

Original article**Metal Detection (Hg, Cu and Fe) from Anthracotic Lesion in Dogs**

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Abstract The study was performed to investigate histopathological change of anthracotic lung and hilar lymph node lesions from 47 dogs separated into 2 groups, 26 of lower 10-year-old and 21 of equal and more than 10-year-old and study autometallographic method to detect mercury and special stainings to detect copper and iron in lung and hilar lymph nodes. Histopathological revealed deposition of carbon particle in lung, calcification of lung, dilatation of alveolar ducts, fibrosis and activation of reticuloendothelial cell between 2 groups were not statistically significant different ($p>0.05$). Whilst deposition of carbon particle in hilar lymph nodes and activation of bronchiolar glands between 2 groups showed statistically significant different ($p<0.05$). Autometallographic method showed 42.31%(11/26) positive of group 1 and 61.90% (13/21) of group 2 that were not statistically significant different ($p>0.05$) between 2 groups. Copper detection was found in 7.69%(2/26) of group 1 and 4.76%(1/21) of group 2 that were not statistically significant different ($p>0.05$) between 2 groups. Ferrous was detected 88.46%(23/26) of group 1 and 85.71%(18/21) of group 2 that were not statistically significant different ($p>0.05$) between 2 groups. Anthracotic lesion of lung and hilar lymph nodes showed an obviously histopathological change and allowed to mercury, copper and iron detection from these lesions.

Keyword : anthracosis, autometallography, copper, iron, mercury
