

Prevalence of Cerebral Microbleeds in Apparently Healthy, Elderly Population: A Meta-Analysis

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Abstract : Background and Objective: Cerebral microbleeds are frequently found in healthy elderly individuals. We performed a meta- analysis to determine the prevalence of cerebral microbleeds in apparently healthy, elderly population and to determine the effect of age, smoking and hypertension on the occurrence of cerebral microbleeds. Methods: Relevant literature was searched using electronic databases such as MEDLINE, EMBASE, PubMed, Cochrane database, Google scholar to identify studies on the prevalence of cerebral microbleeds in general elderly population till March 2016. STATA version 13 software was used for analysis. Fixed effect model was used if heterogeneity was less than 50%. Otherwise, random effect model was used. Meta- regression analysis was performed to check any effect of important variables such as age, smoking, hypertension. Selection Criteria: We included cross-sectional studies performed in apparently healthy elderly population, who had age more than 50 years. Results: The pooled proportion of cerebral microbleeds in healthy population is 12% (95% CI, 0.11 to 0.13). No significant effect of age was found on the prevalence of cerebral microbleeds ($p= 0.99$). A linear relationship between increase in hypertension and the prevalence of cerebral microbleeds was found, however, this linear relationship was not statistically significant ($p=0.16$). Similarly, A linear relationship between increase in smoking and the prevalence of cerebral microbleeds was found, however, this linear relationship was also not statistically significant ($p=0.21$). Conclusion: Presence of cerebral microbleeds is evident in apparently healthy, elderly population, in more than 10% of individuals.

Keywords : apparently healthy, elderly, prevalence, cerebral microbleeds

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