



Pregnancy after ESG: are all efforts thwarted? A case series

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BACKGROUND:

Pregnancy is a condition in which physiologically the pregnant woman potentially undergoes weight gain.
Endoscopic Sleeve Gastroplasty (ESG) is an organ sparing bariatric procedure aimed to reduce gastric volume and modify gastric motility with full thickness endoscopic suture.

AIMS AND METHODS:

A retrospective analysis of a prospective database was conducted to evaluate weight trajectories and lifestyle modification in women that got pregnant after ESG.
Weight loss outcomes, evolution of comorbidities (High Blood Pressure [HBP], Hyperinsulinemia [HINS]) and the Bariatric Analysis and Reporting Outcome System (BAROS) questionnaire were analyzed at the beginning and at the end of the pregnancy and at the first follow-up visit after delivery.

RESULTS:

From May 2017 to October 2021, 228 women underwent ESG in Rome (Fondazione Policlinico Universitario Agostino Gemelli) and nine of them became pregnant after ESG. Another patient got pregnant after ESG in Israel (Hadassah Medical Center).
Out of the total 10 patients (mean age 33,9±6,2 years) got pregnant after the procedure, with a mean interval of 5,8±4,0 months.
Two patients reported H-INS, while another patient had both H-INS and HBP. Two women affected by Poly-Cystic Ovary Syndrome (PCOS) reported difficulty getting pregnant before ESG.

Population	Weight Loss (kg)	EWL (%)	TBWL (%)	BMI (kg/m ²)	Δ BMI (kg/m ²)	EBMIL (%)	BAROS	QoL
Beginning of Pregnancy (N=10)	18,3±8,9	55,7±24,6	18,1±8,1	30,9±4,0	6,8±3,2	55,7±24,6	4,8±1,9	2,3±0,7
End of Pregnancy (N=10)	11,4±14,1	30,4,2±37,2	10,4±12,2	33,7±4,5	4,0±4,6	30,4±37,2	3,4±1,7	2,1±0,7
First Follow-up after delivery (N=10)	10,3±11,2	30,5±30,7	9,9±9,9	34,0±5,0	3,7±3,7	30,5±30,7	3,5±2,2	2,1±0,9

Figure 1. Weight outcomes of the ten patients that got pregnant after Endoscopic Sleeve Gastroplasty in Rome (9 patients) and in Israel (1 patients). Data are reported as mean value±Standard Deviation.
Abbreviations: BP=Beginning of pregnancy; EP= End of pregnancy; FU=Follow-up; WL=Weight Loss; EWL= Excess Weight Loss; TBWL= Total Body Weight Loss; BMI=Body Mass Index; EBMIL= Excess Body Mass Index Loss; BAROS= Bariatric Analysis and Reporting Outcome System questionnaire.

*First follow-up visit after the delivery: 2,5±3,7 months

- Six out of 10 patients had weight gain in the ranges recommended by the Centers for Disease Control and Prevention.
- The patient with H-INS and HBP underwent resolution of her comorbidities both before and during pregnancy. One of the two patients with H-INS had an improvement during gestation, while the second had no changes in her condition.

CONCLUSION:

Lifestyle changes after ESG do not disappear after pregnancy and allow for a gradual loss of weight gained during gestation. Weight loss following ESG could help those women who have difficult-to-get-pregnancy, such as PCOS.