WITNESS STATEMENT

(CJ Act 1967, s.9; MC Act 1980, ss.5A(3) (a) and 5B; MC Rules 1981, r.70)

Statement of: ALLAN ALEXANDER RICHARD

Age if under 18: OVER 18 (if over 18 insert 'over 18') Occupation: FORENSIC SCIENTIST

This statement (consisting of 6 page(s) each signed by me) is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence, I shall be liable to prosecution if I have wilfully stated anything which I know to be false or do not believe to be true.

Signed: A R Allan Date: 21/07/2003

Qualifications and Experience

I am a Bachelor of Science (Honours), a Doctor of Philosophy, a Chartered Chemist and a Fellow of the Royal Society of Chemistry. I was employed for over 20 years by the Home Office Forensic Science Service as a forensic scientist specialising in the analysis of body fluids and other materials for the presence of alcohol, drugs and poisons. While in the Forensic Science Service I was designated an Authorised Analyst under the provisions of Section 16 of the Road Traffic Offenders Act 1988. Since February 1998 I have been employed by Forensic Alliance Limited, Culham, Oxfordshire in a similar capacity, as a Forensic Toxicologist. I am currently designated the 'Merit Scientist' in the Toxicology Department of Forensic Alliance.

Receipt of Items

On the 19th July 2003 (19/07/2003), the following items were received at the laboratory from Thames Valley Police, Didcot:

Taken from the body of David Christopher Kelly at autopsy 18/7/03 (18/07/2003)

NCH/39	Urine - preserved
NCH/40	Urine
NCH/41	Bile
NCH/42	Bile - preserved

Signature Witnessed by:

TVP/1/0033

NCH/43	Heart blood
NCH/44	Blood - fluoride oxalate

(Page 1 Ends)

NCH/46	Blood - EDTA
NCH/47	Plain Blood
NCH/48	Left Lung
NCH/49	Contents of stomach
NCH/50	Liver (sample)
NCH/52	Vitreous humour - preserved
NCH/53	Vitreous humour

Circumstances

I understand that the body of David Christopher Kelly was found at approximately 08:30 (0830) hours on the 18th July 2003 (18/07/2003). He was last seen alive at 15:00 (1500) hours on the 17th July, when he left his home for a walk. Dr Hunt the Home Office Pathologist attended the scene and three empty packets of co-proxamol tablets (labelled DP) were found in his pockets. Only one tablet remained. Mr Kelly's wrist had been slashed. I have been informed that a bottle of what appeared to be water was found nearby and there was also some vomit present.

Purpose

I have been asked by the Thames Valley Police to analyse the post-mortem samples for the presence of alcohol, drugs, medicines, and volatile substances in order to determine if any of these substances were involved in Dr Kelly's death.

Nature of Examination

The blood and urine samples were analysed for the presence of alcohol, and a wide range of commonly available drugs, including: amphetamines; barbiturates; benzodiazepine drugs (the

group that contains diazepam and temazepam); benzoylecgonine (the metabolite of cocaine); cannabinoids (the constituents of cannabis); chemically basic drugs such as antidepressants, dextropropoxyphene and antihistamines amongst a wide range of other substances; methadone; methylamphetamine; 3,4-methylenedioxymethylamphetamine (MDMA, "Ecstasy")

(Page 2 Ends)

and related compounds; and opiate drugs such as morphine and heroin. The stomach contents was examined and analysed for paracetamol. The blood was also analysed for paracetamol and volatile substances such as organic solvents.

No other analyses were performed.

In carrying out this work I was assisted by other scientists and I have taken their contributions into account when preparing this statement. A full record of this work is available at the Laboratory, and statements can be prepared by the other scientists involved if sufficient notice is given.

This work was performed under Forensic Alliance Limited case reference number FAL-05969-03.

Results

The following substances were found in the blood, item NCH/47, at the stated concentrations:

paracetamol	97 micrograms per millilitre of blood
dextropropoxyphene	1.0 " "

Also present were dextropropoxyphene-related substances such as metabolites and breakdown products, and caffeine.

No alcohol was found in the blood item NCH/44 or urine item NCH/39. A trace of acetone was

found in this blood and also possibly in the urine. No other volatile substances were detected. None of the other substances listed under 'Nature of Examination' were detected.

The other screens on the urine, item NCH/40, were negative apart from the presence of caffeine and significant amounts of dextropropoxyphene and its metabolites and breakdown products.

(Page 3 Ends)

The stomach contents, item NCH/49, consisted of a brown, watery slurry containing approximately 67 mg of paracetamol. There was no unusual smell from the stomach contents and no obvious tablet or food material. However there were two pieces of what could be tablet film coating. In the light of these findings no further analyses were carried out on the stomach contents.

Commentary

Co-proxamol

Paracetamol, a mild non-opioid analgesic, and dextropropoxyphene, a mild opioid analgesic, are the active ingredients of co-proxamol tablets, a prescription-only preparation used for the treatment of mild-to-moderate pain. It is available in various generic preparations and also under the trade name 'Distalgesic'. Co-proxamol tablets consist of 325 milligrams (mg) of paracetamol and 32.5 mg of dextropropoxyphene.

In overdose, dextropropoxyphene causes central nervous system (CNS) depressant effects such as drowsiness, sedation and coma, respiratory depression, and heart failure. Paracetamol would not contribute to sedation but does produce delayed liver damage in overdose although this may not be relevant if the person has died due to the effects of dextropropoxyphene. The concentration of dextropropoxyphene in the blood is consistent with the ingestion of a large amount of co-proxamol and although it could represent a fatal overdose in certain circumstances, for example with other substances with CNS depressant effects such as alcohol, it is significantly lower than the average level in reported in fatal overdose cases, which was 2.8 micrograms per millilitre of blood in one survey and 4.7 micrograms per millilitre of blood in a

second survey. Cardiac arrhythmias are reported with acute toxicity.

Likewise, the paracetamol concentration is much higher than would be expected for therapeutic use but lower than would normally be expected in paracetamol fatalities if no other factors or drugs were involved.

(Page 4 Ends)

It is not possible with most drugs to estimate the precise number of tablets taken because of the complex nature of the distribution of the drugs in the body.
Co-proxamol should be prescribed with the warnings:

> *May cause drowsiness. If affected do not drive or operate machinery. Avoid alcoholic drink.*
>
> *Do not take more than 2 at any one time. Do not take more than 8 in 24 hours.*
>
> *Do not take with any other paracetamol products.*

The paracetamol in the stomach contents amount to 67 milligrams (mg). However because of the reported vomiting, some of the contents may have been lost and therefore some paracetamol (and dextropropoxyphene) may not have been available for absorption from the gastro-intestinal tract. Furthermore the concentration of paracetamol indicates that the equivalent of less than one co-proxamol tablet (containing 325 mg of paracetamol) remained in the stomach contents. Bearing in mind the blood results and the lack of visible tablet residue in the contents, apart from the two possible film-coatings, these indicate that it was likely that the bulk of the tablets ingested (excluding those that had been ejected in the vomit) had passed into his circulatory system. It may have been more than an hour or so prior to death when the bulk of the tablets had been ingested. The significant amount of dextropropoxyphene in the urine also supports ingestion some time previously. It seems very likely that Dr Kelly had died before all the paracetamol was absorbed and therefore higher levels may have been produced if death had not intervened and he had not vomited.

Signed: A R Allan
2000(1)

Signature Witnessed by:

TVP/1/0037

Other Substances

Caffeine would be due to consumption of tea, coffee or a cola and I attribute no further significance.

Acetone arises naturally in the body when someone has not eaten for a long time or is fasting and I attribute no further significance to its presence.

(Page 5 Ends)

Conclusions

1. The blood paracetamol and blood dextropropoxyphene levels indicated the consumption of a considerable co-proxamol overdose.

2. Death appeared to have intervened before all the paracetamol had been absorbed from the stomach.

3. Although the paracetamol and dextropropoxyphene could be present at potentially fatal levels, it is more likely in the absence of other CNS depressants such as alcohol, that these levels may not have produced rapidly fatal respiratory depression, however adverse cardiac effects may be significant.

4. Nothing else of significance was detected.

A R Allan