

## 앤지오텐신 수용체 차단제 사용 후 발생하는 고칼륨혈증: 언제 혈청 칼륨을 검사해야 하는가 ?

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### Onset Time of Hyperkalemia after Angiotensin Receptor Blocker Initiation: When Should We Start Serum Potassium Monitoring?

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**Background:** Angiotensin receptor blockers (ARBs) frequently induce hyperkalemia in high-risk patients. Early detection of hyperkalemia can reduce the subsequent harmful effects. The present study was performed to examine the onset time of hyperkalemia after ARB therapy

**Methods:** We carried out a retrospective analysis to determine the onset time of hyperkalemia (serum potassium > 5.5 mEq/L) among hospitalized patients newly starting ARB therapy between April, 2004, and May, 2012, in a tertiary teaching hospital. Predefined possible risk factors and concomitant medications were evaluated.

**Results:** During the 97-month study period, a total of 4,267 hospitalized patients started ARBs as new drugs and 225 patients showed hyperkalemia. A significantly increased risk of hyperkalemia was detected among patients with a high baseline potassium (odds ratio [OR] 6.02,  $p < 0.001$ ) and those who took non-potassium-sparing diuretics (OR 2.17,  $p < 0.001$ ) or potassium supplements (OR 1.61,  $p = 0.006$ ). A high glomerular filtration rate (GFR) was associated with a lower risk of hyperkalemia (OR 0.992,  $p = 0.006$ ).

Fifty-two percent of hyperkalemic events occurred within the first week after initiation of ARB therapy. The highest frequency of hyperkalemia occurred on the first day after initiation of ARBs. Hyperkalemia occurred earlier in patients with a high baseline serum potassium level, reduced GFR, diabetes, and in those without heart failure.

**Conclusions:** Hyperkalemia occurs most frequently at the beginning of ARB therapy in hospitalized patients. Monitoring of serum potassium and estimated GFR after initiation of ARBs should be started within a few days or not later than 1 week, especially in patients with risk factors.

**Key Words:** 고칼륨혈증, 앤지오텐신 수용체 차단제  
Hyperkalemia, Angiotensin receptor blockers

