

Edeam: A Nephrologist View

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Abstract

Edema is an abnormal interstitial fluid accumulation. It is a common sign in general practice. The sign signaled the emergence of a new discipline, Nephrology, more than 100 years ago. Over 170 years after Richard Bright and a century after Ernest H. Starling, the development, location, and severity of edema in patients continue to baffle the predictions of most physicians. Edema can be pitting or non-pitting. Pitting edema can be localized or generalized. In generalized edema, more than 3 liters of additional fluid must be accumulated at least. The accumulated fluid comes from enhanced sodium reabsorption along the nephron. Sodium reabsorption in the renal tubules is a well-organized and -controlled process to maintain the constant extracellular volume in physiological status. The accumulation of the fluid is always associated with an up-regulation of the sodium reabsorption in the kidney, either appropriate or inappropriate. The increased sodium reabsorption along the nephron reflexes an altered regulation in systemic edema. Several hormones and circulating mediators in concert participate in the complicated regulation of sodium reabsorption along the nephron. In this talk, we will review the altered regulation of sodium reabsorption in nephrotic syndrome, heart failure, and cirrhosis in the formation of edema from a nephrologist's view.