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Figure 1. Ultrasonography of the swelling over the patient's left mandible, demonstrating an enlarged tissue mass with prominent hypoechoic areas.

Figure 2. Ultrasonography of the corresponding area on the patient's right side, for comparison, demonstrating decreased tissue mass and less prominent hypoechoic areas as compared to the left side. Used with permission of Casey A. Grover, MD, Stanford/Kaiser Emergency Medicine Residency, Stanford, CA.

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A 3-year-old fully vaccinated girl presented to the emergency department with a 2-day history of low-grade fevers, runny nose, and a "swelling" on the left side of her face. Physical examination demonstrated a well-appearing child with a firm, mobile, 2-cm swelling over the angle of the left mandible. Ultrasonography of the swelling was performed with a 5- to 10-MHz linear array transducer probe (Figure 1). For comparison, ultrasonography of the same area on the right side was performed (Figure 2).

For the diagnosis and teaching points, see page e6.
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(continued from p. e5)

DIAGNOSIS:

Parotitis. Acute parotitis may be caused by a variety of infectious agents, including paramyxovirus (mumps), Coxsackie virus, cytomegalovirus, and *Staphylococcus aureus*.[1,2] Although history and physical examination are helpful in the patient suspected of having parotitis, the superficial location of the parotid glands makes them amenable to ultrasonography. Ultrasonography is well established as being able to evaluate the parotid gland, particularly in excluding malignancy and abscess as the cause of parotid enlargement.[1,3]

The normal parotid usually appears homogeneous and is more echogenic than the surrounding muscle.[1] Small hypoechoic areas may be observed in a normal parotid gland.[3] When acutely inflamed, the gland enlarges and appears heterogenous.[1] Hypoechoic areas in the superficial lobe of the parotid may be more prominent in glands affected with parotitis.[4]

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