California Tumor Tissue Registry's
Subscription "C" - Vol 2(7)
April, 2009

"Renal Pathology"

Case 1

A 71 year old female presented with a renal mass which was removed. The 410 gram right kidney had a 4.8 x 4.5 x 3.0 cm heterogeneous brown-tan and hemorrhagic mass which abutted the capsule but did not invade it. The ureter and vasculature were free of tumor.

Diagnosis: Oncocytoma, kidney
Donation: Dr. Kevin Thompson, Loma Linda University Medical Center

Caveolin-1 immunohistochemical analysis in differentiating chromophobe renal cell carcinoma from renal oncocytoma. Garcia E; Li M. Am J Clin Pathol 125(3): p392-8, 2006.

KIT expression in normal and neoplastic renal tissues: immunohistochemical and molecular genetic analysis. Kato N; Honma K; Hojo H; Sasou S; Matsuzaki O; Motoyama T. Pathol Int 55(8): p479-83, 2005.

Expression of kidney-specific cadherin in chromophobe renal cell carcinoma and renal oncocytoma. Adley BP; Gupta A; Lin F; Luan C; Teh BT; Yang XJ. Am J Clin Pathol 126(1): p79-85, 2006.

The evolving concept of renal neoplasia: impact of emerging molecular and electron microscopic studies. Picken MM. Ultrastruct Pathol 29(3-4): p277-82, 2005.

Oncocytoma-like angiomyolipoma. A clinicopathologic and immunohistochemical study of 2 cases. Martignoni G; Pea M; Bonetti F; Brunelli M; Eble JN. Arch Pathol Lab Med 126(5): p610-2, 2002.

Case 2

A 65 year old woman with a history of bilateral renal cancer was shown to have a 2.5 cm well-circumscribed pink kidney tumor.

Diagnosis: Mixed epithelial and stromal tumor, kidney
Donation: Dr. Wilson Chick, Loma Linda University Medical Center

Mixed epithelial and stromal tumor of the kidney and cystic nephroma share overlapping features: reappraisal of 15 lesions. Antic T; Perry KT; Harrison K; Zaytsev P; Pins M; Campbell SC; Picken MM. Arch Pathol Lab Med 130(1): p80-5, 2006.

Incidental stromal-predominant mixed epithelial-stromal tumors of the kidney: a mimic of intraparenchymal renal leiomyoma. Parikh P; Chan TY; Epstein JI; Argani P. Arch Pathol Lab Med 129(7): p910-4, 2005.

Mixed epithelial and stromal tumor of the kidney: preliminary immunohistochemical and electron microscopic studies of the epithelial component. Picken MM; Fresco R. Ultrastruct Pathol 29(3-4): p283-6, 2005.

Mixed epithelial-stromal tumor of the kidney in adults: two cases from the Arkadi M. Rywlin slide seminars. Bisceglia M; Bacchi CE. Adv Anat Pathol Jul;10(4): p223-33, 2003.

Cystic nephroma (multilocular cyst) and mixed epithelial and stromal tumor of the kidney: a spectrum of the same entity? Jevremovic D; Lager DJ; Lewin M. Ann Diagn Pathol 10(2): p77-82, 2006.

Case 3

A 44 year old man was found to have a 4.5 cm tumor in the kidney. It was homogeneous light brown without "scarring", however there were foci of hemorrhage and white-tan fibrosis. The tumor was adjacent to the capsule but did not infiltrate through the perinephric fat. The ureter and vasculature were free of tumor. The adrenal gland was not involved.

Diagnosis: Chromophobe renal cell carcinoma
Donation: Dr. Mia Perez, Loma Linda University Medical Center

Renal cell carcinoma, chromophobe type, with collecting duct carcinoma and sarcomatoid components. Gong Y; Sun X; Haines GK; Pins MR. Arch Pathol Lab Med 127(1): pe38-40, 2003.

Caveolin-1 immunohistochemical analysis in differentiating chromophobe renal cell carcinoma from renal oncocytoma. Garcia E; Li M. Am J Clin Pathol 125(3): p392-8, 2006.

Chromophobe renal cell carcinoma: analysis of 61 cases. Peyromaure M; Misrai V; Thiounn N; Vieillefond A; Zerbib M; Flam TA; Debre B. Cancer 100(7): p1406-10, 2004.

Chromophobe renal cell carcinoma with focal papillary configuration, nuclear basaloid arrangement and stromal osseous metaplasia containing fatty bone marrow element. Histopathology 46(6): p712-3, 2005.

KIT expression in chromophobe renal cell carcinoma: comparative immunohistochemical analysis of KIT expression in different renal cell neoplasms. Petit A; Castillo M; Santos M; Mellado B; Alcover JB; Mallofre C . Comment In: Am J Surg Pathol. 2005 29(6). Am J Surg Pathol 28(5): p676-8, 2004.

Case 4

A 59 year old male was found to have a 5.7 cm multinodular mass within the lower pole of a kidney, predominantly involving the medulla. The mass was gray-tan with areas of hemorrhage and necrosis. It also involved the capsule. Multiple smaller nodules were found within the renal parenchyma. Tumor also involved a hilar vessel.

Diagnosis: Collecting duct carcinoma
Donation: Dr. Kevin Thompson, Loma Linda University Medical Center

Collecting duct (Bellini duct) renal cell carcinoma: a nationwide survey in Japan. Tokuda N; Naito S; Matsuzaki O; Nagashima Y; Ozono S; Igarashi T. J Urol 176(1): p40-3; discussion 43, 2006.

Cortically located collecting duct carcinoma. Gurocak S; Sozen S; Akyurek N; Uluoglu O; Alkibay T. Urology 65(6): p1226, 2005.

Fine needle aspiration cytology of collecting duct carcinoma of the kidney: report of a case with distinctive features and differential diagnosis. Sarode VR; Islam S; Wooten D; Watumull LM; Molberg K; Ashfaq R. Acta Cytol 48(6): p843-8, 2004.

Renal cell carcinoma, chromophobe type, with collecting duct carcinoma and sarcomatoid components. Gong Y; Sun X; Haines GK; Pins MR. Arch Pathol Lab Med 127(1): pe38-40, 2003.

Collecting duct renal cell carcinoma: clinical study of a rare tumor. Chao D; Zisman A; Pantuck AJ; Gitlitz BJ; Freedland SJ; Said JW; Figlin RA; Belldegrun AS. J Urol 167(1): p71-4, 2002.

Case 5

A 29 year old African American male with sickle-cell trait presented with right side pain and gross hematuria for 4 months. Imaging showed a right renal mass which upon resection was a 7.5 cm renal mass which was yellow-tan and centrally necrotic. There were also satellite nodules in the kidney up to 0.8 cm.

Diagnosis: Renal medullary carcinoma
Donation: Dr. Nelson Quigley, Martin Luther Hospital, Anaheim, CA

Gene expression profiling of renal medullary carcinoma: potential clinical relevance. Yang XJ; Sugimura J; Tretiakova MS; Furge K; Zagaja G; Sokoloff M; Pins M; Bergan R; Grignon DJ; Stadler WM; Vogelzang NJ; Teh BT. Cancer 100(5): p976-85, 2004.

Renal medullary carcinoma: a report of 2 cases and review of the literature. Dimashkieh H; Choe J; Mutema G. Arch Pathol Lab Med 127(3): pe135-8, 2003.

Renal collecting (Bellini) duct carcinoma displays similar characteristics to upper tract urothelial cell carcinoma. Orsola A; Trias I; Raventos CX; Espanol I; Cecchini L; Orsola I. Urology Jan;65(1): p49-54, 2005.

Cytologic features of renal medullary carcinoma. Assad L; Resetkova E; Oliveira VL; Sun W; Stewart JM; Katz RL; Caraway NP. Cancer 25;105(1): p28-34, 2005.

Collecting duct carcinoma of the kidney: a clinicopathological study of 9 cases. Peyromaure M; Thiounn N; Scotte F; Vieillefond A; Debre B; Oudard S. J Urol 170(4 Pt 1): p1138-40, 2003.

Case 6

A 52 year old female with flank pain was found by CT scan to have 3 cm solid enhancing mass in the right kidney. She had a family history of renal cell carcinoma affecting her mother and a niece. The resected kidney weighed 196 grams and was found to have a 4 x 3.9 x 2.9 cm yellow-tan tumor. Neither hemorrhage nor were seen.

Diagnosis: Metanephric adenoma, kidney
Donation: Dr. Gregg Manson, Saint Mary's Regional Medical Center, Reno, NV

Renal metanephric adenoma with previously unreported cytogenetic abnormalities: case report and review of the literature. Rakheja D; Lian F; Tomlinson GE; Ewalt DH; Schultz RA; Margraf LR. Pediatr Dev Pathol 8(2): p218-23, 2005.

Metanephric adenoma of the kidney with massive hemorrhage and necrosis: immunohistochemical, ultrastructural, and flow cytometric studies. Kato H; Suzuki M; Aizawa S; Hano H. Int J Surg Pathol 11(4): p345-52, 2003.

Metanephric adenoma mimicking papillary carcinoma arising in a mixed epithelial and stromal tumor of the kidney. Iqbal J; Gupta S; Breuer FU. Cancer Genet Cytogenet 170(1): p83-5, 2006.

Review of metanephric adenoma of the kidney with focus on clinical and pathobiological aspects. Kuroda N; Tol M; Hiroi M; Enzan H. Histopathol 18(1): p253-7, 2003.

Passive seeding in metanephric adenoma: a review of pseudometastatic lesions in perinephric lymph nodes. Paner GP; Turk TM; Clark JI; Lindgren V; Picken MM. Arch Pathol Lab Med 129(10): p1317-21, 2005.

Case 7

An infant girl presented with enlarged kidneys and respiratory distress. A nephrectomy was performed to improve ventilation. The kidney was 320 gram, 12.5 x 7.5 x 6.0 cm. Several areas had cysts up to 1 mm in diameter.

Diagnosis: Infantile polycystic kidney disease
Donation: Dr. Craig Zuppan, Loma Linda University Medical Center

Clinical and molecular characterization defines a broadened spectrum of autosomal recessive polycystic kidney disease (ARPKD). Adeva M; El-Youssef M; Rossetti S; Kamath PS; Kubly V; Consugar MB; Milliner DM; King BF; Torres VE; Harris PC. Medicine (Baltimore) 85(1): p1-21, 2006.

Autosomal recessive polycystic kidney disease: the clinical experience in North America. Guay-Woodford LM; Desmond RA. Comment In: CANNT J. 14(4):38, 2004. Pediatrics 111(5 Pt 1): p1072-80, 2003.

Autosomal dominant polycystic kidney disease. Ishikura K; Kamimaki I; Hamasaki Y; Hataya H; Ikeda M; Honda M. Am J Kidney Dis 47(6): pA37, e73-5, 2006.

Autosomal-dominant polycystic kidney disease in infancy and childhood: progression and outcome. Abdollah Shamshirsaz A; Shamshirsaz A; Reza Bekheirnia M; Bekheirnia RM; Kamgar M; Johnson AM; McFann K; Cadnapaphornchai M; Nobakhthaghighi N; Haghighi NN; Schrier RW.
Kidney Int 68(5): p2218-24, 2005.

Hereditary polycystic kidney diseases in children: changing sonographic patterns through childhood. Avni FE; Guissard G; Hall M; Janssen F; De Maertelaer V; Rypens F. Pediatr Radiol 32(3): p169-74, 2002.

Case 8

A one y/o girl presented with an abdominal mass was found to have a 6.0 cm mass arising within a kidney. It was centrally located and invaded the pelvis as well as the lateral capsule.

Diagnosis: Malignant rhabdoid tumor of kidney
Donation: Dr. Craig Zuppan, Loma Linda University Medical Center

Diagnosis:

Malignant rhabdoid tumor of the kidney in a child: report of a case with recurrence in the contralateral kidney. Cocker RS; Sharaan M; Wasserman P. Acta Cytol 48(6): p836-42, 2004.

P-Akt expression distinguishes two types of malignant rhabdoid tumors. Charboneau A; Chai J; Jordan J; Funkhouser W; Judkins A; Biegel J; Weissman B. J Cell Physiol 209(2): p422-7, 2006.

Malignant rhabdoid tumor of the kidney in an adult: a case report and review of the literature. Peng HQ; Stanek AE; Teichberg S; Shepard B; Kahn E. Arch Pathol Lab Med 127(9): p371-3, 2003.

Cytologic profile of rhabdoid tumor of the kidney. A report of 3 cases. Barroca HM; Costa MJ; Carvalho JL. Acta Cytol 47(6): p1055-8, 2003.

Extrarenal rhabdoid tumors of soft tissue: clinicopathological and molecular genetic review and distinction from other soft-tissue sarcomas with rhabdoid features. Oda Y; Tsuneyoshi M. Pathol Int Jun;56(6): p287-95, 2006.

Case 9

A 3 year old male child was found to have a 10 cm mass in a kidney. It appeared to arise from the lateral cortex. The tumor was white-tan with intermixed firm/solid areas and areas of hemorrhage, necrosis.

Diagnosis: Wilms tumor (without anaplasia)
Donation: Dr. Craig Zuppan, Loma Linda University Medical Center

Bilateral Wilms' tumor with anaplasia: lessons from the National Wilms' Tumor Study. Hamilton TE; Green DM; Perlman EJ; Argani P; Grundy P; Ritchey ML; Shamberger RC. J Pediatr Surg 41(10): p1641-4, 2006.

Improved survival of children with Wilms tumor. Kutluk T; Varan A; Buyukpamukcu N; Atahan L; Caglar M; Akyuz C; Buyukpamukcu M. J Pediatr Hematol Oncol Jul;28(7): p423-6, 2006.

Treatment of anaplastic histology Wilms' tumor: results from the fifth National Wilms' Tumor Study. Dome JS; Cotton CA; Perlman EJ; Breslow NE; Kalapurakal JA; Ritchey ML; Grundy PE; Malogolowkin M; Beckwith JB; Shamberger RC; Haase GM; Coppes MJ; Coccia P; Kletzel M; Weetman RM; Donaldson M; Macklis RM; Green DM. J Clin Oncol 24(15): p2352-8, 2006.

Prognostic markers in nephroblastoma (Wilms' tumor). Ghanem MA; van Steenbrugge GJ; Nijman RJ; van der Kwast TH. Urology 65(6): p1047-54, 2005.

Metanephric neoplasms: the hyperdifferentiated, benign end of the Wilms tumor spectrum? Argani P.Clin Lab Med 25(2): p379-92, 2005.

Case 10

An 8 month old male infant was found to have an abdominal mass which turned out to be a 7.5 cm kidney tumor which was trabeculated, tan-white and involved the hilum and upper pole

Diagnosis: Congenital mesoblastic nephroma
Donation: Dr. Craig Zuppan, Loma Linda University Medical Center

Expression of ETV6-NTRK in classical, cellular and mixed subtypes of congenital mesoblastic nephroma. Anderson J; Gibson S; Sebire NJ. Histopathology 48(6): p748-53, 2006.

Use of sarcoma-based chemotherapy in a case of congenital mesoblastic nephroma with liver metastases. Patel Y; Mitchell CD; Hitchcock RJ. Urology 61(6): p1260, 2003.

Multicystic congenital mesoblastic nephroma. Drut R. Int J Surg Pathol 10(1): p59-63, 2002.

Cellular mesoblastic nephroma: morphologic, cytogenetic and molecular links with congenital fibrosarcoma. Henno S; Loeuillet L; Henry C; D'Herve D; Azzis O; Ferrer J; Poulain P; Babut JM; Merlio JP; Jouan H; Dubus P. Pathol Res Pract. 199(1): p35-40, 2003.