1-year metabolic and body weight effects of proximal intestinal exclusion as an adjunct to GLP-1RA therapy in suboptimally controlled type 2 diabetes mellitus

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BACKGROUND

75% of patients fail to achieve the NICE targets for continuation of GLP1-RA therapy[1]. Alternative new treatment options to combat the global diabesity pandemic are required. The Endobarrier is a novel 60-cm tubing device, endoscopically inserted for up to 1 year to provide proximal intestinal exclusion.

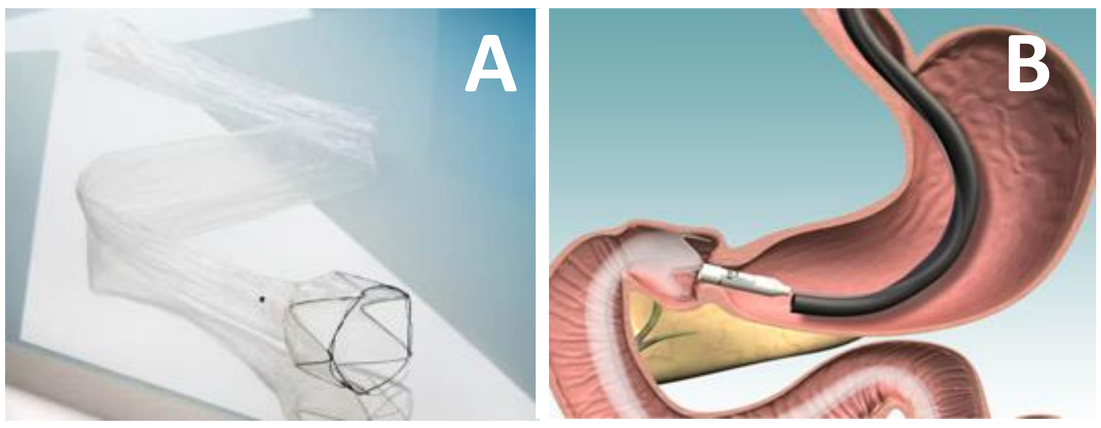


Fig. 1A. Photograph of Endobarrier with crown anchor in foreground and tubing posteriorly; 1B shows the device implanted with endoscope (black) being used to guide capsule (white) containing Endobarrier. Once sited in the duodenum instruments are used to deploy the Endobarrier.

AIM

To investigate the effects of adding proximal intestinal exclusion to GLP-1RA therapy not achieving targets, on weight and HbA1c compared to either treatment alone.

METHOD

Adults with type 2 diabetes mellitus (HbA1c≥58mmol/mol) and obesity (BMI≥35kg/m^2) despite GLP1-RA (liraglutide) therapy were randomised to one of three treatment groups:

- **Endobarrier + liraglutide 1.2mg**
- **Endobarrier (and stop liraglutide)**
- **Liraglutide 1.8mg (and no endobarrier)**

Participants were seen 3-monthly and their diabetes medications were optimised.

RESULTS

Table 1. Baseline characteristics (n70)

Parameter	Endobarrier + liraglutide n24	Endobarrier N24	liraglutide n22
Age (years)	52.0±11.7	50.7±8.4	54.0±10.1
Sex (%male)	41.7	29.2	36.4
Caucasian (%)	66.7	70.8	72.7
*Diabetes duration (yrs)	11.2(6.7-17.1)	10.3(7.8-12.7)	13.3(9.0-18.4)
BMI (kg/m^2)	40.3±4.8	41.7±4.9	40.6±4.4
HbA1c (%, mmol/mol)	9.6±1.4, 81.5±14.9	9.3±1.7, 78.1±19.0	9.7±1.7, 82.5±18.8

*median (IQR); No significant differences between groups

Fig. 2A-B. A. Impact of treatment on change in A. weight and B. in HbA1c over 1 year

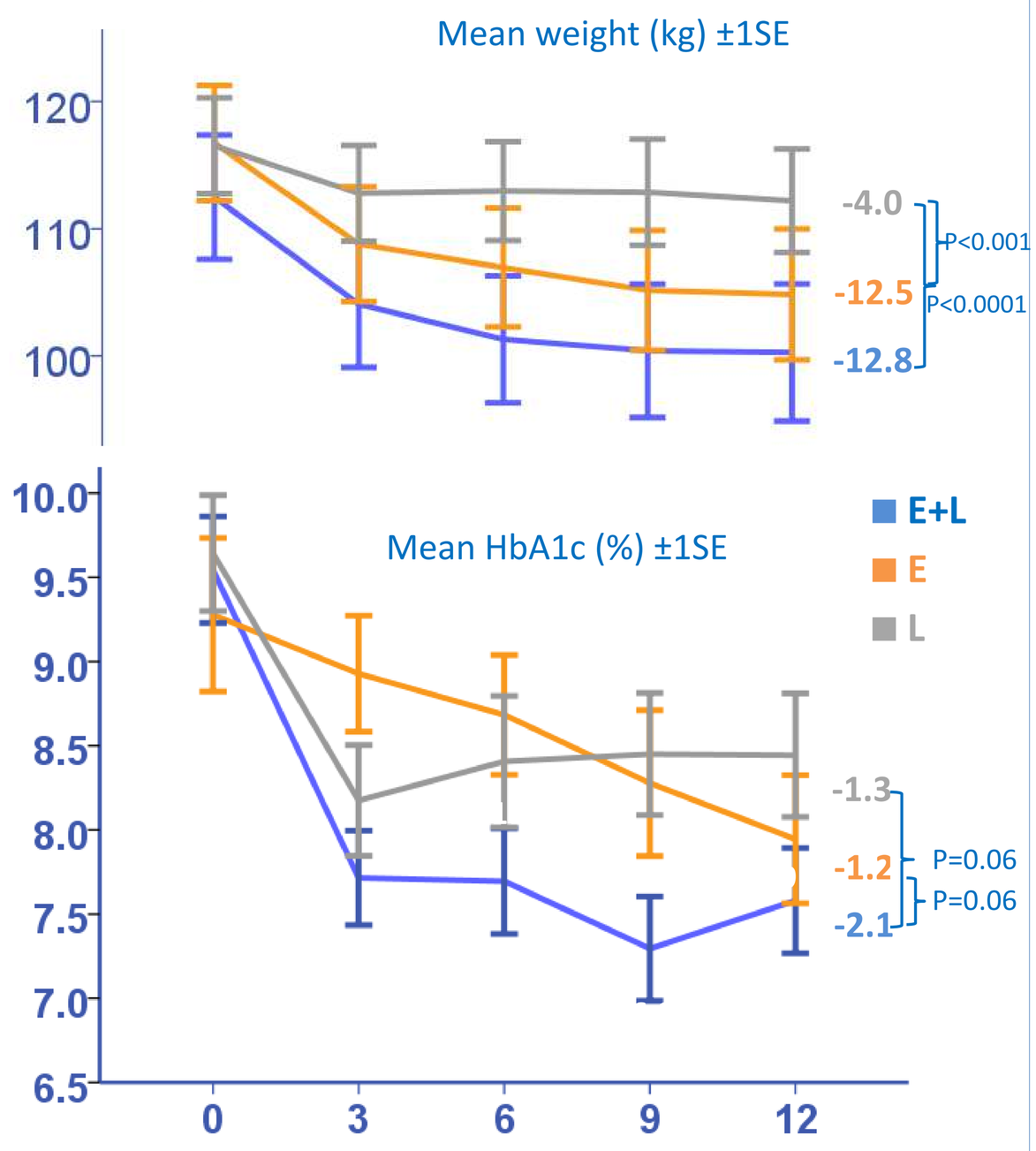
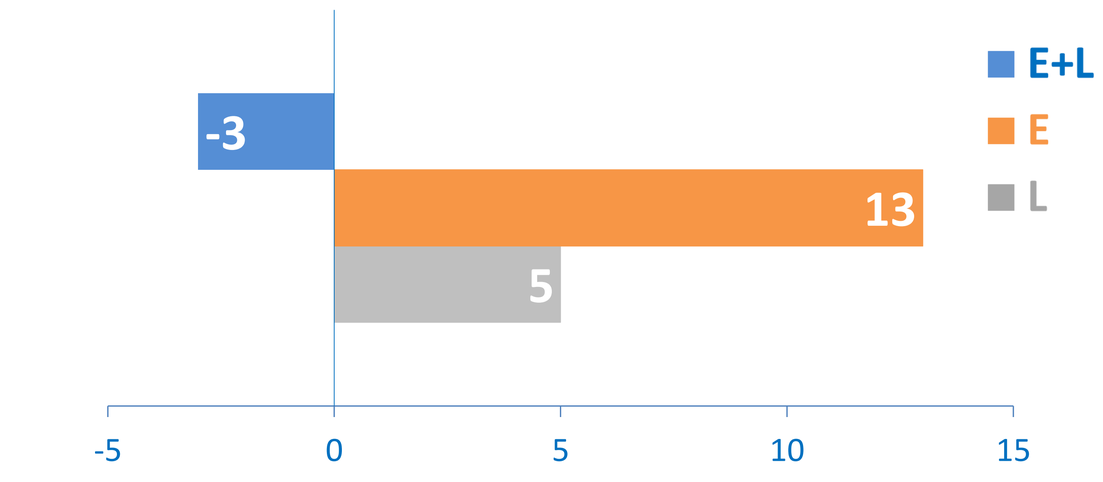


Fig. 3. Number of new diabetes drugs per treatment group at 1 year compared to baseline



CONCLUSION

- All groups produced similar reductions in HbA1c by 1 year, though up to 9 months the E+L group was superior.
- Only the endobarrier groups produced reduction in weight; the E+L group did this with fewer increases in diabetes medications.
- By 1 year, both endobarrier groups achieved similar weight and HbA1c reduction of clinically significant levels.

Adding proximal intestinal exclusion or switching to it in patients with suboptimally performing GLP-1RA therapy, has a useful role in the management of refractory diabetes and obesity

1. Ref: Thong KY, Sen Gupta P et al. BJDVD 2014. (14): 52-9.