BÖLÜM 115

PANKREAS ANATOMİSİ, HİSTOLOJİSİ, EMBRİYOLOJİSİ VE GELİŞİMSEL ANOMALİLERİ

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PANKREASIN EMBRİYOLOJİSİ

Ventral ve Dorsal Tomurcukların Gelişimi

Pankreas, embriyonik dönemin 4. haftasında, duodenumun endodermal tabakasından gelişimine başlar. Bu dönemde ön bağırsak (foregut) ve orta bağırsak (midgut) bileşkesinden iki çıkıntı gelişir; bunlar, ventral (kaudal) ve dorsal (kranial) tomurcuklardır. Ventral tomurcuk, ilerleyen zamanda baş kısmının posterior parçasını ve unsinat prosesi; dorsal tomurcuk, baş kısmının anterior parçasını, gövde ve kuyruk kısmını oluşturur. Ana pankreatik kanal (Wirsung), ventral kanaldan ve dorsal kanalın distal kısmından gelişir. Aksesuar kanal (Santorini), dorsal pankreatik kanalın proksimal kısmının varlığını sürdürmesi nedeniyle oluşur. İlerleyen haftalarda ön bağırsak uzayarak; ventral pankreas, safra kesesi ve safra kanalı saat yönünde rotasyon yaparak duodenumun arkasına geçer ve dorsal pankreasa katılır. Daha sonra ventral pankreas, dorsal pankreas ile birleşir ve böylece pankreas tek parça haline gelir (Tablo-1). Ventral pankreatik kanal ve ana safra kanalı embriyonik kökende birbirlerine bağlanır, bu da majör papillada duodenuma ortak bir girişin erişkin konfigürasyonu ile sonuçlanır (1). Erken embriyonik dönemde pankreas tübüllerden oluşur. Daha sonra tübüllerden veziküller ve veziküllerden de asinüsler meydana gelir (2).

Tablo 1. Pankreasın Embriyolojik Gelişim Evreleri	
4.hafta	Ön bağırsak (foregut) ve orta bağırsak (midgut) bileşkesinden ventral ve dorsal tomurcuklar gelişir *Ventral pankreas: Pankreas baş kısmının posterior segmenti ve unsinat proses *Dorsal pankreas: Pankreas baş kısmının anterior bölümü, gövde ve kuyruk
6.hafta	Ventral pankreas, safra kesesi ve safra kanalı, duodenum etrafında saat yönünde rotasyon yaparak dorsal pankreasa yaklaşır
7.hafta	Ventral pankreas ile dorsal pankreas birleşir

Moleküler Düzenleyici Mekanizmalar

Dorsal ve ventral pankreatik keselerin farklılaşma programında, çevreleyen mezodermal dokunun desteklediği uzak indükleyici sinyallerin belirgin farklılıklar oluşturduğu gösterilmiştir (3). Bu farklılaşmadan sorumlu aracı moleküllerden birisi 'Sonic hedgehog (Shh)'geni proteinidir. Shh geni,

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ik, içerisinde dağınık hiperekojen odaklar barındıran, heterojen ekojenitede, çoğunlukla düzensiz sınırlı görünümdedir (85). Ayrıca endosonografi, pankreatik rest'in gastrointestinal stromal tümör (GIST) ya da leiomyomdan ayrımında kullanılır (86,87).

Gereğinde; semptomatik olduğunda veya histolojik konfirmasyon gerektiğinde, endoskopik bant ligasyonu ve snare polipektomi ile lezyon güvenli olarak rezeke edilebilir (88). Bir diğer opsiyon cerrahi rezeksiyondur. Fakat, insidental olarak keşfedilen ektopik pankreas dokusunun çıkarılması tartışmalıdır. Pankreatik rest dokusu, yalnızca vaka bildirimleri bulunmakla beraber, nadiren malign potansiyel taşırlar (89).

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