POST MORTEM REPORT FOR HM CORONERS FOR EASTERN DISTRICT OF GREATER LONDON

PM No. 414.15
Your Ref. 01973/2015

NAME	**Jack TAYLOR**
AGE/SEX:	**25 years Sex: Male**
DATE OF BIRTH	**20.06.1990**
DATE OF DEATH	**14.09.2015 @ 16.00hrs**
DATE OF POST MORTEM	**17.09.2015**
ADDRESS	**DPA Dagenham, Essex**
PLACE OF DEATH	**Abbey Green, Abbey Road, Barking, Essex**
PLACE OF EXAMINATION	**Queen's Hospital, Rom Valley Way, Romford, Essex**
CASE OFFICER	**T Steadman**
PATHOLOGIST	**Geraldine Soosay**

This report consists of 4 pages

CLINICAL DETAILS AND CIRCUMSTANCES

The deceased was found dead by the groundkeeper at Abbey Green, Abbey Road, Barking, Essex. He was found sitting up against the outer perimeter wall, his head slumped forward with mucous dripping from his nostrils. He had a clean syringe on his person, an empty packet of white powder in his wallet and small unlabelled bottle of clear liquid. There were lateral red marks across his chest with the position of his body which was slumped forward.

Subsequent information received confirmed that he had been referred to a Neurologist in 2014 with headaches and had been diagnosed with migraine. He was being treated with Simpatriptan, Propanolol and Metoclopromide.

EXTERNAL APPEARANCES

The body was that of a well nourished young adult Caucasian man (height 170cm, weight 56kg). There was mucous around his nostrils. There was minimal congestion of the anterior chest wall, and what appeared to be an injection site, with no surrounding bruising, in the right antecubital fossa. The sclerae of both eyes were congested. There was no jaundice. (While undressing the body, a tourniquet and alcohol wipes were identified in the pockets of his clothing).

INTERNAL EXAMINATION

Respiratory System

Upper respiratory tract: The larynx and hyoid bone were intact. The trachea contained frothy secretions.
Lungs: (Left 782g, Right 898g). Both lungs were congested and oedematous. There was no thromboembolus in pulmonary arteries and no evidence of neoplasia or infection. There was no pleural effusion.

Cardiovascular System

Heart weight: 352g
Description: There was, at most, 30% atheromatous narrowing of all three coronary arteries. There was no significant left ventricular hypertrophy, but both ventricles appeared mildly dilated. There were no abnormalities of the atria, or aortic valves. There was no evidence of ischaemia. The aorta and great vessels showed minimal atherosclerosis. The veins were normal.

Gastrointestinal System

Mouth and tongue: normal – there were no bite marks on the tongue.
Oesophagus: the oesophagus was mildly congested and contained a little vomitus.
Stomach: the stomach contained partly digested food. There was no powdery debris in the stomach contents. There was no evidence of ulceration or haemorrhage in the stomach and no neoplasia.
Intestines: there was no evidence of intestinal infarction, inflammation or neoplasia.
Liver: (1560g). The liver was mildly congested.
The gallbladder was normal as were the bile ducts and pancreas

Genito-urinary system

Kidneys: (left and right 318g). The kidneys were healthy.
Pelvis & ureters: normal.
Bladder: the bladder contained mildly turbid urine.
Prostate: normal.

Central Nervous System

Scalp & skull: normal- there was no bruises or lacerations of the scalp and there was no skull fracture.
Meninges: there was no extradural, subdural or subarachnoid haemorrhage.
The cerebral arteries showed minimal atheroma.
Brain (1488g): the brain was very mild oedematous. There was no evidence of a focal lesion, or of cerebral haemorrhage or neoplasia.

Reticulo-endothelial, endocrine and musculo-skeletal systems

Lymph nodes: normal.
Pituitary: not examined.
Thyroid: normal.
Adrenals: normal.
Spleen (162g): normal.

FURTHER INVESTIGATIONS

Histology

Small blocks of tissue from the heart, lungs, liver, adrenal gland, spleen and kidneys were retained for histological examination.

Histology of the heart showed no evidence of a myocarditis or of cardiomyopathy.

Sections of the lungs showed some decomposition, but also oedema and congestion. There was no infection, vasculitis or neoplasia.

Sections of the liver, spleen and kidneys were essentially within normal limits as was the section of the adrenal gland, which also showed some features of decomposition.

Toxicology

Venous blood, vitreous humor, gastric contents, urine and the packet of white powder found in the wallet of the deceased as well as a small unlabelled bottle of clear liquid, were forwarded to the Toxicology Laboratory at Imperial College for analysis.

This demonstrated ethanol in the venous blood at a level of 96 mg/100ml and in the urine at a level of 140 mg/100ml, just below the blood ethanol level associated with drunkenness. Gamma-hydroxybutyrate (GHB) was present in the venous blood at a level of 203 ug/ml and was also present in the urine. Methyl amphetamine was present in the stomach contents and urine, and in the venous blood at a level of 0.80 ug/ml, above the levels associated with recreational use but below the potentially fatal blood concentration of 10.0 ug/ml. A compound structurally similar to Methadone, possibly Clephedrone, was found in trace amounts in the blood. Propranolol was present in the stomach contents and urine but was not detected in the blood. Morphine was not detected in the venous blood.

Analysis of the clear fluid received in an unlabelled bottle showed the presence of Gamma-Hydroxybutyrate.

Analysis of the powder found in the packet in the wallet, belonging the deceased showed a compound structurally similar to Mephedrone, possibly Clephedrone. The latter is thought to be a new psycho-active substance.

Comment

At post mortem examination, and following histological examination, no natural cause of death has been identified, the main abnormalities being pulmonary oedema and congestion, and mild cerebral oedema.

However, toxicological examination has revealed a significant although not toxic level of ethanol in the venous blood and urine, as well as a combination of psycho-active substances included Gamma-Hydroxybutyrate, Methylamphetamine, and Mephedrone. At high levels, Gamma-Hydroxybutyrate has been described to cause seizures and respiratory depression. The compound found in trace amounts in the venous blood and in a packet in the deceased's wallet, thought to be Clephedrone, if similar to Mephedrone, may cause sympathetic effects such as hypertension, tachycardia and hypertension. Symptoms of Mephedrone toxicity have also included self limiting seizures. Methylamphetamine intoxication is associated with hypothermia, and cerebral oedema.

In view of the above, in my opinion, the cause of death in this case is a mixed drug and alcohol overdose.

CONCLUSIONS AND CAUSE OF DEATH

I Disease & Condition directly leading to death. (a) **Mixed drug and alcohol overdose.**

(b)

Antecedent causes. (c)

II Unrelated (contributory).

Signed ... **Signature**

G Soosay FRCPath, Queen's Hospital

Date 16th October 2015

GS/SV/15