

edema include trichinosis, allergic reactions, and myxedema. Edema limited to one leg or to one or both arms is usually the result of venous and/or lymphatic obstruction. Unilateral paralysis reduces lymphatic and venous drainage on the affected side and may also be responsible for unilateral edema. In patients with obstruction of the superior vena cava, edema is confined to the face, neck, and upper extremities in which the venous pressure is elevated compared with that in the lower extremities.

APPROACH TO THE PATIENT

Edema

An important first question is whether the edema is localized or generalized. If it is localized, the local phenomena that may be responsible should be identified. If the edema is generalized, one should determine if there is serious hypoalbuminemia, e.g., serum albumin <3.0 g/dL. If so, the history, physical examination, urinalysis, and other laboratory data will help evaluate the question of cirrhosis, severe malnutrition, or the nephrotic syndrome as the underlying disorder. If hypoalbuminemia is not present, it should be determined if there is evidence of heart failure severe enough to promote generalized edema. Finally, it should be ascertained as to whether or not the patient has an adequate urine output or if there is significant oliguria or anuria. **These abnormalities are discussed in Chaps. 52, 310, and 311.**

■ FURTHER READING

CLARK AL, CLELAND JG: Causes and treatment of oedema in patients with heart failure. *Nature Rev Cardiol* 10:156, 2013.

DAMMAN K et al: Congestion in chronic systolic heart failure is related to renal dysfunction and increased mortality. *Eur J Heart Fail* 12:974, 2010.

FERRELL RE et al: *GJC2* missense mutations cause human lymphedema. *Am J Hum Genet* 86:943, 2010.