

BÖLÜM

5

PANKREAS HASTALIKLARI

Şehnaz EVRİMLER¹

- Vaka 1:** Seröz kistadenom
- Vaka 2:** Müsinöz kistadenom
- Vaka 3:** İntraduktal papiller müsinöz neoplazm
- Vaka 4:** Akut ödematöz pankreatit
- Vaka 5:** Akut nekrotizan pankreatit
- Vaka 6:** Oluk pankreatiti
- Vaka 7:** Otoimmün pankreatit
- Vaka 8:** Kronik pankreatit
- Vaka 9:** Pankreatik duktal adenokarsinom
- Vaka 10:** Pankreas nöroendokrin tümörü
- Vaka 11:** Pankreas solid psödopapiller neoplazmı

¹ Doktor Öğretim Üyesi, Süleyman Demirel Üniversitesi Tıp Fakültesi Radyoloji Anabilim dalı, sehnazevrimler@sdu.edu.tr

Ayrırcı Tanı

Müsinöz kistadenom/adenokarsinom, seröz kistadenom/adenokarsinom, nöroendokrin tümör

Önemli Noktalar

SPEN nadir görülen ekzokrin pankreas tümörüdür. Sıklıkla 20-30 yaş kadınlarda görülür. Nekroz, kanama ve kistik değişiklikler gösterir. Belirgin bir semptom göstermedikleri için saptandığında büyük boyutlara ulaşmış olabilir. Daha çok pankreas kuyruk kesiminde görülür. Pankreas dorsal agenezi ile birlikteliği olabilir. BT'de düzgün sınırlı hemorajik dejenerasyona bağlı olarak, değişken oranda kistik ve solid komponent barındıran lezyonlar olarak izlenirler. Çoğunlukla kontrastlanan solid komponent periferik yerleşim gösterir. Periferik kalsifikasyonlar da eşlik edebilir. MRG'de de içeriğine göre T1AG'de heterojen hipointens, T2AG'de heterojen hiperintens, post kontrast görüntülerde heterojen, yavaş progresif kontrastlanma gösterir (43, 44).

Tuzaklar

Kistik dejenerasyon gösteren nöroendokrin tümörlerle (NET) karışabilirler; ama NET'ler arteriyel fazda hipervasküler özellik gösterirler. Müsinöz ve seröz kistik neoplazmlar ile ayırımında radyolojik bulgular yanında hastanın yaş ve cinsiyeti yardımcı olabilir; ancak biyopsiye ihtiyaç duyulabilir.

Tedavi ve Yaklaşım

Çoğu lezyon benign olmakla birlikte ~%15 malign olabilir. Rezeksiyon ile uzun dönem survi göstermektedir (45).

KAYNAKLAR

1. Campbell F, Azadeh B. Cystic neoplasms of the exocrine pancreas. *Histopathology*. 2008;52(5):539-551.
2. Sarr MG, Murr M, Smyrk TC, et al. Primary cystic neoplasms of the pancreas: neoplastic disorders of emerging importance—current state-of-the-art and unanswered questions. *Journal of Gastrointestinal Surgery*. 2003;7(3):417-428.
3. Choi J-Y, Kim M-J, Lee JY, et al. Typical and atypical manifestations of serous cystadenoma of the pancreas: imaging findings with pathologic correlation. *American Journal of Roentgenology*. 2009;193(1):136-142.
4. Martin DR, Semelka RC. MR imaging of pancreatic masses. *Magnetic resonance imaging clinics of North America*. 2000;8(4):787-812.
5. Sahani DV, Kadavigere R, Saokar A, et al. Cystic pancreatic lesions: a simple imaging-based classification system for guiding management. *Radiographics*. 2005;25(6):1471-1484.
6. Kalb B, Sarmiento JM, Kooby DA, et al. MR imaging of cystic lesions of the pancreas. *Radiographics*. 2009;29(6):1749-1765.

7. Buck J, Hayes W. From the Archives of the AFIP. Microcystic adenoma of the pancreas. *Radiographics*. 1990;10(2):313-322.
8. Jais B, Rebours V, Malleo G, et al. Serous cystic neoplasm of the pancreas: a multinational study of 2622 patients under the auspices of the International Association of Pancreatology and European Pancreatic Club (European Study Group on Cystic Tumors of the Pancreas). *Gut*. 2016;65(2):305-312.
9. Bennett GL, Chew FS. Serous cystadenoma of the pancreas. *AJR American journal of roentgenology*. 1993;161(4):786-786.
10. Lee WA. Mucinous cystadenoma of the pancreas with predominant stroma creating a solid tumor. *World journal of surgical oncology*. 2005;3(1):59.
11. Nishihara K, Kawabata A, Ueno T, et al. The differential diagnosis of pancreatic cysts by MR imaging. *Hepato-gastroenterology*. 1996;43(9):714-720.
12. Lack EE. Pathology of the pancreas, gallbladder, extrahepatic biliary tract, and ampullary region: Oxford University Press; 2003.
13. Salvia R, Fernández-del Castillo C, Bassi C, et al. Main-duct intraductal papillary mucinous neoplasms of the pancreas: clinical predictors of malignancy and long-term survival following resection. *Annals of surgery*. 2004;239(5):678.
14. Ohno E, Itoh A, Kawashima H, et al. Malignant transformation of branch duct-type intraductal papillary mucinous neoplasms of the pancreas based on contrast-enhanced endoscopic ultrasonography morphological changes: focus on malignant transformation of intraductal papillary mucinous neoplasm itself. *Pancreas*. 2012;41(6):855-862.
15. Irie H, Honda H, Aibe H, et al. MR cholangiopancreatographic differentiation of benign and malignant intraductal mucin-producing tumors of the pancreas. *American Journal of Roentgenology*. 2000;174(5):1403-1408.
16. Salvia R, Crippa S, Falconi M, et al. Branch-duct intraductal papillary mucinous neoplasms of the pancreas: to operate or not to operate? *Gut*. 2007;56(8):1086-1090.
17. Zhang XM, Shi H, Parker L, et al. Suspected early or mild chronic pancreatitis: enhancement patterns on gadolinium chelate dynamic MRI. *Journal of Magnetic Resonance Imaging: An Official Journal of the International Society for Magnetic Resonance in Medicine*. 2003;17(1):86-94.
18. Tanaka M, Fernández-del Castillo C, Kamisawa T, et al. Revisions of international consensus Fukuoka guidelines for the management of IPMN of the pancreas. *Pancreatology*. 2017;17(5):738-753.
19. Thoeni RF. The revised Atlanta classification of acute pancreatitis: its importance for the radiologist and its effect on treatment. *Radiology*. 2012;262(3):751-764.
20. Balthazar EJ. Acute pancreatitis: assessment of severity with clinical and CT evaluation. *Radiology*. 2002;223(3):603-613.
21. Lucey BC, Kuligowska E. Radiologic management of cysts in the abdomen and pelvis. *American Journal of Roentgenology*. 2006;186(2):562-573.
22. Janisch NH, Gardner TB. Advances in management of acute pancreatitis. *Gastroenterology Clinics*. 2016;45(1):1-8.
23. Deziel DJ, Prinz RA. Drainage of Pancreatic Pseudocysts: Indications and Long-Term Results. *Digestive Surgery*. 1996;13(2):101-108.
24. Ferrucci JT, Mueller PR. Interventional approach to pancreatic fluid collections. *Radiologic Clinics*. 2003;41(6):1217-1226.
25. Baron TH, Morgan DE. Acute necrotizing pancreatitis. *New England Journal of Medicine*. 1999;340(18):1412-1417.
26. Banks PA, Bollen TL, Dervenis C, et al. Classification of acute pancreatitis—2012: revision of the Atlanta classification and definitions by international consensus. *Gut*. 2013;62(1):102-111.
27. Triantopoulou C, Delis S, Dervenis C. Imaging evaluation of post-pancreatitis infection. *Infectious Disorders-Drug Targets (Formerly Current Drug Targets-Infectious Disorders)*. 2010;10(1):15-20.
28. Freeny P, Lewis G, Traverso L, et al. Infected pancreatic fluid collections: percutaneous catheter drainage. *Radiology*. 1988;167(2):435-441.
29. Baron TH, Harewood GC, Morgan DE, et al. Outcome differences after endoscopic drainage of pancreatic necrosis, acute pancreatic pseudocysts, and chronic pancreatic pseudocysts. *Gastrointestinal endoscopy*. 2002;56(1):7-17.
30. Irani S, Gluck M, Ross A, et al. Resolving external pancreatic fistulas in patients with disconnected pancreatic duct syndrome: using rendezvous techniques to avoid surgery (with video). *Gastrointestinal endoscopy*. 2012;76(3):586-593. e583.
31. Kirby JM, Vora P, Midia M, et al. Vascular complications of pancreatitis: imaging and intervention. *Cardiovascular and interventional radiology*. 2008;31(5):957-970.

32. Sharma PK, Madan K, Garg PK. Hemorrhage in acute pancreatitis: should gastrointestinal bleeding be considered an organ failure? *Pancreas*. 2008;36(2):141-145.
33. Butler JR, Eckert GJ, Zyromski NJ, et al. Natural history of pancreatitis-induced splenic vein thrombosis: a systematic review and meta-analysis of its incidence and rate of gastrointestinal bleeding. *Hpb*. 2011;13(12):839-845.
34. Takahashi N, Papachristou GI, Schmit GD, et al. CT findings of walled-off pancreatic necrosis (WOPN): differentiation from pseudocyst and prediction of outcome after endoscopic therapy. *European radiology*. 2008;18(11):2522.
35. Doerr W. *Spezielle pathologische Anatomie I*: Springer-Verlag; 2013.
36. Raman SP, Salaria SN, Hruban RH, et al. Groove pancreatitis: spectrum of imaging findings and radiology-pathology correlation. *American Journal of Roentgenology*. 2013;201(1):W29-W39.
37. Bachmann K, Tomkoetter L, Kutup A, et al. Is the Whipple procedure harmful for long-term outcome in treatment of chronic pancreatitis? 15-years follow-up comparing the outcome after pylorus-preserving pancreatoduodenectomy and Frey procedure in chronic pancreatitis. *Annals of Surgery*. 2013;258(5):815-821.
38. Khandelwal A, Inoue D, Takahashi N. Autoimmune pancreatitis: an update. *Abdominal Radiology*. 2019:1-12.
39. Tirkes T, Shah ZK, Takahashi N, et al. Reporting standards for chronic pancreatitis by using CT, MRI, and MR cholangiopancreatography: the consortium for the study of chronic pancreatitis, diabetes, and pancreatic cancer. *Radiology*. 2019;290(1):207-215.
40. Löhr JM, Dominguez-Munoz E, Rosendahl J, et al. United European Gastroenterology evidence-based guidelines for the diagnosis and therapy of chronic pancreatitis (HaPanEU). *United European gastroenterology journal*. 2017;5(2):153-199.
41. Isaji S, Mizuno S, Windsor JA, et al. International consensus on definition and criteria of borderline resectable pancreatic ductal adenocarcinoma 2017. *Pancreatology*. 2018;18(1):2-11.
42. Raman SP, Hruban RH, Cameron JL, et al. Pancreatic imaging mimics: part 2, pancreatic neuroendocrine tumors and their mimics. *American Journal of Roentgenology*. 2012;199(2):309-318.
43. Coleman KM, Doherty MC, Bigler SA. Solid-pseudopapillary tumor of the pancreas. *Radiographics*. 2003;23(6):1644-1648.
44. Yu MH, Lee JY, Kim MA, et al. MR imaging features of small solid pseudopapillary tumors: retrospective differentiation from other small solid pancreatic tumors. *American journal of roentgenology*. 2010;195(6):1324-1332.
45. Paluri R, Babiker HM. Cancer, Solid and Papillary Epithelial Neoplasm (SPEN). StatPearls [Internet]: StatPearls Publishing; 2019.