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An insertion-deletion polymorphism in angiotensin-converting enzyme is associated with a reduced risk of preeclampsia: an evidence-based meta-analysis from 44 studies

Objective

An updated meta-analysis was performed to evaluate the relationship between an insertion/deletion (I/D) polymorphism in angiotensin-converting enzyme (ACE) and preeclampsia (PE) risk.

Methods

Pubmed, OVID and China National Knowledge Infrastructure databases were searched. Pooled odds ratios with 95% confidence intervals were calculated using fixed-effects or random effects model.

Results

ACE I/D polymorphism decreased the risk of PE in overall analysis. Subgroup analysis revealed a significantly lower risk of PE with ACE I/D polymorphism in Asians, Caucasians. The decreased risk was also found in severe PE and early-onset PE.

Conclusion

ACE I/D polymorphism may protect against the development of PE.

Keywords: Angiotensin-converting enzyme; polymorphism; preeclampsia; meta-analysis

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