% confidence interval, 0.65–0.96)) showed higher sensitivity and comparable specificity than optic nerve sheath diameter measured on brain computed tomography/magnetic resonance imaging (sensitivity, 0.75 (95% confidence interval, 0.51–0.99); specificity, 0.91 (95% confidence interval, 0.74–1.00)). On meta-regression analysis, the study design, number of patients, and reference standard were the sources of heterogeneity.

Conclusion

Optic nerve sheath diameter may be a useful method for predicting raised intracranial pressure in pediatric patients. We recommend that the measurement of optic nerve sheath diameter should be performed using ocular ultrasound for a more accurate diagnosis of raised intracranial pressure in pediatric patients.

Keywords: Pediatrics, optic nerve sheath diameter, intracranial pressure, meta-analysis.