

PATHOLOGICAL CORRELATIONS IN ALCOHOL USE DISORDERS AND CONTROLS: RESULTS FROM NSW BRAIN TISSUE RESOURCE CENTRE.

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Background: The NSW Brain Tissue Resource Centre (NSW BTRC) is an established postmortem brain resource with a focus on alcohol related brain damage. The NSW BTRC also collects demographic details and postmortem pathological reports on donors.

Aim: To correlate the pathological findings of a cohort of brain donors with DSMIV alcohol use disorders and controls.

Method: Two hundred and twenty coronial cases were identified (94 Alcohol Use Disorder, 126 controls). Data relating to postmortem histological findings of cause of death, toxicology and major organs were included.

Results: The majority of cases were male (79%), mean age (\pm SD) of males was 55y (\pm 11) and females 55y (\pm 12). Cause of death was categorized as cardiac (61%), respiratory (11%), or hepatic (4%) disease or drug/alcohol toxicity (10%) or other (14%). Cases with alcohol abuse were more likely to have a lower brain weight ($p < 0.001$), lower BMI ($p = 0.01$), positive toxicology ($p = 0.01$) including benzodiazepine ($p = 0.002$) and alcohol toxicology ($p = 0.001$), liver disease ($p = 0.001$), brain pathology ($p = 0.006$), bowel conditions ($p < 0.04$) or emphysema ($p = 0.004$). Controls were more likely to have cardiac-related pathology: ischemic heart disease ($p = 0.01$), coronary artery disease ($p < 0.005$), or myocardial infarction ($p = 0.004$).

Conclusion: Controls obtained through the coronial system were more likely to die suddenly from cardiac-related disease than the alcohol use disorder cases. Understanding the effect of co-existing pathologies on brain quality measures and their potential molecular implications assists in the ascertainment of cases and allocations of cohorts in the NSW BTRC.

Disclosure of Interest: NIL