Objectives: the aim of the study is to investigate the impact of laparoscopic stripping surgery of endometriomas on ovarian reserve in patients with uni- and bilateral endometrioma(s). Methods: prospective study, 42 reproductive- aged women underwent laparoscopic stripping surgery for endometrioma(s). Levels of AMH was measured by the third day of the cycle, pre- and 6 and 12 months postoperatively. Results were analyzed by standard software SPSS. Results: Findings: endometrioma(s) unil 27 (66, 64,28%), pre- and 6- months post operatively and 17 of patients were analyzed 12-months postsurgery. Bilat 15 (35,71%) pre- and 6 months postop. and 8 of patients were analyzed 12 months postop. Ovarian reserve evaluation: There were significantly decrease of mean serum AMH levels postop. in the analyzed period of time: the mean±SD AMH levels was in unilat group 3,56 ± 5,31 ng/mL prior and 2,25 ± 1,13 ng/mL 6 months vs.1,18± 1,14 12 months post-surgery (p=0,001), and in bilat group 1,96 ± 1.12 ng/mL prior and 0.76 ± 0.51 ng/ml 6 months vs. 0,39± 0,28 12 months postop. (p=0,005) (Friedman test). The decrease was statistically significant from the first measurement preopeatively to the measurement sixth months after the surgery, in the patients with uni- (p=0,001) and with bil...endometriomas (p=0,002) (Wilcoxon signed rank test). The decline is not statistically significant in the period of measurement of 6 to 12 months postop., in the patients with uni- (p=0,48), and with bil. endometriomas (p=0,12)(Wilcoxon signed rank test). There was statistically significant increase in the frequency of patients with AMH<= 1ng/mL sixth months after operation in the group of patients with bil. endometrioma (20% vs. 73%) (p=0,008), but not in the group with unilat. endometrioma (30% vs 48%) (p=0,125) (Mac Nemar test). Summary: Despite all surgical efforts to be atraumatic, laparoscopic endometrioma stripping surgery neesessarily decreases AMH levels, especially in bil endometriomas. The largest decline of ovarian reserve occurs directly as a consequence of the surgery and maintained over time, especially in women with bilateral endometriomas. This data should be taken into account in patients who are preparing for cystectomy.