Effect of One Anastomosis Gastric Bypass on Haematinics, Vitamin D, and Parathyroid Hormone Levels: A comparison between 150 cm and 200 cm Bilio-Pancreatic Limbs

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Introduction:

There is little data on the effect of One Anastomosis Gastric Bypass (OAGB) on Haematinics, Vitamins D, and Parathyroid Hormone levels. It is further unclear if an OAGB with a Bilio-Pancreatic Limb (BPL) of 150 cm (OAGB-150) would deliver better outcomes than that with a BPL of 200 cm (OAGB-200).

Materials and Methods:

We investigated our records to obtain information on patients who underwent an OAGB-200 or OAGB-150 until 31st July 2018 in our unit. We then separated these patients into two groups – OAGB-200 and OAGB-150; and compared the nutritional outcomes between them and between the preoperative levels of each group and the two follow-up points at 1 and 2 years.

Results:

- A total of 405 patients underwent either an OAGB-200 (n=234) or OAGB-150 (n=171). The mean age was 46±10.98 years and 276 (68.1%) were females.
- The mean preoperative weight and the Body Mass Index (BMI) were 139±29.96 kg and 49±8.14 kg/m2 respectively.
- With OAGB-200 there was a significant increase in anaemia rates at 1 and 2-years compared to preoperative levels with a significant fall in haemoglobin levels.
- After OAGB-150 there was a significant fall in haemoglobin levels at 1 and 2-years but the increase in anaemia rate was only significant at 2-years.
- There was a significant increase in PTH levels and the number of abnormal values at 1 and 2-years with OAGB-200. With OAGB-150, PTH changes were significant at 2 years only.

Significantly higher percentage of patients with low haemoglobin at 1 year in OAGB-200 compared to OAGB-150.

Significantly higher PTH levels and a higher number of abnormal PTH values in the OAGB-200 group at 1 year compared to OAGB-150

Conclusion:

- Both OAGB-200 and OAGB-150 are associated with a significant increase in anaemia and secondary hyperparathyroidism rates.
- Our findings should prompt the evaluation of supplementation protocols with higher dosages for iron, folate, and calcium.
- Consideration should also be given to evaluating shorter BPL lengths than 150 cm as standard BPL length for OAGB as that might result in fewer micronutrient deficiencies and consequently lower anaemia and hyperparathyroidism rates.

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