Intensity of NCPP were reported to be none (8.7%), moderate (21.7%), severe (56.5%) and unbearable (13%) before the operation and decreased to none (43.5%), mild (43.5%), moderate (4.3%) and severe (8.7%), after the operation (Wilcoxon signed-rank test P<0.001, Fig.3).

Nine of 23 patients had mild lesions on peritoneal surfaces and were ablated by bipolar cautery. None of the patients were scheduled for long term pain management.

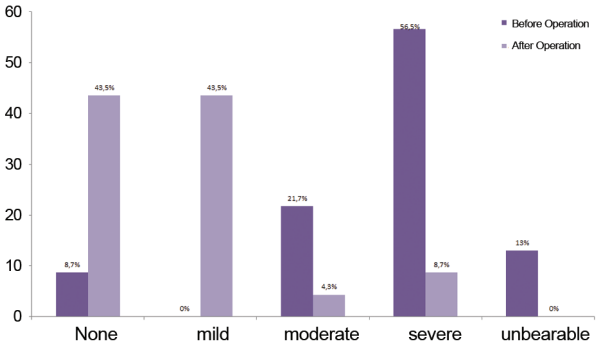

Fig.3: Pain grades for non-cyclic pelvic pain (NCPP) before and after the operation.

Discussion

Women with endometriosis either may have diverse and nonspecific symptoms or may be asymptomatic. The prevalance of endometriosis in asymptomatic women in general population are not known, but pain is the most common symptom associated with endometriosis, diagnosed by visulization of pelvic organs via laparoscopy. Approximately three quarters of symptomatic patients experience nonmenstrual pelvic pain and/or dysmenorrhea (20). In the present study, all participants had different types of pain as follows: 91% had NCPP, 78% had dysmenorrhea, and 21.7% had dyspareunia.

According to the current guideline by European Society of Human Reproduction and Embryology (ESHRE 2013) (21), asymptomatic endometriosis that is incidentally diagnosed should not be operated. Both surgical and medical treatments show improvements in pain scores of symptomatic cases. However, there is no published trials directly comparing one againist the other; therefore, we must rely on other evidence to weigh up the pros and cons of each approach. Unlike medical treatments, surgery can diagnose and remove all macroscopic disease at the same procedure in the majority of cases. In the case of symptomatic endometrioma, suggested and preffered therapeutic approach is surgery. Medical therapy is unlikely to result in complete regression of endometriomas larger than 1 cm and precludes a definitive histologic diagnosis (22, 23).

There have been very few studies in the current literature evaluating the effect of removal of endometrioma on pain symptoms. The efficacy of surgical management of endometriosis was demonstrated by a randomized trial, comparing the outcome of women after therapeutic laparoscopy with the outcome of women who underwent diagnostic laparoscopy alone. Laparoscopic excision of implants led to symptomatic improvement in 80% of patients at six months compared to 32% of controls undergoing diagnostic laparoscopy (3). Ideally if the surgery is performed for diagnosis, consent has to be obtained for surgical resection/ablation of endometriosis at the same time (20).

According to a review by Jadoul et al. (24) in which they analyzed the arguments in favour of and against of surgical treatments of endometriosis and showed that more than 50% of the patients reported pain relief. Also the operation technique used for endometrioma removal affects the pain relief. Several techniques have been described to treat endometriomas. In most of these techniques, the procedure consists of opening and draining the cyst followed by either excision (stripping technique), fulguration, or vaporisation of the cystic wall (ablative technique) (25-28). Drainage is alone not recommended because of the high recurrence rate (29). Hart's Cochrane systematic review found that excisional surgery provides better improvement in pain scores and decreases chance of recurrence compared with ablation (30). In our study the stripping technique was used, while the incidence and severity of NCPP and dysmenorrhea were significantly improved after the operation, as similiar to these studies. Only dyspareunia symptom was remained following the surgery. Ovary is one of the most frequent location for endometriosis, leading to the extensive pelvic and intestinal disease. Caution must be paid not to underdiagnose or undertreat these women (31). Although we