Laparoscopic cystectomy is considered the treatment of choice in women with ovarian endometriomas as long as it provides less recurrence and more subsequent spontaneous pregnancy. However, an increasing number of papers support that the excision of ovarian endometrioma could impair the ovarian reserve. Antral follicle count (AFC) and Anti-Müllerian hormone (AMH), produced by growing pre-antral and early antral follicles, best represent the quantity of the ovarian follicle pool, thus reflecting woman's reproductive function, furthermore AMH can be considered the only cycle-independent parameter to assess ovarian reserve. Recent papers reported a decrease of ovarian reserve, measured by serum AMH levels, after laparoscopic cystectomy, at least in short term follow-up. According to a study undertaken in our department the evaluation of 22 patients operated on for uni- or bilateral endometrioma showed that the serum AMH level after 12 months postoperatively was recovered to about 50% of the preoperative level. The increase in serum AMH could be due to compensatory mechanisms such as an increase growth of primordial follicles and a neovascularization, following post surgical tissue hypoxia, which could interfere with primordial follicle recruitment and AMH production.