Experimental Models of Pancreatitis

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Abstract

Experimental animal models are helpful tools that have been employed to study pancreatitis for more than a century. Although not closely related to all aspects of the human disease, they have contributed greatly to our current understanding of the pathophysiology and cell biology of this disease. They have also become a standard means of testing innovative treatments against pancreatitis. This article reviews the experimental models of acute pancreatitis in common use, their severity, the criteria for the selection of an appropriate model, standards in monitoring and relevance to clinical disease. Despite their undoubted value in elucidating the mechanisms involved in the early cellular events and pathophysiology of acute pancreatitis, these models have not lent themselves to the development of effective new therapies.

Models of chronic pancreatitis are also reviewed. The development of a reproducible model relevant to human chronic pancreatitis remains challenging. Experimental models of chronic pancreatitis have not yet added greatly to the understanding of the pathogenesis of this disease in man.

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