

FIGURE 207-3 Schematic drawings of a normal parotid gland (left) and a parotid gland infected with mumps virus (right). An enlarged cervical lymph node is usually posterior to the imaginary line. (*Reproduced with permission from A Gershon et al: Krugman's Infectious Diseases of Children, 11th ed. Philadelphia, Elsevier, 2004.*)

The most frequent complications of mumps include orchitis, oophoritis, mastitis, pancreatitis, hearing loss, meningitis, and encephalitis. Complications can occur in the absence of parotitis and are more common among adults than among children and among males than among females, likely due to rates of orchitis.

Orchitis (testicular inflammation), usually accompanied by fever, is the most common complication, developing in up to 30% of unvaccinated and 6% of vaccinated postpubertal males. This complication is rare in children. Orchitis typically occurs during the first week of parotitis but can develop up to 6 weeks after parotitis. Both testes are involved in ~10–30% of cases. The testis is painful and tender and can be enlarged to several times its normal size. Pain and swelling may last for 1 week, while tenderness may last for several weeks. Testicular atrophy develops in ~30–50% of affected testicles. The development of anti-sperm antibodies, reduced testosterone production, and impaired sperm mobility through oligospermia, azoospermia, or asthenospermia may lead to temporary sterility or subfertility. However, no studies have assessed the risk of permanent infertility in men with mumps orchitis.

Approximately 7% of unvaccinated and $\leq 1\%$ of vaccinated postpubertal women develop oophoritis, which may be associated with lower abdominal pain and vomiting. The rate of mastitis in mumps has been estimated to be as high as 30% among unvaccinated postpubertal women and as low as $\leq 1\%$ among vaccinated postpubertal women. Pancreatitis occurs in ~4% of unvaccinated and $< 1\%$ of vaccinated mumps patients. Mumps pancreatitis, which may present as abdominal pain, is difficult to diagnose because an elevated serum amylase level can be associated with either parotitis or pancreatitis. However, serum lipase is elevated in pancreatitis and the presence of both elevated serum amylase and lipase can help determine if pancreatitis is present in addition to parotitis. Hearing loss associated with mumps