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Session type **Abstract Submission**

Topic **Novel technologies and gastrointestinal devices for diabetes**

topics 1 **Yes**

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Presentation preference **Oral Presentation**

Abstract number **WCITD19-0050**

Abstract title **UK FIRST NATIONAL HEALTH SERVICE (NHS) ENDOBARRIER SERVICE FOR UNCONTROLLED DIABESITY SHOWS THE METABOLIC IMPROVEMENTS 6-MONTHS AFTER ENDOBARRIER REMOVAL ARE WELL MAINTAINED**

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Abstract text **Background and Aims:**

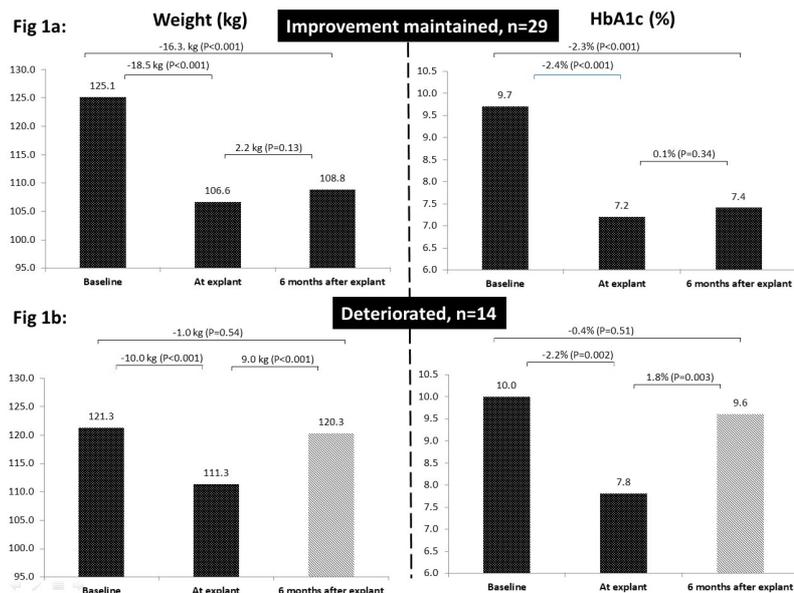
EndoBarrier is a 60cm endoscopically-implanted proximal intestinal liner, designed to mimic the by-pass part of roux-en-y bariatric surgery. We aimed to assess the safety and efficacy of EndoBarrier in patients with suboptimally controlled diabetes.

Methods:

In the first NHS EndoBarrier service, we provided EndoBarrier for patients with suboptimally controlled diabetes and monitored outcomes in a registry.

Results

The first 53 patients have completed 6-months post EndoBarrier removal and of these 43/53 (81%) (age 51.6±6.4years, 58.1% male, 53.5% euroid, diabetes duration 12.0(6.0-20.0)years, 60.5% insulin-treated, BMI 42.0±8.3kg/m2) attended follow-up. During EndoBarrier implantation, mean±SD HbA1c fell by 2.4±2.0 %, from 9.8±2.0 to 7.4±1.2 % (p<0.001), weight by 15.7±8.9kg from 123.9±30.1 to 108.1±31.4kg (<0.001), systolic BP from 139.6±15.6 to 125.4±14.8mmHg (<0.001), cholesterol from 4.8±1.5 to 3.9±0.9mmol/L (p<0.001) and serum alanine-aminotransferase (marker of liver fat) from 30.6±19.4 to 19.0±10.2U/L (p<0.001). Median(IQR) total daily insulin dose reduced from 109(58.5-145.5) to 30(0-72.5)units (p<0.001). 8/26(30.8%) insulin treated patients discontinued insulin. 6-months post-EndoBarrier, 29/43(67%) had maintained the improvement (Fig 1a). Of the 14 whose weight and/or HbA1c deteriorated (Fig 1b), 9/14(64%) had depression or bereavement. 6/53 (11.3%) patients had early Endobarrier-removal: 4 GI bleed, 1 liver abscess and 1 GI symptoms. All 6 had full recovery after removal and most experienced benefit despite the setback. All other patients achieved a full year of EndoBarrier treatment.



Conclusions:

Our data demonstrate EndoBarrier as highly effective in patients with refractory diabetes, with maintenance of improvement after removal in 67%. Benefits outweigh risks. As an endoscopic procedure it is relatively simple and non-invasive and deserves further investigation.

Keywords

EndoBarrier
Obesity
Diabetes
Endoscopic
Non-invasive