Recent studies indicate that tau pathology in Alzheimer’s disease (AD) does not initially manifest in the cerebral cortex but in selected subcortical nuclei, in particular the locus ceruleus (LC). We examined 239 unselected autopsy cases (mean age 82.8 ±9.7 SD years) Neuropathological examination followed standardized criteria and additionally included immunohistochemistry and semiquantitative assessment of tau lesions in LC, substantia nigra (SN), dorsal motor nucleus of nervus vagus (dmX), and olfactory bulb (OB). In Braak stages 0-I (n=25) tau pathology in the form of pretangle material, neuropil threads or neurofibrillary tangles was seen in LC of 2 cases. However, in additional serial sections sparse small dot-like lesions that positively stained for AT8 antibody were present in LC without relevant tau pathology. In Braak stage II tau pathology could be detected in all investigated regions (SN, 30%; LC, 60%; dmX, 25%; OB, 60%) and the prevalence of tau pathology increased with increasing Braak stages reaching over 95% in SN, LC and dmX and 100% in OB in Braak stage VI. The severity of tau pathology in SN, LC, dmX, and OB significantly correlated with Braak stages. Our results suggest that brainstem nuclei rather become increasingly involved during AD progression than representing sites initially affected. However, the relation between small AT8 positive dot-like lesions in the LC and AD remains to be elucidated.