

<h1>Protective effects of acetylsalicylic acid and statin on the progression of osteonecrosis of femoral head: A nationwide population-based cohort study</h1>

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INTRODUCTION:

The association between acetylsalicylic acid (ASA) or statins and osteonecrosis of femoral head (ONFH) progression has not been adequately evaluated. We aimed to investigate the effect of ASA and statins, and a cumulative corticosteroid dose on the progression of ONFH.

METHODS:

This nationwide population-based cohort study was conducted between 2007 and 2021. A total of 101,081 participants diagnosed with osteonecrosis of femoral head were enrolled from Korean nationwide medical insurance data. Participants were divided into two groups according to whether or not they underwent total hip arthroplasty (THA) (n=43,096 and n=57,985, respectively) during the follow-up period and compared.

RESULTS:

A higher cumulative corticosteroid dose was associated with an increased risk of progression to THA after diagnosis of ONFH. The use of ASA [adjusted hazard ratio (aHR), 0.87] alone or in combination with statins (aHR, 0.82) was associated with reduced risk of disease progression than that in the group of non-users. In the group aged <50 years, a mild protective effect was observed on the progression of ONFH only when both ASA and statins were used (aHR, 0.82), whereas, in the group aged >50 years, the use of ASA (aHR, 0.86), statins (aHR, 0.96), or both (aHR, 0.82) exhibited a protective effect on the progression of ONFH after diagnosis.

DISCUSSION AND CONCLUSION:

ASA and/or statins use before and after diagnosis of ONFH were associated with a lower risk of progression to THA.

