

Afterwards we blew bismuth powder into the bronchi, but the shadow was not dark enough to show upon the screen. The animal was then killed, and I will show you the skiagrams taken in extreme inspiration, and also after inflating the lungs with bellows. I show them because they illustrate how such investigations may be carried out, but it is difficult to measure accurately the angle between the two bronchi in so small an animal. Moreover, it is necessary to remember that artificial inflation of the lungs is not like natural inspiration; it is unlikely that the diaphragm will distend so far as in the normal process.

In case there are any anatomists present, may I remind them that the anatomy of the thorax of the text-books is the *anatomy of aspiration*. The measurements, the pouches of pleura between the aorta and esophagus and other matters need, I think, some reconsideration.

But there are yet other movements of the bronchi. At each act of inspiration they are lengthened by traction; for, speaking generally, each individual part of the lung expands and contracts in the direction of the bronchial tubes contained in it; that is, it moves mostly downwards and backwards below, mostly horizontally in the middle, and so on. During expiration the bronchi are shortened, partly by their own elasticity and partly by the contraction of their muscles. At each beat of the heart a very considerable movement is given to them which is easily seen through the bronchoscope, the left main bronchus being principally moved upwards and downwards, the right inwards and outwards. When we think of all these movements occurring during quiet breathing, and remember also that the calibre of the tubes is diminished to an almost incredible extent during coughing, sneezing and vomiting, partly by muscular contraction, partly by the pressure of surrounding solid bodies, there is no difficulty in understanding how it is that ears of corn wander about from place to place in the manner I have already referred to; and that the consideration of this interesting question, even superficially, has led me so far from the subject of my paper.

I wish now to enter a little more in detail into the results of the lodgment of foreign bodies in the air passages. Curiously enough a body may pass through the narrow chink of the glottis and lodge just beyond. I have seen this happen with a cowrie shell and also with a grain of corn, which gave rise to an abscess by the side of the cricoid cartilage, thought to be tuberculous.

A large piece of meat or other soft material, if it becomes impacted in the trachea, rapidly causes death.