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Journal of Diabetes Research

Special Issue on

Type 1 Diabetes, Not Only a Beta Cell Disease?

CALL FOR PAPERS

Type 1 diabetes results from the destruction of insulin-producing beta cells of the pancreatic islets. Beta cell loss is thought to result gradually where, in most cases, autoreactive CD4 and CD8 T cells are involved. Recent evidence from pancreatic sections derived from patients at different stages of type 1 diabetes, that is, in autoantibody-positive donors, and patients early or long after disease onset has challenged this “dogma” and made us reconsider this conventional view of the disease. In addition to the reduction in beta cell mass due to autoimmune destruction, newer reports support that the exocrine pancreas is also affected in patients with type 1 diabetes. Patients with T1D have approximately 24 to 48% smaller pancreas as compared to control nondiabetic individuals. Since beta cell mass makes roughly 2% of the mean organ weight, it is most likely that the reduction in the pancreas size regards the exocrine compartment. The reasons behind the reduction in pancreas size are still unclear although insulin insufficiency could account, at least in part, for the exocrine atrophy. Interestingly, cellular and molecular indicators of increased presence of innate and adaptive immune cells were recently found also in the exocrine pancreas. This suggested that the exocrine insufficiency could be also immune-mediated. Whether this “autoimmune” attack is antigen-specific as it has been demonstrated for the endocrine compartment remains to be addressed. In addition, whether pancreatic atrophy is the cause or the outcome of type 1 diabetes progression is unclear and further studies need to be performed.

Based on this evidence, we invite authors to contribute original research articles as well as review articles that will illustrate and stimulate the continuing effort to understand the implication of the exocrine pancreas in type 1 diabetes development and to exploit possible new diagnostic/predictive biomarkers or potential targets for the development of innovative therapeutic strategies.

Potential topics include, but are not limited to:

- ▶ The possible link between insulin insufficiency and pancreas exocrine atrophy in patients with type 1 diabetes
- ▶ Recent discoveries shedding light on the potential immunological abnormalities in the exocrine pancreatic compartment in patients with type 1 diabetes
- ▶ Identification of possible functional irregularities in the exocrine pancreas, that is, pancreatic enzyme production, in patients with type 1 diabetes and their clinical impact
- ▶ New hypotheses regarding the mechanisms driving pancreas mass demise and its link to type 1 diabetes progression

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jdr/tdbc/>.

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Manuscript Due

Friday, 26 February 2016

First Round of Reviews

Friday, 20 May 2016

Publication Date

Friday, 15 July 2016