

THE FRENCH EXPERIENCE IN BARIATRIC SURGERY " LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB)" IN ADOLESCENCE



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This study is based on prospective longitudinal follow-up of 44 severely obese adolescents (76% girls) operated in a single French institution since 2008.

Surgery was proposed only after at least one-year lifestyle intervention in a multidisciplinary programm managed by a pediatric team.

3 years after surgery, an adult transition plan has been implemented.

Eligibility criteria:

- Age over 14 years (tanner stage IV or V)
- Body mass index>40
- Failure of 12 months of multidisciplinary lifestyle intervention at least

Exclusion criteria:

Syndromic obesity and psychiatric disorders.

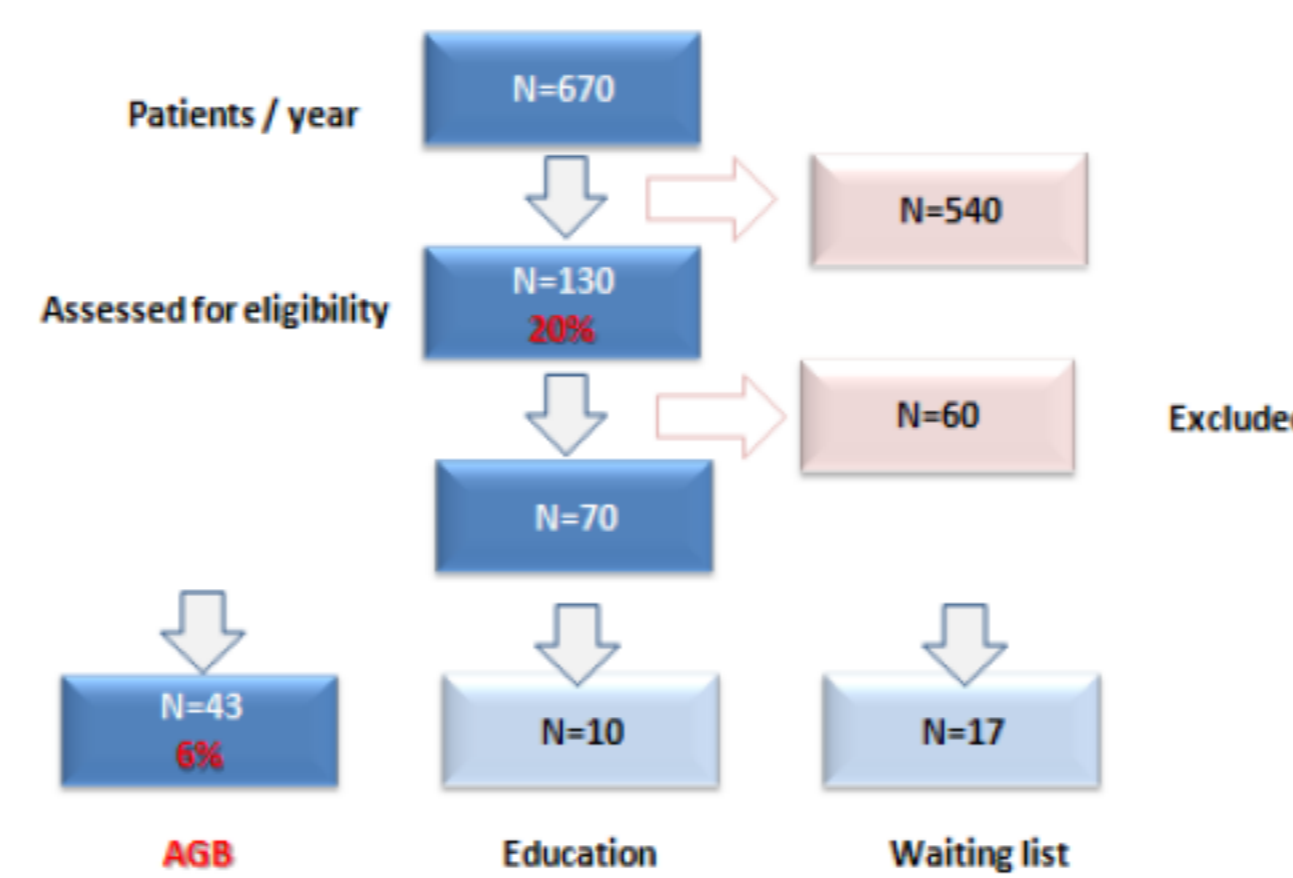
Since 2008

44 adolescents have undergone LAGB (24% male).
Mean age = 16.7 ± 0.9 years (range: 14.5 - 18 years).
Mean BMI = 45.0 ± 5.2 kg/m² (range: 36 - 57).
EW: 56.8 ± 16.3 Kg.
Mean follow - up: 28 months (range: 3 - 84 months)
(70% > 2 years, 52%> 3 years)

An average of 12 visits in the first year, 9 in the second and 5 in the third year were recorded.
in multi variate analysis only the mean number of consultations/ year, was found Significant on weight loss.

Metabolic outcomes

| | Before | 1 year | 2 years | 3 years |
|------------------------|-----------|---------------|---------------|---------------|
| N | 44 | 38 | 31 | 23 |
| Fasting Glucose mmol/L | 5.1 ± 1.2 | 4.6 ± 0.5 * | 4.5 ± 0.3 * | 4.4 ± 0.4 * |
| Homa- IR | 5.6 ± 3.4 | 2.6 ± 1.4 * | 2.0 ± 0.9 ** | 1.1 ± 0.6 * * |
| Triglycerides mmol/L | 1.1 ± 0.5 | 0.8 ± 0.5 * | 0.8 ± 0.3 * | 0.6 ± 0.2 * |
| HDL Cholesterol mmol/L | 1.0 ± 0.2 | 1.1 ± 0.1 * | 1.2 ± 0.2 * | 1.3 ± 0.2 * |
| ALAT UI/L | 31.7 ± 16 | 23.8 ± 20.3 * | 23.0 ± 13.6 * | 20.4 ± 11.8 * |



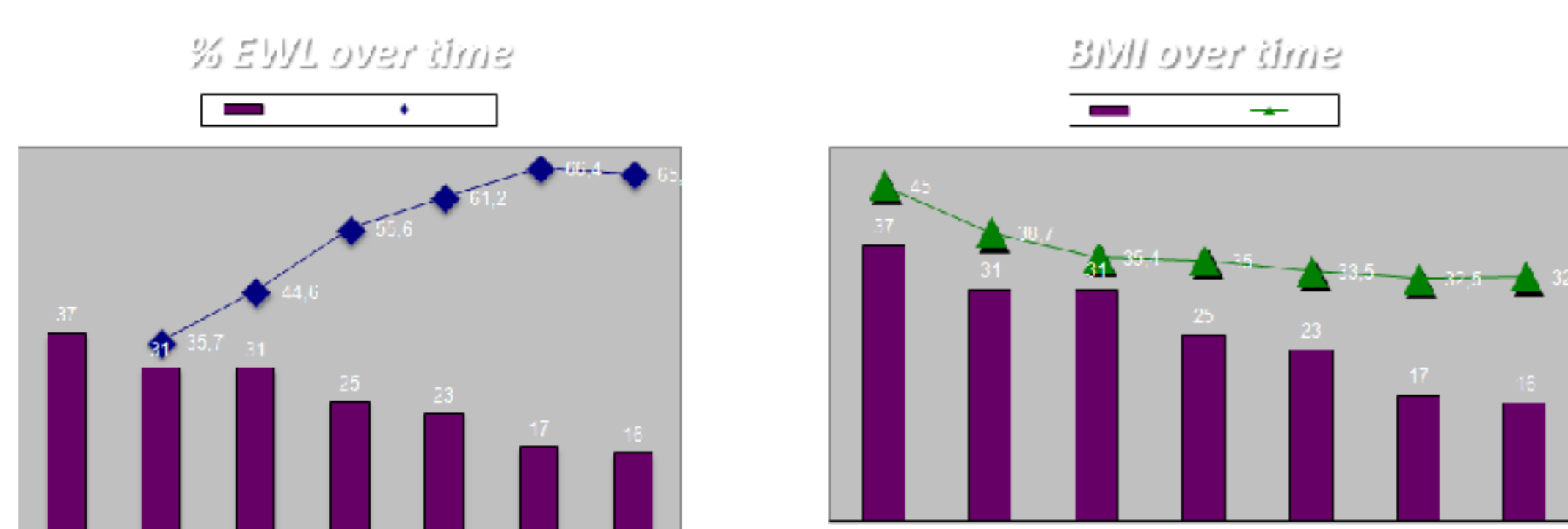
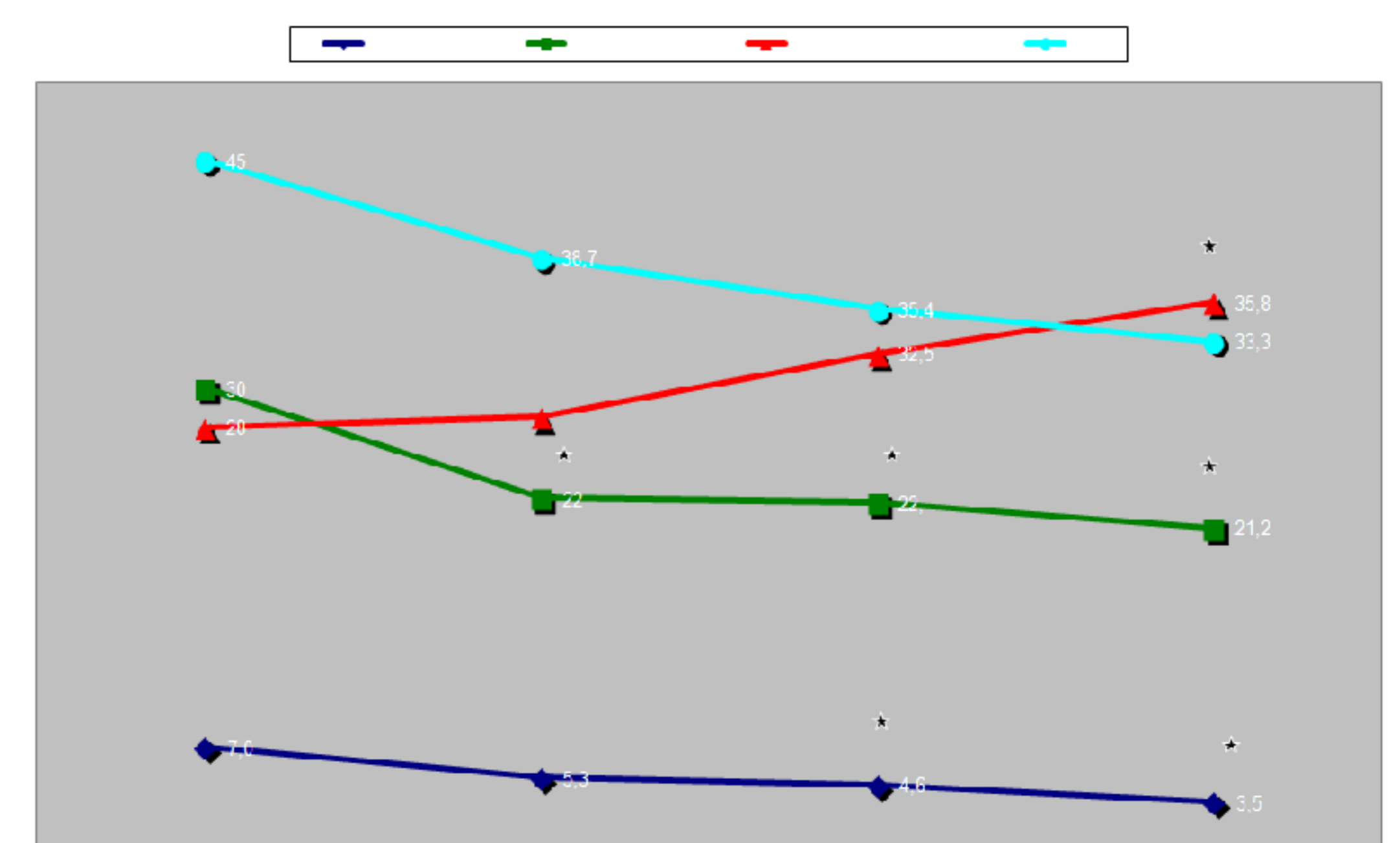
Changes in cardiovascular risk

| | Before | 1 year | 2 years | 3 years |
|---------------------------------|--------------|--------------|--------------|--------------|
| N | 44 | 38 | 31 | 23 |
| Abdominal Fat Mass (Kg) | 26.6 ± 4.8 | 19.4 ± 7.4 * | 16.1 ± 7.7 * | 10.9 ± 5.3 * |
| Homa- IR | 5.6 ± 3.4 | 2.6 ± 1.4 * | 2.0 ± 0.9 * | 1.1 ± 0.6 * |
| Triglycerides:Cholesterol Ratio | 2.4 ± 1.4 | 1.7 ± 1.1 * | 1.4 ± 0.9 * | 1.1 ± 0.2 * |
| Systolic BP (mm Hg) | 117.4 ± 10.2 | 115.3 ± 11 | 117.6 ± 11.4 | 118 ± 15.2 |
| Diastolic BP (mm Hg) | 64.8 ± 5.7 | 64.3 ± 7.6 | 64.2 ± 5.6 | 64 ± 5.2 |

Post operatives results

| | Before | 1 year | 2 years | 3 years |
|-----------------------|--------------|----------------|---------------------------|---------------------------|
| N | 44 | 38 | 31 | 23 |
| Weight Kg | 128.0 ± 19.9 | 101.7 ± 21.6 * | 95.8 ± 23.6* ^o | 95.5 ± 24.7 * |
| Weight loss Kg | | 26.2 ± 13.7 | 34.1 ± 12.7 ^o | 32.0 ± 16.7 ^o |
| Excess weight loss % | | 48.4 ± 26.1 | 62.1 ± 24.7 ^o | 65.6 ± 28.5 ^o |
| BMI Kg/m ² | 45.0 ± 5.2 | 35.5 ± 6.6 * | 33.2 ± 6.4 * ^o | 32.8 ± 7.6 * ^o |
| BMI Loss | | 9.4 ± 4.7 | 12.5 ± 4.9 ^o | 13.3 ± 5.9 ^o |

Psychological outcomes



Among severe obese adolescents there was substantial weight loss and an improvement of metabolic profile three years after LAGB.
But these require a high degree of patient cooperation and professional support.
However this technique appears to be a primary choice for bariatric surgical procedure .

Long- term outcomes are still lacking.

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