Forensic Pathology & Clinical Forensic Medicine

CHRONIC TRAUMATIC ENCEPHALOPATHY

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Chronic traumatic encephalopathy is a neurodegenerative disorder characterised by the abnormal accumulation of hyperphosphorylated tau protein within the brain. The presentation will discuss the history of the neuropathological identification of the disorder, the current diagnostic criteria and recent findings in the literature.

FOUR POST-MORTEM CASES OF ISOLATED BASILAR ARTERY DISSECTION AND REVIEW OF THE LITERATURE

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We present four cases of isolated basilar artery dissection (IBAD). Two traumatic cases had ruptured dissections and subarachnoid haemorrhage (SAH), with skull fractures (fall and motor vehicle crash) and the third unruptured IBAD traumatic case was due to blunt force to the head. One case presented with headache and no vasculopathy histologically. The possibility of unrecognised trauma with delayed rupture is not excluded.

IBAD can present ruptured with subarachnoid haemorrhage¹ or unruptured, with bleeding confined to the wall of the basilar artery. Clinically, patients present with brainstem or cerebellar ischaemic strokes, and less frequently SAH. There is usually an association of atypical neck movement or injury to the head and neck.² Ruptured basilar artery dissection with SAH has a high mortality rate, whereas unruptured basilar artery dissection can have a more favourable outcome.³

In the unruptured IBAD case, death due to post concussive apnoea syndrome was considered. If IBAD is not recognised as an entity and only the vertebral arteries are examined, this may potentially alter interpretation of the underlying cause of death. The actual incidence of IBAD is probably underestimated. As the basilar artery is easily accessible at post-mortem, in all cases with a history of head and neck injury, despite the absence of SAH, the vertebral and basilar arteries should be examined microscopically to identify a possible dissection and exclude a vasculopathy.

References

1. Yoshimoto Y, Hoya K, Tanaka Y, *et al.* Basilar artery dissection. *J Neurosurg* 2005; 102: 476–81.
2. Han Z, Leung TW, Lam W, *et al.* Spontaneous basilar artery dissection. *Hong Kong Med J* 2007; 13: 144–6.

3. Kim BM, Suh SH, Park SI, *et al.* Management and clinical outcome of acute basilar artery dissection. *Am J Neuroradiol* 2008; 29: 1937–41.

ORGAN DONATION IN THE FORENSIC SETTING

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In 2018, over 1,782 Australian's lives were transformed by organ and tissue donation. Although Australia generally performs well in this area the aim is to further improve organ and tissue donation rates, and these rates vary between states. However, there are numerous barriers to successful organ donation. Many of the cases in which organ and/or tissue donation is requested fall within the Coronial jurisdiction / forensic medicine setting. In this setting the final decision regarding consent, and/or restriction of organ and tissue donation lies with Coroner who is advised by the forensic pathologist. However, within New South Wales there are no objective guidelines for forensic pathologists and Coroners to follow, and consequently subjective decisions are made which are reliant on experience and personal preference in a time critical and challenging setting. Ultimately, maintaining the principles of autonomy, justice, beneficence, and non-maleficence while trying to optimise organ donation is not an easy task. This presentation provides a review of the Coronial cases within New South Wales Health Pathology Forensic Medicine (Sydney and Newcastle sites) in which organ donation was requested in 2018 and 2019, and highlights Coronial consent issues in certain cases. Furthermore, objective guidelines are proposed to facilitate consistency and streamline the decision-making process in future cases.

DEAD DRUNK

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Alcohol is a commonly used, readily available substance that is a standard component of many social interactions in Australia and elsewhere. The misuse of alcohol is responsible for a substantial burden of disease around the world. Harmful use of alcohol is responsible for 5.1% of the global burden of disease and is the leading risk factor for premature mortality and disability in individuals aged 15–49 years, accounting for 10% of all deaths in this demographic. Adverse effects attributable to alcohol toxicity are seen with an elevated blood concentration (BAC), which in the post-mortem state is less well defined than during life. Attribution of death to alcohol toxicity requires interpretation of an obtained BAC in the context of the case as a whole. The issue of death due to acute alcohol toxicity is considered on a background of retrospective analysis of deaths attributed to acute alcohol intoxication in the Department of Forensic Medicine in Sydney over the preceding 10 years with consideration of