

Could congestive heart failure be the reason for intractable diuretic resistance in a young woman?

To the Editor: Flenner *et al.*¹ published a very interesting case, in which a young woman developed an intractable diuretic-resistant edema after laminectomy. A fistula was found between the common iliac artery and the common iliac vein. A covered stent was implanted to obliterate the fistula and the edema receded. Therefore, the edema was explained as congestive heart failure secondary to a hyperkinetic circulation.

However, we think this explanation is debatable. Arteriovenous fistula is commonly present in hemodialysis patients as blood access. After arteriovenous anastomosis, arterial pressure is transmitted to the vein, which may cause venous hypertension and lead to edema and discomfort in the hand, especially in the side-to-side technique.² Obviously, localized edema after anastomosis in hemodialysis patients is not due to congestive heart failure. In this patient, the more reasonable speculation for edema would be the iliac arteriovenous fistula-induced venous hypertension transmitted from the inferior vena cava to the secondary veins and backflowed to the inferior vena cava, which may cause edema formation and organ enlargement. The massive edema of abdomen and the dilated inferior vena cava presented in this patient may confirm our speculation. Congestive heart failure may contribute partly to the edema in this patient. However, unless the patient has a history of cardiac disease, it is not appropriate to consider heart failure as the primary reason for intractable edema in this patient.

1. Flenner E, Elgeti F, Luft FC *et al.* The case | intractable diuretic resistance in a young woman. *Kidney Int* 2012; **81**: 221–222.
2. Ahmad S. Vascular access. In Ahmad S (ed) *Manual of Clinical Dialysis*, 2nd edn. Springer Science + Business Media LLC, New York, USA, 2009.

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The Authors Reply: We thank Dr Ji *et al.* for their letter¹ regarding our case report of a 39-year-old woman with intractable diuretic resistance due to a fistula between her common iliac artery and vein.² The fistula occurred postoperatively after she had undergone laminectomy for a herniated L4/5 disc. The patient developed severe volume

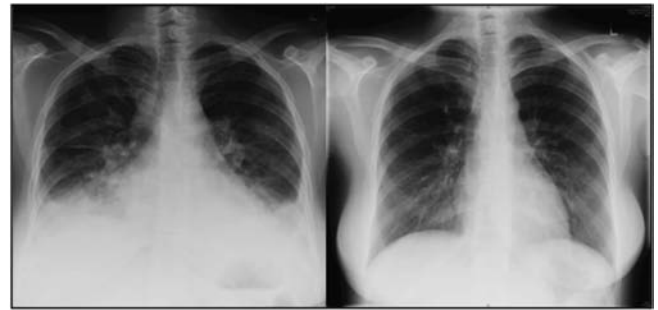


Figure 1 | Posterior–anterior chest roentgenograms. The measured systolic pulmonary artery pressure was 43 mm Hg (left). After repair (right), all symptoms resolved.

expansion with 20-kg weight gain, dyspnea, rales, basilar percussion dullness, and massive edema of abdomen and extremities. Ji *et al.* postulate that edema formation was merely a consequence of venous hypertension and argue that localized edema also occurs after dialysis fistulas without inducing heart failure. We admit that venous hypertension might be one aspect of the pathophysiology. We believe that our diagnosis was correct and include chest roentgenograms before and after treatment. The roentgenogram is diagnostic of heart failure, because it shows that the heart must operate with increased filling pressures to meet the body's demands (Figure 1).

1. Ji Q, He X, Gong D. Could congestive heart failure be the reason for intractable diuretic resistance in a young woman? *Kidney Int* 2012; **82**: 1339.
2. Flenner E, Elgeti F, Luft FC *et al.* The case: intractable diuretic resistance in a young woman. *Kidney Int* 2012; **81**: 221–222.

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Choice of reference in the evaluation of the day-of-week effect on mortality on hemodialysis

To the Editor: Liu and Foley (LF)¹ question the methods in our analysis of day-of-week effects.² Arguing that mortality on the day following the weekend (day 1) is of primary