Degeneration of intrapancreatic nerve fibers after chronic alcohol administration in mice

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Conclusion. These results provide morphological evidence for an alcohol- induced selective intrapancreatic nerve degeneration. This affected mainly the nerve fibers that are inhibitory of the exocrine pancreas, and might represent the morphological background of hypersecretory state of the pancreas in chronic alcoholism. Methods. Intrapancreatic intrinsic nerves were studied by immunohistochemistry and electron microscopy after 4 mo of alcohol consumption and compared with control mice. Results. A dense network of nerve fibers was observed in the normal mouse pancreas around the blood vessels and ending on the exocrine cells. The presence of VIP, NPY, PP, SP, and serotonin in these nerves was demonstrated by immunohistochemistry. Four months of alcohol consumption did not result in apparent morphological changes of the pancreas. However, the majority of periacinar nerve terminals showed degenerative changes. Synaptic vesicles were diminished in number in some other nerve processes, whe