Type II diabetes of early onset: a distinct clinical and genetic syndrome?

O'Rahilly,S; Spivey,RS; Holman,RR; Nugent,Z; Clark,A; Turner,RC

Br Med J (Clin Res Ed). 1987 Apr 11; 294(6577): 923-8.

The inheritance of non-insulin-dependent (type II) diabetes was studied by a continuous infusion of glucose test in all available first degree relatives of 48 diabetic probands of various ages and with differing severity of disease. In an initial study of 38 type II diabetic subjects and their first degree relatives six islet cell antibody negative patients with early onset disease (aged 25-40 at diagnosis) were found to have a particularly high familial prevalence of diabetes or glucose intolerance. Nine of 10 parents available for study either had type II diabetes or were glucose intolerant. A high prevalence of diabetes or glucose intolerance was also found in their siblings (11/16;69%). In a second study of the families of a further 10 young diabetic probands (presenting age 25-40) whose islet cell antibody state was unknown a similar high prevalence of diabetes or glucose intolerance was found among parents of the five islet cell antibody negative probands (8/9; 89%) but not among parents of the five islet cell antibody positive probands (3/8;38%). Islet cell antibody negative diabetics with early onset type II disease may have inherited a diabetogenic gene or genes from both parents. They commonly need insulin to maintain adequate glycaemic control and may develop severe diabetic complications. Early onset type II diabetes may represent a syndrome in which characteristic pedigrees, clinical severity, and absence of islet autoimmunity make it distinct from either type I diabetes, maturity onset diabetes of the young, or late onset type II diabetes.