Supplemental Online Content

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eTable 1. STROBE Checklist of Items That Should Be Included in Reports of Case-Control Studies

eTable 2. Databases and Coding Definitions for Inclusion and Exclusion Criteria, Outcomes, and Patient Characteristics

eFigure. Crude and Adjusted Odds Ratios for the Association Between Severe Electrolyte Abnormalities and Subsequent Eating Disorder Diagnosis

This supplemental material has been provided by the authors to give readers additional information about their work.
eTable 1: STROBE checklist of items that should be included in reports of case-control studies.

| Item No | STROBE items                                                                                                                                  | Reported     |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Title and abstract | 1 (a) Indicate the study's design with a commonly used term in the title or the abstract. (b) Provide in the abstract an informative and balanced summary of what was done and what was found. | Abstract     |
| Introduction | 2 Explain the scientific background and rationale for the investigation being reported.                                                                 | Introduction |
| Objectives | 3 State specific objectives, including any prespecified hypotheses.                                                                            | Introduction |
| Methods | Study design | 4 Present key elements of study design early in the paper.                                                                                     | Methods      |
| Setting | 5 Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection.           | Methods      |
| Participants | 6 (a) Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls. (b) For matched studies, give matching criteria and the number of controls per case. | Methods      |
| Variables | 7 Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable. | Methods      |
| Data sources/ measurement | 8 For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group. | Methods, eTable 2 |
| Bias | 9 Describe any efforts to address potential sources of bias.                                                                                     | Methods      |
| Study size | 10 | Explain how the study size was arrived at. | Methods, Figure 1 |
|-----------|----|--------------------------------------|-------------------|
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why. | Methods |
| Statistical methods | 12 | (a) Describe all statistical methods, including those used to control for confounding.  
(b) Describe any methods used to examine subgroups and interactions.  
(c) Explain how missing data were addressed.  
(d) If applicable, explain how matching of cases and controls was addressed.  
(e) Describe any sensitivity analyses. | Methods |
| Results | | | |
| Participants | 13 | (a) Report numbers of individuals at each stage of study—e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analyzed.  
(b) Give reasons for non-participation at each stage.  
(c) Consider use of a flow diagram. | Results, Figure 1 |
| Descriptive data | 14 | (a) Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders.  
(b) Indicate number of participants with missing data for each variable of interest. | Results, Table 1 |
| Outcome data | 15 | Report numbers in each exposure category, or summary measures of exposure. | Results, Figure 2 |
| Main results | 16 | (a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included.  
(b) Report category boundaries when continuous variables were categorized.  
(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period. | Results, Figure 3 |
| Other analyses | 17 | Report other analyses done (e.g., analyses of subgroups and interactions, and sensitivity analyses). | Results, eFigure 1 |
|----------------|----|-------------------------------------------------------------------------------------------------|-------------------|
| **Discussion** |    |                                                                                                 |                   |
| Key results    | 18 | Summarize key results with reference to study objectives.                                        | Discussion        |
| Limitations    | 19 | Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias. | Discussion        |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence. | Discussion        |
| Generalizability | 21 | Discuss the generalizability (external validity) of the study results.                           | Discussion        |
| **Other information** |    |                                                                                                 |                   |
| Funding        | 22 | Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based. | Funding            |
**eTable 2:** Databases and coding definitions for inclusion and exclusion criteria, outcomes, and patient characteristics.

| Characteristic/Condition | Database | Codes |
|--------------------------|----------|-------|
| **Inclusion Criteria**   |          |       |
| **Cases**                |          |       |
| All individuals with an eating disorder diagnosis between 01JAN2008 and 30JUN2020  *Earliest diagnosis date listed as index date* | DAD NACRS | ICD10: F50.0, F50.1, F50.2, F50.3, F50.8, F50.9 |
| Outpatient electrolyte test between 3 years and 30 days prior to index | OLIS DAD SDS NACRS | OLIS observation codes: 2823-3 39789-3 6298-4 14627-4 1959-6 1960-4 1961-2 1962-0 1963-8 2951-2 2601-3 14879-1 24519-1 |
| **Controls**             |          |       |
| All individuals eligible in RPDB at some point during accrual period (01JAN2008 through 30JUN2020) | RPDB |       |
| Exclude those meeting case definition (eating disorder during accrual) | DAD NACRS | ICD10: F50.0, F50.1, F50.2, F50.3, F50.8, F50.9 |
| Assign pseudo-index date |          |       |
| Outpatient electrolyte test between 3 years and 30 days prior to index | OLIS | DAD | SDS | NACRS | OLIS observation codes: |
|---------------------------------------------------------------|------|-----|-----|-------|--------------------------|
|                                                              |      |     |     |       | 2823-3                   |
|                                                              |      |     |     |       | 39789-3                  |
|                                                              |      |     |     |       | 6298-4                   |
|                                                              |      |     |     |       | 14627-4                  |
|                                                              |      |     |     |       | 1959-6                   |
|                                                              |      |     |     |       | 1960-4                   |
|                                                              |      |     |     |       | 1961-2                   |
|                                                              |      |     |     |       | 1962-0                   |
|                                                              |      |     |     |       | 1963-8                   |
|                                                              |      |     |     |       | 2951-2                   |
|                                                              |      |     |     |       | 2601-3                   |
|                                                              |      |     |     |       | 14879-1                  |
|                                                              |      |     |     |       | 24519-1                  |

**Exclusion Criteria**

Data cleaning
- Missing or invalid IKN
- Missing or invalid age (>105 years)
- Missing or invalid sex
- Death on or before the index date
- Non-Ontario resident

| Age <13 years at index date | RPDB |
|-----------------------------|------|

Exclude those with a previous eating disorder diagnosis

| Eating Disorders | DAD | NACRS | ICD10: |
|------------------|-----|-------|--------|
| Anorexia nervosa |     |       | F50.0, F50.1 |
| Bulimia nervosa  |     |       | F50.2, F50.3 |
| Eating disorder not otherwise specified | DAD | NACRS | ICD10: F50.8, F50.9 |
|----------------------------------------|-----|-------|---------------------|
| **Electrolyte Abnormalities**          |     |       |                     |
| Hypokalemia (≤3.5 mmol/L)              | OLIS | 2823-3 | POTASSIUM:SCNC:PT:SER/PLAS:QN |
|                                        |     | 39789-3 | POTASSIUM:SCNC:PT:BLDV:QN |
|                                        |     | 6298-4  | POTASSIUM:SCNC:PT:BLD:QN  |
| Hyperkalemia (≥5.5 mmol/L)             | OLIS | 2823-3 | POTASSIUM:SCNC:PT:SER/PLAS:QN |
|                                        |     | 39789-3 | POTASSIUM:SCNC:PT:BLDV:QN |
|                                        |     | 6298-4  | POTASSIUM:SCNC:PT:BLD:QN  |
| Hyponatremia (≤130 mmol/L)             | OLIS | 2951-2 | SODIUM:SCNC:PT:SER/PLAS:QN |
| Hypernatremia (≥150 mmol/L)            | OLIS | 2951-2 | SODIUM:SCNC:PT:SER/PLAS:QN |
| Hypomagnesemia (≤0.50 mmol/L)          | OLIS | 2601-3 | MAGNESIUM:SCNC:PT:SER/PLAS:QN |
| Hypophosphatemia (≤0.80 mmol/L)        | OLIS | 14879-1 | PHOSPHATE:SCNC:PT:SER/PLAS:QN |
|                                        |     | 24519-1 | PHOSPHATE:SCNC:PT:BLD:QN  |
| Metabolic alkalosis (Serum bicarbonate ≥30 mmol/L) | OLIS | 14627-4 | BICARBONATE:SCNC:PT:BLDV:QN |
|                                        |     | 1959-6  | Bicarbonate:SCnc:Pt:Bld:Qn  |
|                                        |     | 1960-4  | BICARBONATE:SCNC:PT:BLDA:QN |
|                                        |     | 1961-2  | BICARBONATE:SCNC:PT:BLDC:QN |
|                                        |     | 1962-0  | Bicarbonate:SCnc:Pt:Plas:Qn |
|                                        |     | 1963-8  | Bicarbonate:SCnc:Pt:Ser:Qn  |
| Metabolic acidosis (Serum bicarbonate ≤22 mmol/L) | OLIS | 14627-4 | BICARBONATE:SCNC:PT:BLDV:QN |
|                                        |     | 1959-6  | Bicarbonate:SCnc:Pt:Bld:Qn  |
|                                        |     | 1960-4  | BICARBONATE:SCNC:PT:BLDA:QN |
|                                        |     | 1961-2  | BICARBONATE:SCNC:PT:BLDC:QN |
|                                        |     | 1962-0  | Bicarbonate:SCnc:Pt:Plas:Qn |
|                                        |     | 1963-8  | Bicarbonate:SCnc:Pt:Ser:Qn  |
| **Patient Characteristics**             |     |       |                     |
| Age                                    | RPDB |       |                     |
| Sex                                    | RPDB |       |                     |
| Index year                             | RPDB |       |                     |
| Income quintile                        | RPDB |       |                     |
| Rurality (rural vs. urban)             | RPDB |       |                     |
| Number of hospitalizations in last 2 years | DAD |       |                     |
| Previous healthcare visit for mental health | DAD | NACRS |                     |

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| Condition                                      | Database(s) | ICD10 Codes                          | OHIP Codes                        |
|------------------------------------------------|-------------|--------------------------------------|-----------------------------------|
| Outpatient psychiatry visit                    | OHIP        |                                      |                                   |
| Asthma                                         | DAD, OHIP   | J45, J46                             |                                   |
| Chronic kidney disease                         | DAD, OHIP   | E102, E112, E132, E142, I12, I13, N08, N18, N19 |                                   |
| Chronic obstructive pulmonary disease           | DAD, OHIP   | J41, J42, J43, J44                   |                                   |
| Congestive heart failure                       | DAD, OHIP, NACRS | I50                                 |                                   |
| Inflammatory bowel disease                     | DAD, NACRS, OHIP | K50, K51                           |                                   |
| Diabetes                                       | DAD, OHIP   | E10, E11, E12, E13, E14             |                                   |
| Myocardial infarction                          | DAD         | I21, I22                             |                                   |
| Liver disease                                  | DAD, NACRS, OHIP | B16, B17, B18, B19, I85, R17, R18, R160, R162, B942, Z225, E831, E830, K70, K713, K714, K715, K717, K721, K729, K73, K74, K753, K754, K758, K759, K76, K77 |                                   |
| Depression                                     | DAD, NACRS  | F32.x, F33.x, F34.1, (dxtype='M')    |                                   |
| Anxiety                                        | DAD, NACRS  | F06.4, F40, F41, F93.0-2, F94.0      |                                   |
| Personality disorder                           | DAD, NACRS  | F07.0, F21, F60,F61, F62, F68, F69   |                                   |
| Substance abuse                                | DAD, NACRS  | F10-19, F55                          |                                   |

Abbreviations: DAD, Discharge Abstract Database; ICD10, International Statistical Classification of Diseases and Related Health Problems Version 10; IKN, ICES Key Number; NACRS, National Ambulatory Care Reporting System; OHIP,
Ontario Health Insurance Plan; OLIS, Ontario Lab Information System; RPDB, Registered Persons Database; SDS, Same Day Surgery Database.
eFigure 1: Crude and adjusted odds ratios for the association between severe electrolyte abnormalities and subsequent eating disorder diagnosis.

Severe electrolyte abnormalities were defined as follows: hypokalemia (serum potassium ≤3.0 mmol/L), hyperkalemia (serum potassium ≥6.0 mmol/L), hyponatremia (serum sodium ≤128 mmol/L), and hypophosphatemia (serum phosphate ≤0.60 mmol/L). The multivariable models adjusted for the following covariates: age, sex, year of index, income quintile, rural residence, number of hospitalizations in the prior two years, anxiety, asthma, chronic kidney disease, chronic obstructive pulmonary disease, congestive heart failure, depression, diabetes mellitus, inflammatory bowel disease, liver disease, myocardial infarction, personality disorder, and substance abuse.

Abbreviations: OR, odds ratio.