own essential lining is a low cuboidal type of epithelium but, as their name implies, they actually function in respiration through lateral alveoli distributed along their walls. Either these alveoli or the abrupt change in the character of the lining epithelium, or the small diameter of the respiratory bronchiole, or the combination of all three factors is responsible for retention of the fiber at this site. Only after asbestosis is well established are appreciable numbers of fibers seen in the more peripheral air spaces. Further explanation is required to clarify this observation.

Rate of Tissue Reaction to Asbestos Fibers

The affected tissues react much more rapidly to asbestos than to quartz dust. For example, in rats receiving asbestos fibers by intratracheal injection fibrosis of a characteristic type is visible as early as one month after injection; for quartz dust the latent period is two months or more. Thus, the development of nodular fibrosis due to inhaled silica lags behind the deposition of dust to a greater extent than does the evolution of the diffuse reaction to asbestos. This results in a difference in the degree of progression which follows termination of exposure to dust. For example, on discontinuance of exposure the nodules of silicosis become larger, to a limited extent, for a considerable period of time, whereas the fibrosis of asbestosis increases for only a short time. Subsequently, the asbestotic fibrous tissue contracts; this process often distorts the adjacent pulmonary tissue and may, as a result, progressively interfere with cardiorespiratory function.

Asbestosis Bodies

The peculiar structure known as the asbestosis body or "curious body" is a specific concomitant of asbestosis.[5] The typical body is a golden yellow, beaded or haustrated rod, which may be either straight or curved (fig. 2). Often one or both ends are bulbous like a dumbbell. The bodies vary considerably in length, and dimensions up to 230 microns have been recorded.

It is believed that asbestosis bodies are inhaled fibers on which protein and iron pigment of tissue origin have been deposited.[5] Gloyne[5b] observed reproduction of these bodies in guinea pigs nine months after subcutaneous injection of fibers rendered free of iron. The bodies are abundant in man and in the guinea pig (table 1) but are much larger in the former, probably because the larger-sized air passages admit fibers of greater dimension. In guinea pigs they form after about 70 days

5. Gloyne, S. R.: (a) The Formation of the Asbestosis Body in the Lung, Tubercle 12:393, 1931; (b) The Asbestosis Body, Lancet 1:1331, 1932. (c) Gardner and Cummings.[16]

6. Lynch, K. M., and Smith, W. A.: Asbestosis Bodies in Sputum and Lung, J. A. M. A. 95:639 (Aug. 30) 1930. Simson, F. W., and Strachan, A. S.: Asbestosis Bodies in the Sputum: A Study of Specimens from 50 Workers in an Asbestos Mill, J. Path. & Bact. 34:1, 1931. Gardner and Cummings.[16] Gardner.[16] Gloyne.[5a, b]