

the abdomen. Case 2: A 13-year-old male status post two orthotopic heart transplants presented for a dental procedure. Following this, he developed an anaphylactoid-type reaction to medication, with hives and bradycardia followed by cardiac arrest. He was resuscitated, however, his cardiac function steadily declined throughout the remainder of his stay. Heart biopsy revealed no evidence of cell-mediated transplant rejection. Pancreatic enzymes were mildly elevated, and abdominal imaging was unremarkable. His tacrolimus levels were noted to be suprathreshold, and this was discontinued. Shortly before passing, he developed severe abdominal pain with distension, nausea and vomiting. At autopsy, he was found to have nearly two liters of hemorrhage and clot within the peritoneum emanating from a necrotic and hemorrhagic pancreas.

**Results (if a Case Study enter NA):** NA.

**Conclusion:** Close clinical monitoring of pancreatic function should be considered in solid organ transplant recipients receiving tacrolimus.

### Lewy Body Pathology and Alzheimer Disease in Down Syndrome

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**Introduction/Objective:** Aging adults with Down syndrome (DS) develop Alzheimer disease neuropathology (AD) by the age of 40 years, primarily due to the overexpression of the amyloid precursor protein on chromosome 21. Lewy bodies (LBs), containing alpha-synuclein protein, are observed in 7-60% of AD patients in the amygdala and in cortex. Prior DS studies (n=20-56 cases) find the frequency of LB pathology to range between 8-50% of cases being affected. We hypothesized that LB pathology would also be present in DS brain with similar locations and prevalence to AD. Thus, we evaluated the frequency of LB in our UCI cohort of DS cases that we have collected over the past 25 years.

**Methods/Case Report:** Neuropathology reports from 55 cases with DS from the UCI-ADRC were included in this study. Cases were stained for beta-amyloid, phosphor-tau, alpha-synuclein and TDP-43 as per NACC protocols (one case each v7,8,9 and three v11).

**Results (if a Case Study enter NA):** We identified 6 cases (10.9%), all male, with a mean age of 57 years (SD=3) that showed LB and/or Lewy neurites. LB pathology was classified as amygdala predominant in 3 cases, brainstem predominant in one, intermediate/transitional in one, and diffuse/neocortical in one. Five cases were BRAAK stage 6 and one was stage 5. Five cases had CERAD neuritic plaque score C and one case had a B score. Two

of 3 cases were Thal phase 5, and one was phase 4. The case with diffuse/neocortical LB pathology demonstrated hippocampal sclerosis.

**Conclusion:** The observation that all our LB positive cases were male may reflect a sample bias. In our study, Lewy pathology was most common in amygdala but other sites of involvement are seen similar to a prior DS study and AD studies. Prior DS studies (n=20-56 cases) find the frequency of LB pathology to range between 8-50% of cases being affected. The prevalence of LB in our DS cohort (10.9%) is in the low end of the range seen in other DS and AD studies.

### Pulmonary Tumor Thrombotic Microangiopathy (PTTM) Caused by Metastatic Ovarian High-Grade Serous Carcinoma: A Rare Case Report and Literature Review

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**Introduction/Objective:** Pulmonary tumor thrombotic microangiopathy (PTTM) is a rare entity, and often diagnosed in postmortem. PTTM is usually presented as unexplained dyspnea in a patient with known or unknown history of cancer. Tumor microemboli mainly affect the pulmonary microvasculature. PTTM is resulting from coagulation cascade activation secondary to tumor microemboli induced fibrin clot formation and fibrocellular intimal proliferation.

**Methods/Case Report:** The patient is a 65-year-old female with past medical history of ovarian high-grade serous carcinoma, and presented to the hospital with chest pain and shortness of breath. Coronary angiography showed no new obstructive disease. Echocardiogram revealed markedly elevated right ventricular systolic pressure (65-70 mmHg), indicated pulmonary hypertension. Computed tomography of the chest revealed diffuse bilateral ground glass and solid centrilobular nodules, with no pulmonary emboli identified. She developed worsening hypoxia and expired. A lung-restricted autopsy was performed. Literature review was conducted. The important gross findings included multiple firm and red-brown nodules (approximately 0.1 cm) in bilateral lungs. Microscopic examination revealed the lung parenchyma demonstrated numerous tumor microemboli in the pulmonary arterioles and occasionally in the small arteries. The tumor microemboli consist of tumor cells with various degree of fibrin deposition and fibrocellular intimal proliferation. The tumor cells were epithelioid with moderate to marked nuclear pleomorphism, occasional cytoplasmic vacuoles, frequent apoptosis and necrosis. Immunohistochemical stains for PAX-8 and WT1 highlight the tumor microemboli. These findings are consistent with PTTM secondary to metastatic ovarian