LIVER DISEASE IN HOG CAUSED BY RHIZOPUS COHNII

by

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ABSTRACT

In a hog slaughtered for general deterioration of health and jaundice, tumoriform, nodular lesions were found in the liver. Histologically, there was coagulation necrosis sometimes liquefied in its central parts, lined with demarcation wall of neutrophilic granulocytes, or, with fibroblastic granulation tissue and infiltrates of histiocytes, eosinophilic granulocytes, lymphocytes and multinucleated foreign body giant cells. Within these lesions, there was mycelium of a Phycomycetes type. Cultures yielded Rhizopus cohnii.

There are not many reports of phycomycosis type disease in hogs. The largest series of primary mycotic infection of the gastrointestinal tract, sometimes generalised and systemic, was published by CHRISTIANSEN (1929). Intestinal ulcerations similar to bubonic lesions in porcine plague, were noted by TSCHERNIAK (1934), WALKIEWICZ (1934, quoted by AINSWORTH & AUSTWICK 1959) and KÖNIG et al. (1967). GITTER & AUSTWICK (1959) described a simultaneous mucormycotic illness of gastrointestinal tract in a whole litter of sucking-pigs, DAVIS et al. (1955) published a case of pulmonary disease of phycomycosis type, which is quite rare in hogs, whereas KRETSCHMAR (1954) described disseminated forms of this disease.

In some of these cases, the assessment of the fungal agent was either inaccurate or only approximate. Therefore, a general term "phycomycosis" we used, might appear suitable. Among recorded cases of "mucormycosis", there is one by GITTER & AUSTWICK which was caused by Rhizopus microsporus. In other cases, published by CHRISTIANSEN, there were Absidia ramosa and Rhizopus suinus. R. suinus was described by NIELSEN (1929), as a new species in one of CHRISTIANSEN'S cases. R. suinus is, however, identical with R. cohnii. As far as we know, CHRISTIANSEN'S case should be the only recorded instance of R. cohnii infection in hog, while our own case might be the second one.

CASE REPORT

A hog weighing 50 kg, was slaughtered because of sudden deterioration of health and icterus. For examination, we received only li-

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Accepted for publication: 25. XII. 1971
Fig. 1. Nodular lesions on the cut surface of the liver. One of the nodules at the right side is colliquated centrally.

ver, lungs, kidneys and spleen. In the liver tumoriform lesions were macroscopic visible. The rest of the received organs were macroscopically normal.

**Gross appearance of the liver**

The organ was greatly enlarged, weighing approximately 3 kg. Under the fibrous capsule and on the cut surface, there were many whitish, firm, well bordered, spherical nodules measuring 1.5–2.5 cm, scattered regularly in the whole liver parenchyma. Some of them were homogenous, some were liquefied in their central parts, containing watery, rusty—brownish, foul smelling liquid. Around these lesions, there was a hemorrhagic zone, gradually vanishing into the normal parenchyma. There were many dilated blood vessels, obturated with grayish red thrombi. The nodular lesions had a definite macroscopical resemblance to tumorous metastases.

Histologically, the above described nodules, consisted of simple coagulation necrosis, pervaded by a dense network of mycotic hy-