

Modified STROBE Statement—checklist of items that should be included in reports of observational studies (Cohort/Cross-sectional and case-control studies)

	Item No	Recommendation
Title and abstract	1	<p>(a) Indicate the study's design with a commonly used term in the title or the abstract</p> <p>Yes (Glucosuria predicts the severity of Puumala hantavirus infection)</p> <hr/> <p>(b) Provide in the abstract an informative and balanced summary of what was done and what was found</p> <p>Yes</p>
Introduction		
Background/rationale	2	<p>Explain the scientific background and rationale for the investigation being reported</p> <p>Yes</p>
Objectives	3	<p>State specific objectives, including any prespecified hypotheses</p> <p>Yes, does glucosuria at hospital admission predict severity of acute kidney injury in patients with Puumala hantavirus infection.</p>
Methods		
Study design	4	<p>Present key elements of study design early in the paper</p> <p>Yes, presented in abstract. More detailed description in Materials and methods, and Results.</p>
Setting	5	<p>Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection</p> <p>Yes, described in Materials and methods (pages 4-6)</p>
Participants	6	<p>(a) <i>Cohort study</i>—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up</p> <p>Yes, all the patients who were treated in the Tampere University hospital for Puumala hantavirus infection during the indicated period of time and who provided an informed consent. Patients lacking a dipstick urine test at hospital admission were excluded from further analysis. Clinical features and laboratory samples were measured during the hospital care. See Materials and methods p. 4-6, sections</p>

Subjects (page 4) and Laboratory determinations (page 5-6), and Results (p. 7-9).

Case-control study—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

Cross-sectional study—Give the eligibility criteria, and the sources and methods of selection of participants

Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable Yes, see Results (p. 7-9) and Discussion (p. 10-14).
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Yes, see Materials and methods (p. 4-5, section Subjects and p. 5-6, section Laboratory determinations).
Bias	9	Describe any efforts to address potential sources of bias Patients with less severe Puumala hantavirus infection do not need hospital care and therefore are not included in the study.
Study size	10	Explain how the study size was arrived at (if applicable) Patients treated for Puumala hantavirus infection during the indicated period of time. See Materials and methods (page 4, paragraph 1).
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why Patients were grouped according to the presence or absence of glucosuria in the dipstick urine test at hospital admission. Blood and urine samples were collected during the hospital care and analyzed in certified laboratory. In addition, clinical features were followed during the hospital care. See Materials and methods (p. 4 section Subjects and p. 5 section Laboratory determinations).
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding Yes, see materials and methods (p. 6 section Statistical analyses). <hr/> <i>(b) Describe any methods used to examine subgroups and interactions</i> <hr/> <i>(c) Explain how missing data were addressed</i>

Patients lacking a dipstick urine test at hospital admission were excluded from further analysis, see Materials and methods (p. 4, paragraph 3).

(d) Cohort study—If applicable, explain how loss to follow-up was addressed

Patients who provided an informed consent, were followed during the hospital care. There was no follow-up after hospital care and therefore no patients were missed.

Case-control study—If applicable, explain how matching of cases and controls was addressed

Cross-sectional study—If applicable, describe analytical methods taking account of sampling strategy

(e) Describe any sensitivity analyses -

Results

Participants

13*

(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analyzed

Yes, patient selection described in Materials and methods (p. 4, section Subjects). Patients lacking a dipstick urine test at hospital admission were excluded from further analysis.

(c) Use of a flow diagram

Not applicable

Descriptive data

14*

(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders

Yes, see Materials and methods; page 4, Results; page 7 and Table 1.

(b) Indicate number of participants with missing data for each variable of interest

Number of patients with urine sample taken at various stages of the study is indicated in Materials and methods, section Subjects; page 4, paragraph 3 and in Laboratory determinations; page 5, paragraph 3.

Number of patients with chest radiography taken is indicated in Materials and methods; page 4, paragraph 4.

Number of patients with blood samples taken and analyzed is indicated in Materials and methods, section Laboratory determinations, page 6, paragraph 2.

Number of patients with blood glucose samples taken and analyzed is indicated in Results, page 8, paragraph 3.

(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)

Yes, time spent in the hospital (see Table 1; hospital stay).

Outcome data	15*	<i>Cohort study</i> —Report numbers of outcome events or summary measures over time
		Not applicable.
		<i>Case-control study</i> —Report numbers in each exposure category, or summary measures of exposure
		<i>Cross-sectional study</i> —Report numbers of outcome events or summary measures
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included
		Not applicable.
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses
		Not applicable
Discussion		
Key results	18	Summarise key results with reference to study objectives
		Yes, see Discussion (p. 10, paragraph 3 and page 14, paragraph 2-4).
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
		Patients with less severe Puumala hantavirus infection do not need hospital care and therefore are not included in the study.
		Glucosuria is an early and transient sign in the course of Puumala virus infection. Patients may have been glucosuric before hospital admission.

Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence Yes, see discussion (p. 14, paragraphs 2-3).
Generalisability	21	Discuss the generalisability (external validity) of the study results Yes, see discussion (p. 14, paragraphs 2-4)

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at www.strobe-statement.org.