

Myeloid CD11c+ antigen-presenting cells ablation prevents hypertension in response to angiotensin II plus high-salt diet

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© 2017 The Authors. Increasing evidence shows that antigen-presenting cells (APCs) are involved in the development of inflammation associated to hypertension. However, the potential role of APCs in the modulation of renal sodium transport has not been addressed. We hypothesized that APCs participate in renal sodium transport and, thus, development of high blood pressure in response to angiotensin II plus a high-salt diet. Using transgenic mice that allow the ablation of CD11c^{high} APCs, we studied renal sodium transport, the intrarenal renin-angiotensin system components, blood pressure, and cardiac/renal tissue damage in response to angiotensin II plus a high-salt diet. Strikingly, we found that APCs are required for the development of hypertension and that the ablation/restoration of APCs produces rapid changes in the blood pressure in mice with angiotensin II plus a high-salt diet. Moreover, APCs were necessary for the induction of intrarenal renin-angiotensin system components and af