

Bölüm 29

ENDOMETRİOMA YÖNETİMİ

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Endometrioma izole bir patoloji gibi algılansa da, overyan endometriozis daha ileri pelvik ve intestinal endometriozisin göstergesi olabilir. İzole overyan endometriozis olguların %1'lik bir kesiminde görülür. Endometrioma saptanan subfertil bir hasta söz konusu olduğunda hastanın yalnız endometrioma için değil ileri evre yaygın endometriozis açısından da değerlendirilmesi ve ekspektan ya da cerrahi girişim kararının bu şekilde verilmesi akıcı bir yaklaşım gibi görülmektedir. Ayrıca ekspektan yaklaşım ile izlenen bir hastada gebelik oluşması durumunda endometriomanın gebeliğin seyrine etki edebileceği de düşünülmelidir. Cerrahi prosedürlerin herhangi bir çeşidinin overyan işlev üzerinde olumsuz etkisi olabileceği her ne kadar kabul edilse de, overyan tutulumu olmayan peritoneal endometriozisli kadınlarda görülen erken menopoz riskinin cerrahiden bağımsız olarak bir prematür overyan yetmezlik riski olduğuna işaret edebilir. **Editorial**

Giriş

Endometriozis üreme çağındaki kadınların %3-4 'ünde görülen bir hastalıktır. Semptomatik hastalarda genellikle pelvik ağrı ve infertilite yakınması ile kendini gösterir. Endometrioma, over içinde ek-topik endometriotik dokuların yerleşmesi sonucu oluşan içi eskimiş kan ile dolu olan bir kistik yapıdır. Endometriozis en sık olarak douglas peritonun-

da ve uterosakral ligamanlarda izlenir. Endometrioma ise bunlardan sonra üçüncü sıklıkla görülen endometriozis formudur ve cerrahi gerektiren benign over kistlerinin yaklaşık %35'ini oluşturur. Endometiomalar, endometriozisin ileri evreleri ve artmış morbiditeyle ilişkilidir. İlk defa 1927'de tarif edilen "retrograd transplantasyon teorisinden" bu yana bir çok mekanizma öne sürülmüş olsa da endometriozisin patogenezi hala tartışımlıdır. Epidemiyolojik, cerrahi ve patolojik verilere göre en güncel teori overyan endometriozis, peritoneal endometriozis ve rektovaginal septumun adenomyotik nodüllerinin tek bir hastalığın farklı görünümleri olduğunu söylemektedir. Yakın geçmişte overyan endometriomaların hemen hepsinin (%90) overyan korteksin invajinasyonu ve çölemik epitelin metaplazisi sonucu olduğu öne sürülmüştür (1).

Endometriozis tablosunun overlere doğru genişleyerek kistler oluşturulması ve endometriomaya ilerlemesi de mümkündür. Kistler, yer kaplayan etkileri, lokal reaksiyonlar ve bazen her ikisinden dolayı mevcut fonksiyonel over rezervini kötü yönde etkileyebilir. Overyan rezerv üzerindeki negatif etki cerrahi sonrası daha da kötü olabilmektedir (2). Mevcut tartışmalar en iyi cerrahi yaklaşımın hangisi olacağına yönelik olsa da, şu an kabul edilen gerçek her türlü cerrahının zaten baskılanmış olan overyan fonksiyona zarar verebileceği yönündedir (3).

overde yer kaplaması veya tedavileri sonucunda over rezervinin etkilenmesi, tedavinin planlanmasında en önemli faktördür. Endometriomaların cerrahi tedavisi özellikle infertilite yakınması ile başvuran hastalarda çok dikkatli bir şekilde değerlendirilmesi gereken bir durumdur. Ancak IVF planlanan hastalarda oosit toplanma işlemi sırasında apse oluşumu riski de göz arı edilmemelidir. Tedavilerin overyan rezerv üzerine etkisini araştıran, iyi tasarılanmış çalışmalara gereksinim vardır. Bu çalışmalarda AMH'nin kullanılması daha doğru değerlendirme için önemli olabilir. Tüm bu çalışmalar sonucunda endometriomaların yönetiminde “overyan rezerv koruyucu yaklaşım” belirlenebilir.

Kaynaklar

- Nisolle M, Donnez J. Peritoneal endometriosis, ovarian endometriosis and adenomyotic modules of the rectovaginal septum are three different entities. *Fertil Steril* 1997;68:585–96.
- Taylor RN, Lebovic DI, Strauss JF, Barbieri R, eds. Yen and Jaff e's reproductive endocrinology: physiology and clinical management (6th edn). New York: Elsevier, 2009: 577–95.
- Garcia-Velasco JA, Somigliana E. Management of endometriomas in women requiring IVF: to touch or not to touch. *Hum Reprod* 2009; 24: 496–501.
- Broekmans FJ, Soules MR, Fauser BC. Ovarian aging: mechanisms and clinical consequences. *Endocr Rev* 2009; 30: 465–93.
- Streuli I, Fraisse T, Chapron C,et al. Clinical uses of anti-mullerian hormone assays: pitfalls and promises. *Fertil Steril* 2009; 91: 226–30.
- Shebl O, Ebner T, Sommergruber M, et al. Anti mullerian hormone serum levels in women with endometriosis: a case-control study. *Gynecol Endocrinol* 2009; 25: 713–16.
- Falconer H, Sundqvist J, Gemzell-Danielsson K, et al. IVF outcome in women with endometriosis in relation to tumour necrosis factor and anti-mullerian hormone. *Reprod Biomed Online* 2009 ;1 :582-8.
- Al-Azemi M, Bernal AL, Steele J, et al. Ovarian response to repeated controlled stimulation in in-vitro fertilization cycles in patients with ovarian endometriosis. *Hum Reprod* 2000; 15: 72–75.
- Matos L, Stevenson D, Gomes F, et al. Superoxide dismutase expression in human cumulus oophorus cells. *Mol Hum Reprod* 2009; 15: 411–19.
- Deaton JL, Gibson M, Blackmer KM, et al. A randomized, controlled trial of clomiphene citrate and intrauterine insemination in couples with unexplained infertility or surgically corrected endometriosis. *Fertil Steril* 1990;54:1083-8.
- Vercellini P, Somigliana E, Vigano P,et al. Endometriosis: current therapies and new pharmacological developments. *Drugs* 2009; 69: 649–75.
- Yap C, Furness S, Farquhar C. Pre and post operative medical therapy for endometriosis surgery. *Cochrane Database Syst Rev* 2004; 3: CD003678.
- Hughes E, Brown J, Collins JJ, et al. Ovulation suppression for endometriosis. *Cochrane Database Syst Rev* 2007; 3: CD000155.
- Marcoux S, Maheux R, Bérubé S, for the Canadian Collaborative Group on Endometriosis. Laparoscopic surgery in infertile women with minimal or mild endometriosis. *N Engl J Med* 1997; 337: 217–22.

15. Jacobson TZ, Duff y JM, Barlow D, et al. Laparoscopic surgery for subfertility associated with endometriosis. Cochrane Database Syst Rev 2010; 1: CD001398.
16. Vercellini P, Fedele L, Aimi G,et al. Reproductive performance, pain recurrence and disease relapse after conservative surgical treatment for endometriosis: the predictive value of the current classification system. *Hum Reprod* 2006; 21: 2679–85.
17. Parazzini F. Ablation of lesions or no treatment in minimal-mild endometriosis in infertile women: a randomized trial. Gruppo Italiano per lo Studiodell'Endometriosi. *Hum Reprod* 1999;14:1332–4.
18. RCOG Green-top Guideline No. 24.
19. Osuga Y, Koga K, Tsutsumi O, et al. Role of laparoscopy in the treatment of endometriosis-associated infertility. *Gynecol Obstet Invest* 2002;53:33–9.
20. Guzick DS, Silliman NP, Adamson GD, et al. Prediction of pregnancy in infertile women based on the American Society for Reproductive Medicine's revised classification of endometriosis. *Fertil Steril* 1997;67:822–9.
21. Adamson GD, Hurd SJ, Pasta DJ, et al. Laparoscopic endometriosis treatment: is it better? *Fertil Steril* 1993;59:35–44.
22. Benaglia L, Somigliana E, Vercellini P, et al. Endometriotic ovarian cysts negatively affect the rate of spontaneous ovulation. *Hum Reprod* 2009;9:2183–6.
23. Somigliana E, Vercellini P, Vigano P, et al. Should endometriomas be treated before IVF-ICSI cycles? *Hum Reprod Update* 2006;12:57–64.
24. Garcia-Velasco JA, Mahutte NG, et al. Removal of endometriomas before in vitro fertilization does not improve fertility outcomes: a matched, case-control study. *Fertil Steril* 2004;81:1194–7.
25. Demirok A, Guven S, Baykal C, et al. Effect of endometrioma cystectomy on IVF outcome: a prospective randomized study. *Reprod Biomed Online* 2006;12:639–43.
26. Van Rooij IA, Broekmans FJ, te Velde ER, et al. Serum anti-Mullerian hormone levels: a novel measure of ovarian reserve. *Hum Reprod* 2002;17:3065–71.
27. Redwine DB. Ovarian endometriosis: a marker for more extensive pelvic and intestinal disease. *Fertil Steril* 1999; 72:310-5.
28. McArthur JF. Ulfeder H. The effect of pregnancy upon endometriosis. *Obstet Gynecol Survey* 1965; 20:709-33.
29. Padilla SL. Ovarian abscess following puncture of an endometrioma during ultrasound-guided oocyte retrieval. *Hum Reprod* 1993;8:1282–3.
30. Yaron Y, Peyser MR, Samuel D, et al. Infected endometriotic cysts secondary to oocyte aspiration for in-vitro fertilization. *Hum Reprod* 1994;9:1759–60.
31. Younis JS, Ezra Y, Laufer N, et al. Late manifestation of pelvic abscess following oocyte retrieval, for in vitro fertilization, in patients with severe endometriosis and ovarian endometriomata. *J Assist Reprod Genet* 1997;14:343–6.
32. Den Boon J, Kimmel CEJM, Nagel HTC, et al. Pelvic abscess in the second half of pregnancy after oocyte retrieval for in-vitro fertilization. *Hum Reprod* 1999;14:2402–3.
33. Matsunaga Y, Fukushima K, Nozaki M, et al. A case of pregnancy complicated by the development of a tubo-ovarian abscess following in vitro fertilization and embryo transfer. *Am J Perinatol* 2003;20:277–82.
34. Moini A, Riazi K, Amid V, et al. Endometriosis may contribute to oocyte retrieval-induced pelvic inflammatory disease: report of eight cases. *J Assist Reprod Genet* 2005;22:307–9.
35. Scarpe K, Karovitch AJ, Claman P, et al. Transvaginal oocyte retrieval for in vitro fertilization complicated by ovarian abscess during pregnancy. *Fertil Steril* 2006;86:11–3.
36. Benaglia L, Somigliana E, Iemmello R,et al. Endometrioma and oocyte retrieval-induced pelvic abscess: a clinical concern or an exceptional complication?. *Fertil Steril.* 2008;89:1263–6.
37. Munkarah AR. Malignant transformation of endometriosis. In: Diamond MP, Osteen KG, eds. *Endometrium and Endometriosis*. Oxford: Blackwell Science Publishers, 1997:42–6.
38. Gucer F, Pieber D, Arikan MG. Malignancy arising in extraovarian endometriosis during estrogen stimulation. *Eur J Gynaecol Oncol* 1998;19:39–41.
39. Stern RC, Dash R, Bentley RC, et al. Malignancy in Endometriosis: Frequency and Comparison of Ovarian and Extraovarian Types. *Int J Gynecol Pathol* 2001;20:133–9.
40. Mostoufizadeh M, Scully RE. Malignant tumors arising in endometriosis. *Clin Obstet Gynecol* 1980;23:951–63.
41. ESHRE Guideline for the Diagnosis and Treatment of Endometriosis. *Hum Reprod* 2005;20:2698-704.
42. Thomas EJ. Cooke ID. Impact of gestrinone on the course of asymptomatic endometriosis. *BMJ* 1987; 294:272-4.
43. Mahmood TA. Templeton A. The impact of treatment on the natural history of endometriosis *Hum Reprod* 1990;5:965-70.
44. Fanchin R, Schonauer LM, Righini C, et al. Serum anti-Mullerian hormone is more strongly related to ovarian follicular status than serum inhibinB, estradiol, FSH and LH on day 3. *Hum Reprod* 2003;18:323–7.
45. Van Rooij IA, Tonkelaar I, Broekmans FJ, et al. Anti-mullerian hormone is a promising predictor for the occurrence of the menopausal transition. *Menopause* 2004;11:601–6.

46. Chang HJ, Han SH, Lee JR, et al. Impact of laparoscopic cystectomy on ovarian reserve: serial changes of serum anti-Müllerian hormone levels. *Fertil Steril* 2010;94:343-9.
47. Biacchiardi CP, Piane LD, Camanni M, et al. Laparoscopic stripping of endometriomas negatively affects ovarian follicular reserve even if performed by experienced surgeons. *Reprod Biomed Online* 2011;23:740-6.
48. Carmona F, Martínez-Zamora MA, et al. Ovarian cystectomy versus laser vaporization in the treatment of ovarian endometriomas: a randomized clinical trial with a five-year follow-up. *Fertil Steril* 2011;96:251-4.
49. Daftary GS, Kayisli U, Seli E, et al. Salpingectomy increases peri-implantation endometrial HOXA10 expression in women with hydrosalpinx. *Fertil Steril* 2007; 87:367-72.
50. Hammadieh N, Coomarasamy A, Ola B, et al. Ultrasound-guided hydrosalpinx aspiration during oocyte collection improves pregnancy outcome in IVF: a randomized controlled trial. *Hum Reprod* 2008;23:1113-7.
51. Bromley B, Benacerraf B. Adnexial masses during pregnancy: Accuracy of sonographic diagnosis and outcome. *J Ultrasound Med* 1997;16:447-52.
52. Whitecar B, Turner S, Highby K. Adnexial masses in pregnancy: A review of 130 cases undergoing surgical management. *Am J Obstet Gynecol* 1999;181:19-24.
53. Struyk AP, Treffers PE. Ovarian tumors in pregnancy. *Acta Obstet Gynecol Scand* 1984;63:421-424.
54. Condous G, Khalid A, Okaro E, et al. Should we be examining the ovaries in pregnancy? Prevalence and natural history of adnexal pathology detected at first trimester sonography. *Ultrasound Obstet Gynecol* 2004;24:62-6.
55. Pados G, Tsolakidis D, Bontis J. Laparoscopic management of the adnexal mass. *Ann N Y Acad Sci* 2006;1092:211-28.
56. Busacca M, Chiaffarino F, Candiani M, et al. Determinants of long-term clinically detected recurrence rates of deep, ovarian, and pelvic endometriosis. *Am J Obstet Gynecol* 2006, 195: 426-32.
57. Aboulghar MA, Mansour RT, Serour GI, et al. The outcome of in vitro fertilization in advanced endometriosis with previous surgery: a case-controlled study. *Am J Obstet Gynecol* 2003;188:371-5.
58. Littman E, Giudice L, Lathi R, et al. Role of laparoscopic treatment of endometriosis in patients with failed in vitro fertilization cycles. *Fertil Steril*. 2005;84:1574-8.
59. Tsolakidis D, Pados G, Vavilis D, et al. The impact on ovarian reserve after laparoscopic ovarian cystectomy versus three-stage management in patients with endometriomas: a prospective randomized study. *Fertil Steril* 2010;94:71-7.
60. Hart RJ, Hickey M, Maouris P, et al. Excisional surgery versus ablative surgery for ovarian endometriomata. *Cochrane Database Syst Rev* 2008;16;(2):CD004992.
61. Donnez J, Nisolle M, Gillet N, et al. Large ovarian endometriomas. *Hum Reprod* 1996;11:641-6.
62. Somigliana E, Arnoldi M, Benaglia L, et al. IVF-ICSI outcome in women operated on for bilateral endometriomas. *Hum Reprod* 2008;23:1526-30.
63. Daniell JF, Kurtz BR, Gurley LD. Laser laparoscopic management of large endometriomas. *Fertil Steril* 1991;55:692-5.
64. Sönmezler M, Taşkin S, Taşçı T, et al. Is “restoration of ovarian function or ovarian reserve” possible after ovarian surgery? *Fertil Steril* 2010;93:e37.
65. Muzii L, Bianchi A, Crocè C, et al. Laparoscopic excision of ovarian cysts: is the stripping technique a tissue-sparing procedure? *Fertil Steril* 2002;77:609-14.
66. Hachisuga T, Kawarabayashi T. Histopathological analysis of laparoscopically treated ovarian endometriotic cysts with special reference to loss of follicles. *Hum Reprod* 2002;17:432-5.
67. Woad KJ, Watkins WJ, Prendergast D, et al. The genetic basis of premature ovarian failure. *Aust N Z J Obstet Gynaecol* 2006;46:242-244.
68. Coccia ME, Rizzello F, Mariani G, et al. Ovarian surgery for bilateral endometriomas influences age at menopause. *Hum Reprod* 2011;26:3000-7.
69. Podgaec S, Abrão MS, Dias JA Jr, et al. Endometriosis: an inflammatory disease with a Th2 immune response component. *Hum Reprod* 2007;22:1373-9.
70. Mier-Cabrera J, Jimenez-Zamudio L, García-Latorre E, et al. Quantitative and qualitative peritoneal-immune profiles, T-cell apoptosis and oxidative stress-associated characteristics in women with minimal and mild endometriosis. *BJOG* 2011;118:6-16.
71. Ding GL, Chen XJ, Luo Q, et al. Attenuated oocyte fertilization and embryo development associated with altered growth factor/signal transduction induced by endometriotic peritoneal fluid. *Fertil Steril* 2010;93:2538-44.
72. McIlveen M, Skull JD, Ledger WL. Evaluation of the utility of multiple endocrine and ultrasound-measures of ovarian reserve in the prediction of cycle cancellation in a high-risk IVF population. *Hum Reprod* 2007;22: 778-85.
73. Smeenk JM, Sweep FC, Zielhuis GA, et al. Antimüllerian hormone predicts ovarian responsiveness, but not embryo quality or pregnancy, after in vitro fertilization or intracytoplasmic sperm injection. *Fertil Steril* 2007;87:223-6.
74. Muzii L, Bianchi A, Bellati F, et al. Histologic analysis of endometriomas: what the surgeon needs to know. *Fertil Steril* 2007;87:362-6.

75. Van Rooij IA, Broekmans FJ, Scheffer GJ, et al. Serum antimüllerian hormone levels best reflect the reproductive decline with age in normal women with proven fertility: a longitudinal study. *Fertil Steril* 2005;83:979–87.
76. Koga K, Takemura Y, Osuga Y, et al. Recurrence of ovarian endometrioma after laparoscopic excision. *Hum Reprod* 2006;21:2171–4.
77. Somigliana E, Vercellini P, Vigano P, et al. Should endometriomas be treated before IVF-ICSI cycles? *Hum Reprod Update* 2006;12:57–64.
78. Maheshwari A, Fowler P, Bhattacharya S. Assessment of ovarian reserve should we perform tests of ovarian reserve routinely? *Hum Reprod* 2006;21:2729–35.
79. Durlinger AL, Gruijters MJ, Kramer P, et al. Anti-Müllerian hormone inhibits initiation of primordial follicle growth in the mouse ovary. *Endocrinology* 2002;143: 1076–84.
80. Themmen AP. Anti-Müllerian hormone: its role in follicular growth initiation and survival and as an ovarian reserve marker. *J Natl Cancer Inst Monogr* 2005;18–21.
81. Sutton CJ, Ewen SP, Jacobs SA, et al. Laser laparoscopic surgery in the treatment of ovarian endometriomas. *J Am Assoc Gynecol Laparosc* 1997;4:319–23.
82. De Vet A, Laven JS, de Jong FH, et al. Antimüllerian hormone serum levels: a putative marker for ovarian aging. *Fertil Steril* 2002;77:357–62.
83. Tsepelidis S, Devreker F, Demeestere I, et al. Stable serum levels of anti-Müllerian hormone during the menstrual cycle: a prospective study in normo-ovulatory women. *Hum Reprod* 2007;22:1837–40.
84. Lewis M, Baker V, Nezhat C. The impact on ovarian reserve after laparoscopic ovarian cystectomy versus three-stage management in patients with endometriomas: a prospective randomized study. *Fertil Steril* 2010;94:81–2.