Bölüm 4

İMPLANTASYON BAŞARISIZLIĞININ ENDOMETRİAL MOLEKÜLER VE GENETİK MEKANİZMALARI

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Endometriozis, hidrosalpinks, leiomyoma, polikistik over sendromu ve endometrial polip gibi çeşitli benign jinekolojik hastalıklar fekundabilitede azalma ve bozulmuş uterin reseptivite ile ilişkili bulunmuşlardır. Bu hastalıkların bazıları endometriuma bası yaparak ya alanı daraltarak ya da genişleterek mekanik etkiyle implantasyon üzerine olumsuz etkide bulunur. Bazıları ise reseptivite ile ilgili genlerin ekspresyonlarını değiştirerek ya da fizyolojik inflamasyonu bozarak olumsuz etkide bulunurlar. İmplantasyon için belli bir miktar inflamasyon gerekli ve zaruri iken artmış veya azalmış inflamasyon reseptivitenin yetersiz olmasına yol açar. Hidrosalpinkste artmış endometrial inflamasyon implantasyonu engellerken salpenjektomi sonrası gebelik oranlarının %50 oranında artması inflamasyon ve reseptivite arasındaki ilişkiyi net olarak gösterir. Benzer şekilde RIA kullanımına bağlı artmış yabancı cisim inflamasyonu ve düşük redoks potansiyelleri gebelik oluşumunu engeller. Endometriomalı hastaların ötopik endometriumlarında artmış inflamasyonun endometriomaların cerrahi olarak çıkartılmasından sonra azalması da indirekt inflamasyonun en güzel örneğidir. Endometrioma kistektomi sonrası endometrial NF-kB düzeylerinin azalması ve implantasyonun artması da endometriozis yönetiminde cerrahi yaklaşımlarımızı etkilyecek yeni bilimsel veriler sunması açısından önem arz eder. **Editorial**

Giriş

Eşişiz bir biyolojik fenomen olan ‘embrio implantasyonu’ üreme sürecinin en kritik adımlarından birini temsil eder. Başarılı bir implantasyon için reseptif bir endometrium, blastokist aşamasında fonksiyonel bir embrio ve anne ile embrionik doku arasında senkronize bir diyalog gerekmektedir (1). Endometrium ovulasyondan yaklaşık 6 gün sonra reseptivite özelliğini kazanır ve bunu 4 gün boyunca (siklusun 20-24. günleri) devam ettirir (2). Eğer bu 4 günlük süre içerisinde implantasyon gerçekleşmez ise, tam olarak gelişmiş olan bu endometriumun dökülmesi ile menstrüasyon oluşur. Ancak, eğer implantasyon gerçekleşirse endometrium gelişimine devam eder ve embrionun gelişimi için önemli destek sağlayan bazı morfolojik ve moleküler değişimler geçirir (3). Endometriozis, hidrosalpinks, leiomyom ve polikistik over sendromu (PKOS) gibi çeşitli benign jinekolojik hastalıklar fekundabilitede azalma ve bozulmuş uterin reseptivite ile ilişkili bulunmuşlardır (4). Günümüzde Yardımlı Üreme Teknikleri (YÜT) araçları yüksek kalitede embrioların seçimini olanak sağlamakta ve daha yüksek gebelik oranlarını elde etmeyi amaçlayan YÜT protokolleri geliştirilmeye devam etmektedir. Ancak implantasyon oranları hala rölatif olarak düşüktür (5). Uterin reseptivite sağlıklı gebeliklerin oluşmasında anahtar bir rol oynar. Uterin reseptivitede bozulma YÜT başarısını sınır-

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Not: Bu bölüm temel olarak "K.E. May et al, Endometrial alterations in endometriosis: a systematic review of putative biomarkers, Human Reproduction Update, Vol.17, No.5 pp. 637–653, 2011", "Hakan Cakmak and Hugh S. Taylor Implantation failure: molecular mechanisms and clinical treatment Human Reproduction Update, Vol.17, No.2 pp. 242–253, 2011", "de Ziegler D et al. Endometriosis and infertility: pathophysiology and management. Lancet. 2010 28;376:730-8. Review" isimli üç ana yazıyı özetleyen bir derlemedir. Ayrıntılı bilgi için bu kaynaklara bakınız.