Vascular Changes Induced by Migration of *Ascaris Suum* Larvae through Pig Liver

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SUMMARY

Modern systems utilized for pigs growing reduced parasitical impact, but it seems *Ascaris suum* are often encountered in all farm types. During their migration *Ascaris suum* larvae reach into liver producing necrotic lesions in acute phase. In this context we considered to make some histopathological investigations in liver provided by piglets infested with *Ascaris suum*. There were appreciated the severity of hepatic vascular lesions in both acute and chronic stages, the last one being represented by reparatory processes.

The study was realized in 6 piglets of 4 months that had positive coproparasitological exam for *Ascaris suum*. From slaughtered animals had been harvested liver fragments represented by 5 mm slices that were fixed during 24 hours in Susa–Heidenhain mixture. Fixed samples were dehydrated in ethylic alcohol clarified into butyric alcohol, and embedded into paraffin. Embedded paraffin samples were sectioned to about 5 µm and stained by trichrome Goldner method.

Hepatic lobules containing fresh parasitical migration trajectories had hemorrhagic and necrotic character. During traumatic parasitical migration sinusoid capillaries walls are going to suffer necrosis inducing large infiltrating hemorrhages. In liver that had some chronic lesions due to some previous parasitical migrations through parenchyma are obvious some reparatory processes. There are numerous blood vessels with normal structure, but there are some with interesting structural changes. The changes in affected vessels seem to have a multistage evolution. In the first stage is affected the endothelium, being represented by vacuolar degeneration and dethatching from basement membrane. In some other vessels could be noticed endothelial cell hyperplasia with their tendency to occupy vessel lumen. On the other hand there are some vessels which present changes into mean vessel wall region involving both muscular and conjunctive component. Proliferating connective tissue from mean vessel wall region become dominant in detriment of muscular tissue. In this manner muscular cells are dislocated and anarchically oriented. In some situations some small vessels suffer complete fibrosis. Is seems that endothelial cell hyperplasia is the consequence of toxic and irritative action induced by *Ascaris suum* larvae migration through the liver. Collagen proliferation from vessels wall seems to have the same cause. Collagen domination into affected vessels is the consequence of large destructions into the vessels wall. Also, some vessels are functionless influencing local reparatory processes determined by larvae migration through piglets’ liver.

**Keywords:** pig, vascular change, endothelial hyperplasia, fibrosis, *Ascaris suum*.