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Risk factors associated with IgA vasculitis with nephritis (Henoch–Schönlein purpura nephritis) progressing to unfavorable outcomes: a meta-analysis

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Qiu Li[1]

[1]Children's Hospital of Chongqing Medical University, Chongqing, China

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Qiu Li

ABSTRACT

The aim of this study was to analyze the risk factors associated with unfavorable outcomes in children with IgA vasculitis with nephritis (Henoch-Schőnlein purpura nephritis) (IgA-VN). these databases PubMed, Embase, and Web of Science were searched in this meta-analysis. The data were extracted to perform pooled analysis, heterogeneity testing, subgroup analysis, sensitivity analysis, and publication bias analysis.

EXTERNAL LINK

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THIS PROTOCOL ACCOMPANIES THE FOLLOWING PUBLICATION

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GUIDELINES

The preparing and performing of this meta-analysis were performed according to the Cochrane Handbook. The findings were reported according to the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) statement.

1 **literature search:** PubMed, Embase, and Web of Science databases were searched for studies, published in English through February 2019. Using basic search terms from combined text and Medica Subject Heading (MeSH) terms. These included a MeSH search using the term 'Purpura, Schoenlein-Henoch' and a keyword search using the term 'Henoch-Schönlein purpura', and terms related to unfavorable outcomes (including MeSH searches using the terms 'Kidney Failure, Chronic' and 'Renal Insufficiency, Chronic', and keyword searches using the term 'end stage renal disease' and 'chronic renal disease').

2 **Study selection:** Cohort and case-control studies were included, whereas cross-sectional, case reports, review articles, comments, meeting abstracts, genetic association studies, and editorial comments were excluded. Studies were included if they assessed patients diagnosed with IgA-VN at age <18 years; if they included detailed information after the onset of IgA-VN, with a minimum follow-up time of 1 year; and if clinical outcomes was graded according to Meadow's criteria. Patients with IgA nephropathy were excluded.

3 **Data collection and data extraction:** Data were independently extracted by two investigators, with any discrepancies resolved by a third investigator. Data collected included the characteristics of the studies (year of publication, country, and duration of follow-up), the demographic characteristics of the patients (e.g., numbers of patients and age), laboratory predictors, renal manifestations and renal histopathology at onset.

4 **Quality assessments of the studies:** Study quality was assessed using three main categories of the Newcastle-Ottawa scale.

5 **Statistical analysis:** Aggregates were pooled used the generic inverse variance meta-analysis method. Effect measures of interest were reported as ORs and 95% CIs.All statistical analyses were performed using Stata 14.0 software.