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# 부종진단에서 소변 바소프레신과 아쿠아포린-2, 생체임피던스 측정의 유용성

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# Usefulness of Urinary Arginine Vasopressin, Aquaporin-2 and Bioimpedance Spectroscopy for Diagnosis of Edema

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**Aim:** Bioimpedance measurement may be useful in diagnosing edema. However, other available methods have not been investigated sufficiently. This study aims to investigate whether urinary AVP and AQP-2 assessments can be useful in diagnosing edema.

**Methods:** The study included thirty-three patients complaining of edema, and who didn't have a history of edema-related disease and relevant medication. Body fluid excess was determined by bioimpedance measurement and presented as OH (overhydration) value. OH 1 means 1 liter excess of body fluid. The amounts of 24-hr urinary AVP, AQP-2 excretions were also measured. We compared the urinary AVP, AQP-2 excretions between apparent and inapparent edema groups. Lastly, we identify idiopathic edema patients, and investigated urinary AVP, AQP-2 in it.

**Results:** The OH value of total subjects was 0.1 indicating no body fluid excess, while 24-hr urinary AVP, AQP-2 excretions respectively decreased to 6.7 ng (reference: 34-70 ng/day) and 0.9 ug (reference: 600-1200 or 11 ug/day) indicating edematous status. There was significantly negative correlation between the OH value and 24-hr urinary AVP excretion (p=0.020). In addition, the apparent edema group had less 24-hr urinary AVP excretion than the inapparent edema group (p=0.019). In the idiopathic edema patients, the OH value was - 0.28, while 24-hr urinary AVP, AQP-2 excretions decreased to 8.7 ng and 0.9 ug respectively.

**Conclusion:** This study indicates that urinary AVP assessment can be useful in diagnosing edema. Besides urinary AVP and AQP-2 assessments are believed to be more useful in diagnosing uncertain or idiopathic edema than bioimpedance measurement.

**Key Words:** 부종, 바소프레신, 아쿠아포린
Edema, Vasopressin, Aquaporin