A case of sheehan's syndrome associated with hyporeninemic hypoaldosteronism and chronic hyponatremia

Department of Internal Medicine, Chosun University Medical College, Kwangju, Korea
Bong Kwan Ryu, M.D.*, Bum Yun Kim, M.D., Byung Chul Shin, M.D.,
Hyun Lee Kim, M.D., Jong Hoon Chung, M.D.

Sheehan's syndrome has been attributed to ischemic damage of the pituitary gland or hypothalamic-pituitary stalk during the peripartum period. Well-described clinical features of Sheehan's syndrome include hypothyroidism, growth hormone deficiency, hypogonadism, hypoprolactinemia, adrenal insufficiency, and differences in sodium and water disturbance. The occurrence of sodium and water disturbances associated with Sheehan's syndrome depends on the degree of pituitary damage, time of onset since the initial pituitary insult, and concurrent medical conditions that also may play a role in sodium and water balance. Chronic hyponatremia is the common presentation of altered sodium levels in patients with Sheehan's syndrome.

Well-accepted mechanism implicated in the development of chronic hyponatremia include volume depletion, cortisol deficiency, hypothyroidism, and possibly syndrome of inappropriate antidiuretic hormone (SIADH). The chronic nature of the presenting hyponatremia suggests more subtle changes of panhypopituitarism or better adaptive mechanisms (or both). Although controversial, another mechanism proposed for hyponatremia in the chronic setting involves alternation in the renin-angiotensin/aldosterone system with resulting sodium wasting.

We presented a patient with Sheehan's syndrome with hyporeninemic hypoaldosteronism and chronic hyponatremia. 53 years old women, who had 4th baby delivery with severe blood loss 25 years ago, was visited to hospital because of nausea and constipation. After admission, SIADH was diagnosed. Management carried out fluid restriction and hypertonic saline infusion. After symptom was improved, for SIADH was seen cause, we performed pituitary hormone and adrenal hormone study. The result was hypopituitarism and hyporeninemic hypoaldosteronism. Hyponatremia was corrected by administrated glucocorticoid.

key words: Sheehan's syndrome, hyporeninemic hypoaldosteronism, hyponatremia

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Differential Regulation of Atrial Natriuretic Peptide in Clipped and Contralateral Kidneys in Two-Kidney, One Clip Hypertension

Soo Wan Kim, M.D.*, Jong Un Lee, M.D.*, Gyun Ho Jeong, M.D., Taek Kyun Jeong, M.D., Byung Seok Park, M.D.,
Seong Kwon Ma, M.D., Nam Ho Kim, M.D., Ki Chul Choi, M.D.

Departments of Internal Medicine and Physiology*, Chonnam National University Medical School, Gwangju

Background: The present study was aimed to determine the pathophysiological implications of local atrial natriuretic peptide (ANP) system in the kidney in two-kidney, one clip (2K1C) hypertension.

Methods: Rats were made 2K1C hypertensive, and their mRNA expressions of ANP and natriuretic peptide receptors (NPR) were determined in the clipped and contralateral kidneys by reverse transcription-polymerase chain reaction.

Results: The expression of ANP was decreased in the clipped kidney and increased in the contralateral kidney. Similarly, the expression of both NPR-A and NPR-C was decreased in the clipped kidney and increased in the contralateral kidney.

Conclusion: These findings indicate a differentially-altered ANP system in the clipped and the contralateral kidneys in 2K1C hypertension.