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Rapid Healing of Embolic Lung Abscess in Atelectatic Lobes.

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The relationship between massive atelectasis and pulmonary sup-
puration has been a subject of much controversy during the past
few years. Some believe that once massive atelectasis has devel-
oped, a suppurative process is inevitable. Others, however, are of
the opinion that a suppurative lesion develops only when the ob-
struction producing the atelectasis contains infective organisms; or
when an embolus is engrafted upon an atelectatic area.

The following experimental investigation was carried out to
determine the effect of septic and aseptic emboli engrafted upon an
atelectatic lung. Massive atelectasis of the left lung was produced
in each of 8 dogs by the silver nitrate cauterization technique.¹
Three emboli were introduced into the jugular vein of each animal,
and subsequently lodged in the lung. Two of the emboli were
infected with staphylococci, spirochetes, and fusiform bacilli; the
third was sterile. Each emboli contained a lead pellet and could
thus be located by roentgenogram.

Results.—None of the animals died. They were sacrificed at the
end of 11 days, 3½ weeks, 5 weeks, 8 weeks, and 5 months. Gross,
microscopic and roentgenologic examinations were made. Over
66⅔% of the emboli lodged in the atelectatic (left) lung. Each
animal received at least one septic embolus on the collapsed side. At
the 11-day stage both normal and collapsed lobes presented abscesses
0.75 to 1.0 cm. in diameter. By 3½ weeks the abscesses had healed
in the collapsed lobes and only a bronchial and peribronchial inflam-
mation of a subacute or chronic nature was seen thereafter. How-
ever, cavities 1.0 cm. in diameter persisted in the inflated lobes for
more than 2 months. No abscesses were produced by the bland
emboli in either atelectatic or inflated pulmonary tissue.

¹ Adams, W. E., and Livingstone, H. M., *Ann. Surg.*, 1932, **95**, 106.