# 小児において軽微な感染が脳卒中リスクを上昇させる可能性がある(Abstract: 39)

VIPS:小児において一般的な感染と脳卒中リスク上昇とに関連が認められるがワクチン接種によりリスクが低下する可能性がある

VIPS: Common infections linked to increased stroke risk in children but vaccines may reduce risk

一般的な感染が小児において脳卒中の危険性を有意に上昇させるが、ルーチンのワクチン接種によりリスクが低下する可能性があるとの予備的な研究結果が2014年American Stroke Association's International Stroke Conference で発表された。この国際スタディ Vascular effects of Infection in Pediatric Stroke (VIPS)は、感染と虚血性脳卒中との関連を調査した前向きスタディである。研究者らは、過去1週間の一般的な感染が脳卒中リスクを6倍以上上昇させることを明らかにした。過去1週間に何らかの微小感染を有していたと報告したのは、脳卒中患者では17%であったのに対し脳卒中を有さない者では3%であった。感染のうちで最も頻度が高かったのは感冒および他の上気道感染であった(脳卒中患者の8%および非脳卒中患者の2.4%が過去1週間にこれらの感染を有していたと報告した)。ポリオ、麻疹、流行性耳下腺炎、風疹および肺炎球菌などに対するルーチンのワクチン接種を"いくつか受けたかほとんどまたは全く受けていない"者は"全てまたはほとんど受けた"者よりも虚血性脳卒中を発現する確率が6.7倍高かった。

# Full Text

Common infections are associated with a significantly higher chance of stroke in children, but routine vaccinations may help decrease risk, according to preliminary research presented at the American Stroke Association's International Stroke Conference 2014.

"The protective association of routine vaccination against childhood stroke provides a widely available means of prevention, and this information can easily be dispersed by pediatric healthcare providers," said Nancy Hills, Ph.D., M.B.A., lead researcher and assistant professor of neurology at the University of California, San Francisco Medical Center.

The international study, Vascular effects of Infection in Pediatric Stroke (VIPS) is a prospective study examining the link between infections and ischemic stroke, the most common type of stroke.

Previous research by Hills and co-authors found that minor infections were related to an increased risk, but it was unclear whether infection actually could help predict future stroke.

In the VIPS study, researchers found that common infections within the past week were linked to more than six times the risk of stroke, Hills said. Seventeen percent of the stroke patients vs. 3 percent of the non-stroke patients were reported to have had any minor infection in the prior week. The most frequent types of infection were colds and other upper respiratory infections (8 percent of the stroke and 2.4 percent of the non-stroke patients reported an occurrence of these kinds of infections in the prior week).

However, routine vaccinations were associated with a lower stroke risk

Children who had "some, few or no" routine vaccinations were 6.7 times more likely to have an ischemic stroke than those receiving "all or most" vaccines, including those against polio, measles, mumps, rubella and pneumococcus.

Researchers interviewed parents or guardians of 310 children who had a stroke to determine the presence and timing of any infectious illnesses prior to their stroke. They compared their findings with 289 children who hadn't experienced a stroke, but had visited the doctor for an annual checkup, routine follow-up for headaches or developmental delay, or trauma.

The median age of the children who had a stroke was 7.5 years, and the median age among the comparison group was slightly more than 8.

"Because many childhood strokes appear to have no clear cause, and others likely have more than one cause, preventive measures have not been forthcoming," Hills said. "It is very promising that childhood vaccinations appear to have a protective effect."

"VIPS is the largest-ever NIH-funded study of childhood stroke," said Heather J. Fullerton, M.D., M.A.S., principal investigator for the VIPS study and Professor of Neurology and Pediatrics at University of California San Francisco. "These three abstracts represent the first results of this important international effort."

Other VIPS researchers are: Gabrielle A. DeVeber, M.D., M.Sc.; Mitchell S. Elkind, M.D., M.S.; Max Wintermark, M.D.; Carol A. Glaser, M.D.; Katherine Sear, M.P.H.; Jorge M. Luna, M.P.H; W. Ian Lipkin, M.D; Kawthar Muhammad, B.A.; and Rafal Tokarz. Ph.D.

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VIPS represents the work of the International Pediatric Stroke Study (IPSS), a consortium of pediatric stroke investigators established in 2003 by Dr. Gabrielle DeVeber at the Hospital for Sick Children, Toronto. The 40 IPSS centers enrolling in VIPS are located on five continents and have now enrolled almost 350 cases and 350 controls — numbers that can only be achieved through a large collaborative effort like this. The VIPS study is co-lead by Fullerton and DeVeber, Hospital for Sick Children in Toronto.

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