

번호 12-4

제 목	영문	<b>Low Serum Cholesterol is Not a Risk Factor for Hemorrhagic Stroke in Men: The Korean Medical Insurance Corporation Study</b>			
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진행 상황	연구완료( O ), 연구중( ) → 완료 예정 시기 :      년      월				
<p><b>1. Objectives</b></p> <p>Some prospective studies reported that hemorrhagic stroke has been found to occur at higher rates in persons with low serum cholesterol levels than in persons with higher levels. The purpose of our studies was to determine whether low serum total cholesterol is an independent risk factor for hemorrhagic stroke [Intracerebral hemorrhage (ICH) and Subarachnoid hemorrhage (SAH)] in Korea, an Asian country with relatively low levels of serum total cholesterol.</p> <p><b>2. Methods</b></p> <p>The Korea Medical Insurance Corporation Study is a prospective cohort study. In this study, 114,793 Korean men, ages 35-59, who received health examinations from the Korea Medical Insurance Corporation in 1990 and 1992 were followed for 6 years (1993-1998). Main outcomes measured were hospital admissions and deaths from ICH and SAH.</p> <p><b>3. Results</b></p> <p>Over a period of 6 years (1993-1998), 528 developed hemorrhagic stroke (372 ICH, 98 SAH and 58 unspecified stroke). Serum total cholesterol levels were divided into quintiles; &lt; 166.5 mg/dl; 166.5 - &lt;183.5 mg/dl; 183.5 - &lt;199.5 mg/dl; 199.5 - &lt;220.0mg/dl; and 220.0mg/dl or more.</p>					

In multivariate Cox proportional hazard models adjusted for age, smoking, blood pressure, alcohol consumption, fasting blood sugar and body mass index, the relative risks of developing ICH in each quintile (from the lowest) compared to the highest quintile were: 1.21 (95% CI: 0.88-1.67); 0.93 (95% CI: 0.67-1.30); 1.08 (95% CI: 0.79-1.47); and 1.12 (95% CI: 0.83-1.52). The corresponding relative risks for SAH were: 1.43 (95% CI: 0.76-2.72); 1.14 (95% CI: 0.59-2.21); 1.27 (95% CI: 0.68-2.40); and 1.19 (95% CI: 0.63-2.25). When cases that occurred during the first two years of follow-up were excluded, the relation between serum total cholesterol and the incidence of ICH was considerably attenuated, but there was no significant change in the relation between the lowest total cholesterol and incidence of SAH.

#### 4. Conclusions

In Korea, low serum total cholesterol is not considered an independent risk factor for hemorrhagic stroke (both in ICH and SAH) in men. This study supports this view and low serum total cholesterol levels were found not to increase the risk of developing hemorrhagic stroke in men.