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Elective report

Placements;

- Pathology – 4 weeks spent with Dr PGJerrreat seeing pathology and forensic pathology
  - Email: pgjerrreat@msn.com
  - 22/04/2013 - 18/05/2013
- Forensic Psychiatry – 2 weeks spent at Broadmoor Hospital. Supervisor was Dr Sengupta.
  - 20/05/2013 - 31/05/2013

Objectives;

1. To compare and contrast the cause of death and demographics of those seen on the pathology placement compared with that of the general population

Seeing post mortems of people originating from across South East England provided an 'epidemiological window' enabling me to qualitatively assess some trends in cause of death. For example coronary artery disease was seen in most post mortems to varying degrees. Some showed small levels of occlusion and calcification whilst others showed near full occlusion of multiple vessels. On top of this many post mortems revealed evidence of either new or old myocardial infarction. Pulmonary oedema was a common finding suggesting degrees of heart failure were also present. In 2010 the largest proportion of deaths were attributed to cardiovascular causes (32% of all causes of death) and of these the majority were caused by ischaemic heart disease and acute myocardial infarction(1); this evidence supports my observations. Other common comorbidities seen at post mortem included COPD and kidney disease.

An interesting comparison between bodies from the South London area compared to those from the Kent and Sussex was the level of asbestos related disease. There was a variety of asbestos related pathologies including pleural plaques, pleural mesothelioma and abdominal mesothelioma seen in bodies taken from several London boroughs but there were no cases seen in bodies taken from the Kent and Sussex area over the 4 week period. Asbestos related lung disease usually occurs after a latent period following asbestos exposure and particular professions are at higher risk; these include painters, electricians, plumbers and shipyard workers(2). This suggests that the people who have lived and died in South London were far more likely to be exposed to asbestos, perhaps through occupation or living arrangements, compared to people who have lived and died in the Kent and Sussex areas.

2. To understand the process of a post mortem and how medical/forensic science is used to examine for the cause of death

A post mortem is a thorough process which is not unlike a clinical examination of a patient in hospital. In a clinical setting the clinician takes a history from the patient about the complaint before examining them; the examination is made up of first a general inspection of the patient before a more system specific examination is carried out. In a post mortem the pathologist looks

at the context in which the person is found along with their medical history. The next step is then to carry out a general inspection of the deceased including weight and height, noting all external marks including tattoos and scars. Once the external examination is complete the internal examination begins. Each organ is weighed and then dissected to look for any signs of disease that may explain how the patient died. The pathologist may then take samples which can include blood, vitreous fluid, urine or bile as well as dissected pieces of tissue. Using all the information collected the pathologist decides whether the death is natural and then what the most likely cause of death is; if this is not possible the cause of death remains unascertained.

There are many pathological signs that can be seen at post mortem that may explain how the person died or co morbid conditions that the patient may have suffered from. One example is if a person was to die from hypothermia. The body may have parchment abrasions over the bony prominences; these are areas of abrasion that occur peri-mortem whilst the patient is in a state of confusion. Because of the closeness to the time of death these abrasions do not produce any, or very little, inflammatory reaction so have no surrounding erythema. Another classical finding seen in hypothermia are Wischnewski ulcers seen in the stomach. These are collections of small black ulcers seen on the lining of the stomach.

### 3. To develop an appreciation of what forensic pathology involves

The job of a forensic pathologist is a multi-faceted one. One role is to conduct post mortems to discover the cause of death and these are carried out for a variety of reasons. Some cases involve people in whom the cause of death is unknown. Other cases are considered suspicious and are requested by the police in order to discover whether the death is suspicious or not. Pathologists are also asked by the courts to provide a second opinion on the work of other pathologists. Pathologists are also required to provide evidence in court which can either be at a coroner's or a criminal court depending upon the circumstances. Other jobs that a pathologist may be involved in include the analysis of histology taken at post mortem and research. The job involves a close liaison with a lot of different professionals including mortuary staff, the police, crime scene investigators, coroner's officers, coroners and judges.

### 4. To compare how patients and their needs are cared for in Broadmoor with comparisons made to a general adult psychiatry unit.

Broadmoor is a high security mental health hospital which has approximately 200 male service users. Patients are admitted to Broadmoor for a variety of reasons; some have committed high profile crimes, some lots of more minor offences whilst others have been moved up from medium secure units or prisons after extensive assessment. The range of offences varies widely and at the most extreme end includes murder and sex offences. Patients are split between the mental illness and the personality disorder directorate and each has a series of different wards including high dependency, admission and rehabilitation wards. The illnesses that people suffer from reflect those that have been associated with crime and include schizophrenia and an array of personality disorders(3,4). For many patients it is not as simple as a single diagnosis and many have features of psychotic illness and personality disorder. This, along with the idea that many of these people and their illnesses are resistant to treatment, makes management incredibly complex. Patients receive a



lot of input from the multi-disciplinary team which includes occupational therapists, psychologists, social workers, nursing staff as well as psychiatrists. This was seen to a much greater degree than during my time at the general psychiatry unit. This may be a reflection of the longer time period that clinicians have to treat these patients (the average stay at Broadmoor being between 5-7 years) as well as the complexity of their illnesses. The discharge is often different as well with these patients being stepped down to medium secure facilities as opposed to being discharged back into the community as was often seen on my placement on a general adult psychiatry ward in fourth year.

Patients also had access to a GP based inside Broadmoor hospital. The GP working at Broadmoor faced additional logistical challenges as well as specific health problems encountered by those with mental health problems. Specialists are often invited to see patients inside Broadmoor if possible and simple tasks such as referring and sending a patient for a CT becomes incredibly difficult because of the high risk nature of some patients. This arrangement was not seen in my adult psychiatry placement but this is a reflection of not only the length of time that patients spend at Broadmoor but also their high risk nature.

Overall I feel that the time I spent both with the forensic pathologist and at Broadmoor was incredibly valuable and I have learnt a lot. I was able to dispel a few myths, including how accurate time of death really is and that Broadmoor was a place where criminals were incarcerated for life. The experiences that I have gained over last 6 weeks will stay with me for a long time.

Word count – 1,199 words

### Bibliography

- (1) Simon Rogers (2011) 'Mortality Statistics: every cause of death in England and Wales, visualised.' Published on the Guardian online. Accessed via <http://www.guardian.co.uk/news/datablog/2011/oct/28/mortality-statistics-causes-death-england-wales-2010>. Date accessed 02/06/2013.
- (2) GP Currie, SJ Watt, NA Maskell (2009) 'An overview of how asbestos exposure affects the lung'. BMJ. 2009. 339; b3209.
- (3) PA Brennan, SA Mednick, S Hodgins (2000) 'Major Mental Disorders and Criminal Violence in Danish Birth Cohort.' Arch Gen Psychiatry. 57(5). 494-500
- (4) R Yu, JR Geddes, S Fazel. (2012) 'Personality Disorders, Violence and Antisocial Behaviour. A systematic review and meta regression analysis.' Journal of Personality Disorder. 26(5); 775-792.