Non-uniform distribution of islet amyloid in the pancreas of 'maturity-onset' diabetic patients.

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Quantitative morphometry of the pancreases of five 'maturity-onset' diabetic subjects has demonstrated more amyloid in islets of the head, body and tail (where it was found in a mean 29% of the islets occupying a mean 11% islet area) than in islets of the 'pancreatic-polypeptide-rich' lobule of the head (where amyloid was found in a mean of 3% of the islets occupying a mean of 0.7% islet area, both p less than 0.005). The non-uniform amyloid distribution may relate to the hormone content of the islet; the head and tail contained significantly more A, B and D-cells than the pancreatic-polypeptide-rich lobule in both non-diabetic subjects (n = 8) and diabetic patients (n = 5; p less than 0.005). This result is compatible with the previous suggestion that amyloid may be derived from insulin or its precursors.