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Figure 1. Extensive progressive palpable painful purpura over the patient's trunk and upper extremities.

Figure 2. The confluence of purpura progressed to hemorrhagic bullae.

Figure 3. The hemorrhagic bullae progressed to necrotizing vasculitis. Used with permission of Chih-Ming Huang, MD, Department of Emergency Medicine, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Taiwan, ROC.

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A 47-year-old woman visited the emergency department (ED) because of extensive palpable painful purpura over her trunk and 4 extremities for 7 days (Figure1). The purpura converged and progressed to cellulitis, with skin necrosis on the lower legs (Figures 2 and 3). One month before, she was diagnosed with recurrent Graves' disease and had been receiving propranolol for 30 days and propylthiouracil for 17 days. In the ED, she was afebrile with normal vital signs, exophthalmos, and a palpable goiter. Her initial ED laboratory results revealed a normal CBC count and serum electrolyte levels, a C reactive protein of 33 mg/L, and an erythrocyte sedimentation rate of 24 mm/hour.

For the diagnosis and teaching points, see page 268.

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REFERENCES

1. Buettcher M, Baer G, Bonhoeffer J, et al. Three-year surveillance of intussusception in children in Switzerland. *Pediatrics*. 2007; 120:473-480.
2. Verschelden P, Filiatrault D, Garel L, et al. Intussusception in children: reliability of US in diagnosis—a prospective study. *Radiology*. 1992;184:741-744.
3. Hryhorczuk AL, Strouse PJ. Validation of US as a first-line diagnostic test for assessment of pediatric ileocolic intussusception. *Pediatr Radiol*. 2009;39:1075-1079.
4. Kairam N, Kaiafis C, Shih R. Diagnosis of pediatric intussusception by an emergency physician–performed bedside ultrasound: a case report. *Pediatr Emerg Care*. 2009;25:177-180.
5. Longjohn M, Wan J, Joshi V, et al. Point-of-care echocardiography by pediatric emergency physicians. *Pediatr Emerg Care*. 2011;27: 693-696.
6. Moore C, Todd WM, O'Brien E, et al. Free fluid in Morison's pouch on bedside ultrasound predicts need for operative intervention in suspected ectopic pregnancy. *Acad Emerg Med*. 2007;14:755-758.
7. Pershad J, Myers S, Plouman C, et al. Bedside limited echocardiography by the emergency physician is accurate during evaluation of the critically ill patient. *Pediatrics*. 2004;114:e667-671.
8. Tayal VS, Beatty MA, Marx JA, et al. FAST (focused assessment with sonography in trauma) accurate for cardiac and intraperitoneal injury in penetrating anterior chest trauma. *J Ultrasound Med*. 2004;23:467-472.
9. Chen L, Baker MD. Novel applications of ultrasound in pediatric emergency medicine. *Pediatr Emerg Care*. 2007;23:115-123; quiz 124–126.
10. Moore CL, Copel JA. Point-of-care ultrasonography. *N Engl J Med*. 2011;364:749-757.

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DIAGNOSIS:

Propylthiouracil-related ANCA-positive vasculitis. The patient was admitted to the hospital for further management of her vasculitis and treated with amoxicillin/clavulanate for her associated cellulitis. She had an excellent clinical response 9 days after she discontinued receiving propylthiouracil and was administered methylprednisolone. Skin biopsy showed leukocytoclastic vasculitis, and a serum perinuclear antineutrophil cytoplasmic antibody (ANCA) result was elevated. She underwent subtotal thyroidectomy for controlling Graves' disease 2 weeks after the cessation of propylthiouracil.

The diagnosis of drug-induced ANCA-associated vasculitis is based on the temporal relationship between clinically evident vasculitis and administration of the offending drugs, and excluding medical conditions that mimic vasculitis and other definable types of vasculitis.[1] ANCA positivity may range from 4.1% to 64% in patients receiving propylthiouracil, with very few developing associated vasculitis.[2] Prognosis is favorable with timely discontinuation of propylthiouracil and consideration of an alternate hyperthyroidism therapy such as radioiodine therapy or thyroidectomy.[3]

REFERENCES

1. Ying Gao, Ming-Hui Zhao. Review article: drug-induced anti-neutrophil cytoplasmic antibody-associated vasculitis. *Nephrology*. 2009;14, 33-41.
2. Yazisiz V, Ongut G, Terzioglu U, et al. Clinical importance of antineutrophil cytoplasmic antibody positivity during propylthiouracil treatment. *Int J Clin Pract*. 2010;64:19-24.
3. Antonucci A, Bardazzi F, Iozzo I, et al. Necrotizing vasculitis in a patient affected by autoimmune hyperthyroidism treated with propylthiouracil. *Dermatol Ther*. 2010;23(suppl 2):S41-43.