28. BÖLÜM

ONKOLOJİ HASTALARINDA EGZERSİZ

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GİRİŞ

Egzersiz, bilindiği üzere süresi ve yoğunluğu ile ilişkili olarak bir dizi fizyolojik değişikliğe yol açar. Bu değişiklikler kabaca kalp debisinde artış, kan akış modelinde dramatik değişiklikler, kas hücrelerindeki anaerobik metabolizmaya bağlı olarak laktat seviyeleri artışı ve bunların sonucunda metabolik hız ve glukoz tüketimi artışı olarak sıralanabilir. Dahası, egzersiz sırasında epinefrin ve norepinefrin dahil olmak üzere katekolaminler, adrenal bezlerden artan salınımıyla önemli ölçüde yükselir. Endokrin sistem hem dinlenme hem de egzersiz sırasında fizyolojik yanıtların bütünleştirilmesinde anahtar rol oynar (Walsh & ark., 2011). Bu hormonlar, kalp atış hızı, kan basıncı ve kan şekeri seviyelerindeki değişimler ile ilişkili hızlı yanıtın önemli bir parçasıdır. Ayrıca, konu hakkında çelişkili veriler olmasına rağmen, akut egzersizin çeşitli immün hücreleri sayısında hızlı bir artışa neden olduğu, ardından normal sınırların altına bir düşüş ve ardından normal seviyelere gelmesine yol açtığı konusunda fikir birliği vardır (Gleeson & Bishop, 2005). Akut egzersize karşı en duyarlı immün hücre tipi, egzersiz dakikaları içinde harekete geçirilen Naturel Killer (NK) hücresidir (Timmons & Cieslak, 2008). NK hücrelerinin maksimum mobilizasyonu 30 dakikalık egzersizden sonra elde edilir ve uzun süreli egzersiz artmış NK hücre seviyelerine yol açar, ancak maksimum NK hücre seviyesi, devam eden egzersiz programı ile 3 saate kadar korunabilir. NK hücreleri hedef hücreleri direkt olarak hazırlamadan öldürebilmeleriyle karakterize edilir ve virüslere karşı immünitede, strese maruz kalmış veya dönüştürülmüş hücreleri temizlemede önemli rol alırlar (Karre & ark., 1986). NK hücrelerinin bu egzer-

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