**Abstract**

Pick's Disease (PDD) is a neurodegenerative disease characterized by neuronal cell death in the frontal and temporal lobes of the brain, classifying it as a Frontotemporal dementia (FTD). Symptoms include dementia, changes in speech patterns, and many behavioral indicators including anxiety, confusion, attenuated social abilities and disengagement from friends and family. Onset of the disease usually occurs between the ages of 40 and 60, with the average age of onset being 54.

We evaluated the pathology postmortem in the brain of a 68 year old female using various histological and antibody stains. One indicator of PDD is a buildup of amyloid and tau proteins, which was evaluated using Ab 1-42 and AT8 (respectively) as well as other amyloid and tau markers. Several silver stains were also used to detect abnormal pathology. The Campbell-Switzer method revealed amyloid plaques and deposits, which resembled Alzheimer’s (AD) pathology but the plaques were far fewer in number in the PDD brain than an average AD brain. A Silver Protein protocol (Wako, cat # 283-80241), a modified Bodian stain, revealed both amyloid plaques and neurofibrillary tangles. Thionine Nissi and H&E stains showed swollen, “ballooned” neurons, one of the hallmark indicators of PDD. A hyperphosphorylated state was observed with both GFAP (astrocytes) and Iba1 (microglia).

This battery of stains on near adjacent tissue sections further characterizes the unique pathology of PDD.

**Conclusion**

By using a battery of traditional and IHC stains one can gain an understanding of the unique pathological aspects of a chosen disease. Here we have shown the unique anatomical features that contribute to the symptoms of PDD.

Gaining an understanding of these features and how they present during the course of the disease can lead to better knowledge of the behavioral symptoms and possibly point improved course of treatment and management of symptoms.