Use of a frameless LNG-IUS as conservative treatment for a premalignant uterine polyp in a premenopausal woman – a case report

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Abstract

Prevention of progression to invasive carcinoma in patients with a premalignant endometrial lesion using long-term treatment with levonorgestrel (LNG) releasing intrauterine systems (IUS) remains controversial, especially when manifest cellular atypia has been found in the endometrial biopsy specimen. We present a case of a 44-year-old premenopausal woman with a premalignant uterine polyp who declined hysterectomy and was followed-up for more than 12 years after the first LNG-IUS was inserted. Endometrial atrophy installed, no pathology was detected and hysterectomy was thereby successfully avoided. The positive experience in this case should encourage further studies as literature data indicate that conservative treatment of premalignant endometrial pathology is a real option with a high success rate for women who have a contra-indication for surgery, refuse the classical approach for personal reasons or want to preserve their fertility.

Key words: Atypical endometrial hyperplasia, conservative treatment, frameless IUS, levonorgestrel, LNG-IUS, premalignancy.
RI (resistance index) of 0.77, as seen normally in the postmenopausal period. Eight months later our patient was referred to a tertiary centre for extensive ultrasound investigation, which confirmed our findings. In September 2006, a new D&C was performed. Hysteroscopy revealed only a discrete irregular aspect at the posterior wall of the uterine cavity. The FibroPlant LNG-IUS was still correctly anchored in the uterine fundus, and easily removed with simple traction. Histopathological investigation showed non-characteristic secretory endometrium and no signs of atypical hyperplasia. Figure 2 illustrates the histopathologic findings in September 2006.

A new FibroPlant LNG-IUS was inserted in October 2006. In September 2009, histological examination showed 'important decidual transformation, probably hormonally induced' and the LNG-IUS was replaced for the second time. A last endometrial sample was taken in October 2010, showing 'chronic non-specific endometritis'. From 2011 until now the patient was followed regularly, showing an atrophic uterus with a LNG-IUS inside. The woman is in amenorrhea since about 10 years and apparently very happy with this treatment and follow-up schedule.

Discussion

Atypical endometrial hyperplasia, also called 'adenocarcinoma in situ', is a well-known precursor...
of overt endometrial carcinoma. A rate of 45.9% of endometrial carcinoma was found in hysterectomy specimen in women with this particular subtype of endometrial hyperplasia (Pennant et al., 2008). As was experienced in the observational study we conducted, the malignancy rate associated with endometrial polyps is rather low. Meta-analysis on the oncogenic potential of polyps reveals a malignancy rate between 0.8 and 8% (Lee et al., 2010).

In a recently published prospective Belgian study of 1220 pre-, peri- and postmenopausal women with abnormal uterine bleeding atypical hyperplasia was found in one single patient, i.e. 0.1% of the total cohort studied, belonging to the post-menopausal group of 454 women (Van den Bosch et al., 2015). Endometrial hyperplasia without atypia was found in 48 patients, about 40 times more frequently. In this perspective, the pre-menopausal patient with atypical endometrial hyperplasia we presented seems a rather exceptional case.

Conservative treatment of atypical endometrial hyperplasia with LNG-IUS can be considered in selected cases, such as in women who wish to preserve their fertility. However, conservative treatment carries an inherent oncologic risk as no correct staging is possible and the risk of missing a concurrent ovarian cancer cannot be neglected. Therefore, patients opting for conservative treatment should have a strict gynaecological follow-up with regular endometrial biopsy and pelvic ultrasound.

Endometrial hyperplasia has been treated before in other centres with LNG-IUS. In an Australian systematic review a 96% regression rate for non-atypical endometrial hyperplasia treated with LNG-IUS was found (Buttini et al., 2009). In their own patient cohort there was (also only) one patient with atypical endometrial hyperplasia, treated with a LNG-IUS for more than seven weeks. The patient had normal endometrial histology on subsequent assessment.

In a Korean study (Lee et al., 2010) complete regression of endometrial hyperplasia was achieved in all 12 cases. In the (also single) case of atypical hyperplasia, the regression was attained at the 9th month after insertion of the LNG-IUS.

A Norwegian research group found LNG-IUS to be effective at reducing the occurrence of hyperplastic endometrial polyps, with effectiveness superior to that of oral progestin and observation-only (Arnes et al., 2014). Furthermore, in the first prospective comparative trial of its kind conducted by the same group, a study was performed to examine the results of the treatment of 170 patients with endometrial hyperplasia which were treated either by an oral progestogen or by LNG-IUS: All 53 women treated with an LNG-IUS showed histologically normal endometrium after 6 months of therapy (Ørbo et al., 2014). In this study nineteen patients were diagnosed with atypical hyperplasia and six of them were successfully treated with LNG-IUS. The authors concluded that cyclical
progestogens are found to be less effective compared with continuous oral therapy and LNG-IUS, and should not be used any more for this indication.

Conclusion

We present a case of a 44-year old premenopausal woman with a premalignant uterine polyp opting for conservative therapy. Today, 14 years after the start of her treatment, the patient is in good health and very happy with this therapeutic option. Considering the rather limited value of a case-report the positive experience should encourage further studies, especially since recent literature data indicate that conservative treatment of premalignant endometrial pathology is a real option with high success rate in selected women such as patients who want to preserve their fertility, have contraindications for surgery or refuse hysterectomy.

Acknowledgements

The authors would like to sincerely thank both Marc Dhont (Belgium) and Andreas Obermair (Australia) for providing us with significant redactional suggestions for this paper.

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