The reversal of type 2 diabetes - The role of the bile

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Type 2 diabetes is a complex disorder. A relative rather than an absolute lack of insulin allows blood sugar to rise above normal even though the patients secret excess insulin. This is termed insulin resistance and is preceded by a hyperinsulinemia phase where blood sugars still remain normal. The hyperinsulinemia reflects good islet cell function even if not sufficient to control hyperglycaemia. At this stage in the disease there is an opportunity to reduce insulin resistance and to improve beta cell function and to control/reverse diabetes. Bile plays an important regulatory function in carbohydrate and fat metabolism and signals beta cell stimulation and insulin secretion. Abnormalities in bile have been well documented in obesity and type 2 diabetes, and alterations have been shown with weight reduction and following bariatric surgery. Reversal of diabetes has been shown to occur following lifestyle changes and weight reduction and the recent. Direct study has shown that many obese patients are able to follow a meaningful weight reduction program with 85% of patients who lose more than 15% of body weight being able to reverse their diabetes. Most dietary programs prior to this study, incurred large expenditure but the direct study showed the possibility of general practice being able to deliver a program with little in the way of cost implications. The research showed that about 25% of obese patients with type 2 diabetes were willing and able to complete a year's program, with many being successful in reversing their diabetes. Bariatric surgery has a similar impact on diabetes reversal. It is of course more successful in weight reduction in that more patients will lose more than 15% of body weight but at a cost of more complications and a greater financial cost. The role of pharmaceutical agents in preserving beta cell function, improving satiety and diminishing hunger will be discussed.

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