Chapter 5

UTERINE ARTERY EMBOLIZATION FOR TREATMENT OF UTERINE MYOMAS IN YOUNGER WOMEN

Nurullah DOĞAN¹

INTRODUCTION

Uterine myomas are the most common gynecological problem that is seen in women of reproductive age (1). Since most of the myomas are asymptomatic, their exact prevalence cannot be known. In symptomatic myomas, hysterectomy and myomectomy are traditional treatment methods (2). According to literature data, myomectomy is recommended as the first option especially for patients who expect to conceive. Today, women prefer uterine myoma embolization (UME) more over abdominal myomectomy, even though they expect to get pregnant (4-6). For this preference, the factors that play a role are UME's being less invasive, having shorter hospitalization time and providing quick healing.

In our country, in accordance with the decision of the consensus established with obstetrician and gynecologists, we suggest patients who expect to conceive to undergo myomectomy. Likewise, we recommend hysterectomy to patients above 42 who do not expect to conceive, since it has a protective role against cancer. However, we implement UME process on patients whom hysterectomy is recommended even though they expect to conceive, and also in cases that may require hysterectomy during the operation. Our short-term results were published in previous studies (7). In this study, we share our long-term technical success, clinical success and complications.

MATERIAL AND METHODS

Our study was retrospective and the results of 80 patients who were treated with UAE at the unit between January 2012 and January 2017 were analyzed. All the patients had undergone pelvic computed tomography (CT) angiography for pelvic vessel mapping before the procedure (Fig. 1) and pelvic magnetic resonance imaging (MRI) before and 3 months after the procedure. Pelvic MRI investigations included T2W sagittal and axial, T1W sagittal, axial and coronal,

¹ Uzman Doktor, Doruk Tıp Merkezi, drndogan@gmail.com

This shows that the complications of the process can be identified better with increasing number of patients. The results belong to a limited number of patients undergoing the procedure by the same clinician in a single center. We believe that performance of this procedure in more than one center and with higher number of patients will provide more efficient assessment of the process.

CONCLUSION

UAE is a reliable alternative to hysterectomy and myomectomy. We believe that UAE should be preferred in particular in patients recommended hysterectomy or predicted to potentially require hysterectomy during myomectomy and who have an expectation of fertility.

Conflict of interest: The author declare no conflicts of interest.

REFERENCES

- Barnard EP, Abdelmagied AM, Vaughan LE, Weaver AL, Laughlin-Tommaso SK,-Hesley GK. Periprocedural Outcomes Comparing Fibroid Embolization and Focused Ultrasound: a Randomized Controlled Trial and Comprehensive Cohort Analysis. Am J Obstet Gynecol 2017 Jan 4. pii: S0002-9378 (16)46488-4. doi: 10.1016/j. ajog.2016.12.177. [Epub ahead of print]
- 2. Bratby MJ, Belli AM. 2008. Radiological treatment of symptomatic uterine fibroids. Best Pract Res Clin Obstet Gynaecol.22:717-734.
- 3. Dinc H. 2012. Uterin arter embolizasyonu. Turkiye Klinikleri J Radiol-Special Topics 5:202-210.
- 4. Lohle PN, Voogt MJ, De Vries J,Smeets AJ, Vervest HA, Lampmann LE, et al. 2008. Long-term outcome of uterine artery embolization for symptomatic uterine leiomyomas. J Vasc Interv Radiol 19:319-326.
- 5. Torre A, Fauconnier A, Kahn V, Limot O, Bussierres L, Pelage JP .Fertility after uterine artery embolization for symptomatic multiple fibroids with no other infertility factors. Eur Radiol.2016 Dec 13. [Epub ahead of print]
- 6. Pelage JP, Cazejust J, Pluot E, Le Dref O, Laurent A, Spies JB, et al. 2005. Uterine fibroid vascularization and clinical relevance to uterine fibroid embolization. Radiographics 25:99-117.
- 7. Dogan N,Karataş S, Erdemir M, Kurt O, Baykan D. Uterine Artery Embolization for Myomas Treatment: Early Results. UuTF Dergisi 2013;39 (3): 147-151
- 8. Voogt MJ, Arntz MJ, Lohle PNM, Mali WPM, Lampmann LEH. 2011. Uterine Fibroid Embolisation for Symptomatic Uterine Fibroids: A Survey of Clinical Practice in Europe. Cardiovasc Intervent Radiol 34:765–773.
- 9. Boosz AS, Reimer P, Matzko M, Römer T, Müller A. 2014. The conservative and interventional treatment of fibroids. Dtsch Arztebl Int 111:877-883.
- Tomislav S, Josip M, Liana CS, Marko V, Marko J, Ante R, et al. 2011. Uterine Artery Embolization as Nonsurgical Treatment of Uterine Myomas. ISRN Obstet Gynecol 23:489281.
- 11. Duhan N. 2011. Current and emerging treatments for uterine myoma an update. Int J Womens Health 3:231-241.

Obstetrics and Gynecology I

- 12. Parker WH. 2007. Uterine myomas: management. Fertil Steril 88:255-271.
- 13. Ravina JH, Herbreteau D, Ciraru-Vigneron N, Bouret JM, Houdart E, Aymard A, et al. 1995. Arterial embolisation to treat uterine myomata. Lancet 346: 671–672.
- 14. Mara M, Horak P, Kubinova K, Dundr P, Belsan T, Kuzel D. 2012. Hysteroscopy after uterine fibroid embolization: evaluation of intrauterine findings in 127 patients. J Obstet Gynaecol Res 38:823-831.
- 15. Liu R, Dai E, Chen C, Liu P. 2014. Application of in vivo pelvis and abdominal-pelvic arterial network digital three-dimensional model for uterine artery embolization in surgical approach planning. Zhonghua Fu Chan Ke Za Zhi 49:89-93.
- 16. Stampfl U, Radeleff B, Sommer C, Stampfl S, Dahlke A, Bellemann N, et al. 2011. Midterm results of uterine artery embolization using narrow-size calibrated embozene microspheres. Cardiovasc Intervent Radiol 34:295-305.
- 17. Ustunsoz B, Ugurel MS, Bozlar U, Duru NK, Ustunsoz A. 2007. Is uterine artery embolization prior to myomectomy for giant fibroids helpful? Diagn Interv Radiol. 13:210-212.
- 18. Greenwood LH, Glickman MG, Schwartz PE Morse SS, Denny DF. 1987. Obstetric and nonmalignant gynecologic bleeding: treatment with angiographic embolization. Radiology 164:155-159.
- Abbas FM, Currie JL, Mitchell S, Osterman F, Rosenshein NB, Horowitz IR. 1994.
 Selective vascular embolization in benign gynecologic conditions. J Reprod Med 39: 492-496.
- 20. Stringer NH, Grant T, Park J, Oldham L. 2000. Ovarian failure after uterine artery embolization for treatment of myomas. J Am Assoc Gynecol Laparoscopist 7:395-400.
- 21. Toor SS, Jaberi A, Macdonald DB, McInnes MD, Schweitzer ME, Rasuli P. 2012. Complication rates and effectiveness of uterine artery embolization in the treatment of symptomatic leiomyomas: a systematic review and meta-analysis. AJR Am J Roentgenol 199:1153-1163.
- 22. Suzuki S, Tanigawa N, Kariya S, Komemushi A, Kojima H, Tokuda T, et al. 2011. Posterior reversible encephalopathy syndrome occurring after uterine artery embolization for uterine myoma. Cardiovasc Intervent Radiol 34:157-160.
- 23. Gupta JK, Sinha A, Lumsden MA, Hickey M. 2014. Uterine artery embolization for symptomatic uterine fibroids. Cochrane Database Syst Rev 12:CD005073.
- 24. Bakri YN, Linjawi T. 1992. Angiographic embolization for control of pelvic genital tract hemorrhage. Report of 14 cases. Acta Obstet Gynecol Scand 71:17-21.
- 25.Usadi RS, Marshburn PB. 2007. The impact of uterine artery embolization on fertility and pregnancy outcome. Curr Opin Obs tet Gynecol 19:279-283.