

THE WEEK

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# SMART *life*

LIVE HEALTHY, STAY FIT

male



## Cut to cure

Ileal transposition is a quick, effective option for both obese and non-obese patients with type 2 diabetes

BY DR ABHAY AGRAWAL



**F**our million people die from diabetes every year. More than half of these deaths can be prevented. British researchers in a recently released survey found that people from South Asia, especially India, are prone to type 2 diabetes caused by high levels of obesity and insulin resistance. India is declared the diabetes capital of the world: It is estimated that by 2025, India will be home to more than 80 million diabetics and most of them will be type 2 diabetics.

Diabetes mellitus is a worldwide epidemic which is on the rise without much cure and associated with a number of short- and long-term complications. Retinopathy is a major cause of morbidity in patients with diabetes mellitus. The incidence of blindness, for example, is 25 times higher in people with diabetes than in non-diabetics.

If all complications of diabetes were combined, individuals with intensive diabetes management would experience 15.3 more years of life without significant micro-vascular or neurologic complications, compared to individuals who received standard therapy. This translates to an additional 5.1 years of life expectancy for individuals in the intensive diabetes management group.

Eighty per cent of patients with diabetes are obese or overweight, and weight reduction is one of the most efficient ways to achieve control of this illness. However, it is difficult to achieve smooth normal blood sugar level readings with just the conventional treatments comprising diet, exercise, oral tablets and insulin. On the other hand, impressive improvement in diabetic status of patients undergoing bariatric and metabolic surgery has stimulated interest in surgery as a potential cure for type 2 diabetes.

### **Ileal surgery**

Research shows there are intestinal hormones that have a striking effect

on pancreas and insulin secretion, especially in response to food intake. On the basis of this, Brazilian surgeon Dr Aureo de Paula devised a laparoscopic surgery that is proving very helpful in controlling diabetes and avoiding its complications. A long segment of ileum (ending portion of small intestine) is shifted to the upper small intestinal area, where food particles reaching immediately after the meal can cause an immediate secretion of hormone GLP-1, which acts on the B-cells of pancreas to secrete insulin, to immediately control blood sugar. If there is no intake of food, this will not happen, so there is no danger of low blood sugar (hypoglycaemia).

It was originally thought that the control of diabetes was on account of weight loss. However, more recently, it has been noted that insulin impairment is reversed merely days after a metabolic procedure and, therefore, could not be solely due to weight loss.

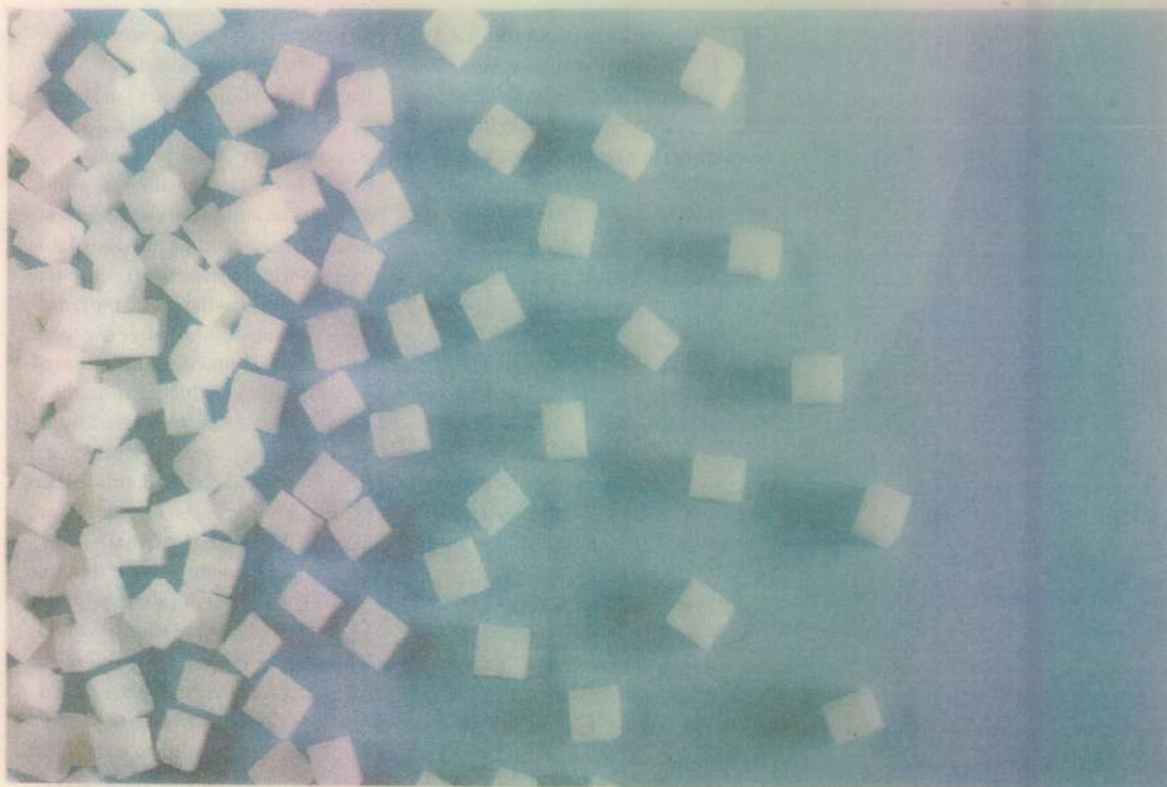
### **Immediate benefits**

This operation is ideal for the surgical cure of diabetes in non-morbidly obese patients as well. Patients can stop all medicines within a few months, at times even within two

### **History of ileal transposition**

Dr Aureo de Paula has been performing ileal transposition surgeries for the last seven years and has presented his work internationally, showing excellent results. He alone has performed over 700 such surgeries in the last seven years with utmost safety and excellent results of 95 per cent remissions. His results have been published in a number of articles in internationally reputed journals like *Surgical Endoscopy*.

Besides Paula, ten other surgeons in Brazil also practise this surgery and 2,000 patients have been operated upon so far.



to four weeks post surgery. Good improvement is seen in their triglycerides, cholesterol, kidney function and leg pain, thus proving to be a true metabolic surgery. Since there is no loss of intestinal length and no diversion of food, there are no long-term side-effects and no nutritional deficiency. The only lifestyle change required is intake of smaller portions of food at a time to enjoy a disease-free, longer and healthier life.

The operation takes around four hours and costs ₹4-4.5 lakh. The patient can start walking the next day and can begin work in a week.

### *Ileal transposition vs bariatric surgery*

In type 2 diabetes patients with normal BMI, conventional bariatric surgery would be inappropriate, as it would lead to a significant undesirable weight loss. In such patients, ileal transposition is the future.

Despite the significant link between obesity and type 2 diabetes,

20 per cent of patients with type 2 diabetes are not obese and some of these patients are unable to achieve adequate control of their blood glucose, despite dietary and pharmacological treatment.

In these non-obese patients, type 2 diabetes is still associated with significant morbidity such as blindness, renal insufficiency, neuropathies, amputations and cardiovascular disease and reduced life expectancy. While a significant body of research shows that bariatric surgery can reverse type 2 diabetes in obese individuals, there is limited but promising evidence of its efficacy in the non-morbidly obese population, too.

Laparoscopic sleeve gastrectomy (LSG), a restrictive bariatric operation, is added to ileal transposition to induce weight loss in moderately obese diabetics. Diabetes is resolved in all these patients, hypertension is resolved in 92.9 per cent and improved in the remaining patients.

A study conducted in Brazil enrolled patients with BMI between 22 and 34 (mean BMI 26.6) and who had been diagnosed with type 2 diabetes with inappropriate blood glucose control despite diet regulation, oral drugs and/or insulin for at least three years. The mean duration of diabetes was 6.8 years. Patients underwent ileal interposition. There were no complications and 92.9 per cent patients achieved adequate glycemic control with a mean follow-up time of 9.2 months. This procedure could resolve type 2 diabetes in patients who are facing serious life-threatening complications. This metabolic surgery—ileal transposition with sleeve gastrectomy—is effective even in non-morbidly obese patients with poorly controlled type 2 diabetes.

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