

PCA

POLICE COMPLAINTS AUTHORITY

Policing Acute Behavioural Disturbance

Revised Edition

March 2002

Policing Acute Behavioural Disturbance

Published by:

Police Complaints Authority
10 Complaints Authority
10 Great George Street
LONDON
SW1P 3AE

© Crown Copyright 2002

This material may be freely reproduced except for sale or advertising purposes.

ISBN 0-9533157-7-0

CONTENTS

	Page No.
1. Introduction	4
2. Police Management of Acute Behavioural Disturbance	7
3. Custody Officer to bring to the attention of treating Physicians	9
4. Pathologists – suggested guidelines	10
References	12
Glossary	13

INTRODUCTION

Some of the most distressing and high profile cases of deaths in police custody in recent years have been those where the detainee has died following police restraint, which has often been applied in response to an acute behavioural disturbance. In these tragic cases there may be no anatomical evidence found at post-mortem examination to establish why the person dies. Yet the culpability or otherwise of police officers involved in restraining the individual may hinge on the cause of death. If the phrase “restraint asphyxia” is used this will raise serious questions about the reasonableness of the force used. At its most extreme such a death may lead to a murder charge against a police officer.

The PCA, a body of lay Members and staff, relies entirely upon the evidence of pathologist, medical consultants, forensic medical examiners and the toxicology tests to determine the cause of death. However, time and again in these cases there is no agreement between the medical professionals. In a handful of cases, up to five opinions have been sought in an attempt to resolve the conflict. Instead of helping to resolve matters, the family become suspicious of the motives of the PCA member.

The aim of this paper is to set out some straightforward guidance for police officers, forensic medical examiners and pathologists which, if followed, would greatly assist in preventing some deaths and identifying the causes of others.

ACUTE BEHAVIOURAL DISTURBANCE

The individuals who are most at risk of sudden death during restraint appear to be those exhibiting an extreme form of acute behavioural disturbance which goes far beyond “distressed” state often encountered by the Police.

Presenting features

The main features of the extreme state are a period of agitation, excitability, perhaps paranoia, coupled with great strength, aggression and non-pain compliance. Sudden collapse and death may follow.

Causes

There are many possible causes. These include head injury, brain tumours, delirium from high temperature, heat exhaustion and endocrine disorders such as high blood sugar or low blood sugar and thyroid disease. Therapeutic (anti-psychotic) drugs and others (cocaine etc) can also precipitate these episodes.

It is not clear whether restraint does increase the likelihood of death of a detainee suffering an acute behavioural disturbance. Exertion, exhaustion and sheer act of resisting carry a sudden death rate.

Enlargement of the heart can be found as a result of natural disease (high blood pressure) or following abuse of drugs (cocaine). Such enlargement of the heart also increases the risk of sudden death from the development of abnormal cardiac rhythms. It is thought possible, though not yet proven, that cocaine can also affect the dopamine receptors and the kappa 2 receptors in the brain, thus increasing the risk level.

Signs post-mortem

Very high temperature at the time of death.

Petechiae around the eyes may be present. However they are not diagnostic and they have also been recorded in cases of individuals with heart failure, where there is no question of strangulation. (Karch) Petechiae can also occur as a result of resuscitative attempts. They may not be apparent until some time has elapsed after death. Photographic documentation of the absence of petechiae is just as important as documentation of their presence.

Neurochemical abnormalities in the brain – affecting dopamine transporters, kappa2 receptors, serotonin receptors. These can only be detected by specialised analysis in samples taken very quickly after death. Testes do not yet form part of the ‘standard’ post-mortem protocol

An enlarged heart, abnormalities in the ultra structure and in the blood vessels that supply the heart. A concentrically enlarged heart, which may be associated with cocaine use, has a relative under-supply of blood vessels to heart muscle at all times leading to a relative decrease in blood supply and the risk of the development of arrhythmias or to hypoxia.

If present, blood level of cocaine will be either low or moderate but will generally not be of a toxic level from overdose.

POSITIONAL ASPHYXIA

Definition

Death which results from a body position that interferes with the ability to breathe. Positional asphyxia is a recognised cause of death.

Why does positional asphyxia occur?

Compression of the trunk limits chest movement and may splint the diaphragm preventing the diaphragm moving up and down between the chest and the abdomen. These diaphragmatic movements are essential to the breathing process. We know that people who have their chest squeezed die because they are unable to breathe adequately. Such individuals die due to traumatic asphyxia. The Hillsborough tragedy was an example of this. Such deaths are more likely to occur in the context of either “cocaine induced

bizarre or frenzied behaviour,... or drugs and alcohol intoxication,...” (Petty and McDonough).

Some forms of police restraint may increase the risk of asphyxia through the degree of risk associated with different holds is far and clear. The position of a person’s body may also contribute to asphyxia though again the degree of risk associated with the position of the body remains uncertain. Nat Cary pointed out that “if you put someone with a beer belly on their front, you will squeeze their abdominal contents, such that their diaphragm is relatively ineffective.” (Cary p.31)

Further, the individual may hold their breath in an attempt to lift their body in order to be able to breathe. This is akin to a weight lifter tensing their abdominal muscles and holding their breath in order to lift a weight. Nat Cary’s research indicated that a sequence of breath holding, in a situation of high exertion could cause potentially dangerous heart rhythm disturbance.

Exhaustion may also play a part. There may have been a chase before the individual has been detained. In a struggle with six or more police officers that describe becoming exhausted, the individual will certainly be exhausted. Underlying ischemic heart disease, if present, could lead to a sudden cardiac death.

Post-mortem signs

Petechiae around the eyes. It is possible, however, to die in a crushing situation without there being many signs at autopsy (Cary p.30).

Nat Cary argued that there is likely to be no anatomical cause of death (Cary p.39).

POLICE MANAGEMENT OF ACUTE BEHAVIOURAL DISTURBANCE

We are not concerned here with the management of a detainee displaying a violent temper. Such an individual can be controlled using tried and tested police restraint techniques. Anyone displaying an acute behavioural disturbance should, however, be treated as a medical emergency. Such individuals may be dangerous to others or to themselves. Management is therefore difficult; officers are unlikely to know whether the patient has a cardio vascular problem or a psychiatric disorder or indeed whether the patient is abusing drugs. All these factors may increase the risk of death. The cause of the acute behavioural disturbance should not affect the response of officers.

Police officers are used to dealing with difficult, often abusive and disruptive individuals, they should be aware of the more extreme situations discussed in this guidance paper.

For example: if a member of the public is naked and acting strangely in a public place; or if they are talking incoherently and failing to respond to simple commands or to respond to questions intelligibly, the risk of sudden death may be very great.

GUIDANCE TO POLICE OFFICERS

- If possible contain rather than restrain;
- Summon an ambulance immediately;
- Make every effort to ensure transportation to hospital by ambulance, **not** in a police vehicle if possible (the public perception will be that the officers used force in the police vehicle). However, case should not be delayed waiting for an ambulance;
- Do not use CS spray. It may not subdue the individual and it could create needless liability;
- Do not hogtie victim (i.e. do not lie the person on their front and tie their hands and feet together behind their back). It is not an approved procedure and may cause death;
- If possible, ensure attendance of medical or paramedical personnel during transportation of an 'acute behavioural disturbance' patient;
- Always take such a patient direct to an A & E department of a hospital – NOT to a psychiatric unit unless specifically authorised;
- Clear protocols are needed as to how to restrain such an individual and training is essential;
- Notify doctor immediately of any death of a detainee with an acute behavioural disturbance.

Guidance when restraint is unavoidable

If the person has a knife or gun, taking them down to the prone position may be absolutely necessary. However, **“the prone position should be avoided**

if at all possible, and the period that someone is restrained in the prone position needs to be minimised.” (Cary p.38)

The amount of time that restraint is applied is as important as the form of restraint and the position of the detainee. Prolonged restraint and prolonged struggling will result in exhaustion, possible without subjective awareness of this, which can result in sudden death.

If possible, avoid the situations in which prolonged restraint and prolonged struggling, become necessary.

If the person has to be restrained, avoid pressing down on the trunk. Use the limbs. Binding the ankles and wrists will be considerably safer than kneeling on the back of someone’s chest.

CUSTODY OFFICER – BRING TO THE ATTENTION OF THE TREATING PHYSICIANS THE FOLLOWING CHECK LIST OF RECOMMENDED ACTIONS

TO ASSIST THE PATIENT

Ensure rapid transfer to hospital. Accompany the individual to hospital and 'hand over' formally to A & E staff.

Rapid tranquilisation should only be performed where equipment for cardio-pulmonary resuscitation is present and where staff are trained to undertake such activity.

To determine the cause of death

AUTOPSY NEEDS TO BE DONE WITHIN 12 HOURS OF DEATH.

The FME or other treating physician should tell the police and coroner of the importance of an early autopsy. The needs of the relatives to have a representative present will need to be taken into account, however.

The following tests will need to be undertaken if the cause of death is to be established in cases of agitation and restraint followed by sudden death.

Guidance to FME and other treating physicians

1. take aural or rectal temperature; ideally this should be recorded hourly so that you can extrapolate backwards. If there is a possibility of sexual abuse then take a swab first before taking a rectal temperature.
2. ensure ambient temperature is recorded is recorded by SOCO as early as possible.
3. record whether thyroid/cricoid pressure is used when trying to intubate.
4. record number of times intubation attempted and name who undertook the attempts.
5. record oxygen saturation (using pulse oximeter) during transportation

Suggested guidelines for pathological examination of
deaths associated with restraint and possible “excited delirium”
(Revised version 2008)

The following guidelines represent standard procedures however each case is unique and must be assessed by the pathologist involved who will then be able to give specific and final advice to H M Coroner and the police.

1. Ambient temperature of the scene should have been recorded as early as possible by a SOCO / CSI / IDO
2. Ideally core body temperature should also be taken at the scene by the pathologist but if the pathologist does not attend the scene then the core body temperature should be taken as early in post-mortem examination as practical.
3. If the body temperature has not been taken at the scene and if the post mortem will be unduly delayed then every effort should be made to take the body temperature before the body is placed in a refrigerator.
4. Post-mortem should be performed as speedily as possible after death and should not be delayed for more than 12 hours except in most unusual circumstances.
5. Mortuary facilities **MUST** be adequate (e.g. mortuary **MUST** have scales for body & organs) – consider moving body if full facilities not suitable.
6. Record core body temperature (again) at post mortem.
7. Specifically document clothing worn by deceased
8. Specifically document height and weight of body
9. Full external inspection of body surfaces with documentation of injuries, marks and abnormalities.
10. Collect routine external scientific samples: head hair, pubic hair, sexual swabs etc.
11. Collect any other specific samples dictated by events/scene/or examination: e.g. possible semen stains etc.
12. Collect additional external samples specifically for drug screening / quantification:
 - Head hair (pubic hair if no head hair) - for chronic drug use
 - Finger nails/toe nails - for chronic drug use
 - Nasal swabs - acute drug sniffing / snorting

Injection sites

- acute intravenous injection

13. Full internal examination with specific dissection of neck after allowing for drainage. Consider additional internal / subcutaneous examination of face, limbs and back to exclude or confirm injuries.
14. Documentation of all internal injuries, marks and abnormalities.
15. Collect any routine, internal scientific samples: blood in EDTA for identification, deep muscle for DNA etc.
16. Collect internal samples for toxicology:

blood fluoride	-	femoral veins
	-	(collect 20 ml samples - one from each leg if possible)
	-	fluoride preservative (final conc should be 2% w/v)
blood fluoride	-	right side of heart (if available)
	-	fluoride preservative (final conc should be 2% w/v)
urine fluoride	-	2 x 25mls (if available)
stomach contents	-	All
deep muscle	-	approx 20g
vitreous humour	-	(sample from each eye in separate fluoride bottles).

Ensure correct and complete labelling.

Cool as soon as possible.

DO NOT LEAVE AT ROOM TEMPERATURE

Store at 4° C unless frozen.

17. Take full histological sampling of all internal organs and consider specialist examination of heart and brain.

Retention of brain tissue for receptor analysis

18. There is a conflict between the taking of neuroreceptor samples of the brain and a full neuropathological examination. It is not possible to perform both tests.
19. Some authorities indicate that neuroreceptor analysis should be performed on deaths related to cocaine abuse and / or excited delirium. **These tests are not useful or necessary in every death associated with restraint.**

20. A decision regarding the retention of brain tissue for analysis of neuroreceptors at the expense of a full neuropathological examination should be made at the time of the discussions between the pathologist, the SIO and HM Coroner regarding all of the forensic aspects of the case. These decisions should take into account the circumstances of each case. A note should be kept of the decision made.

Prepared by Dr R T Shepherd Forensic Medicine Unit
St George's Hospital Medical School 0709 2211 091

REFERENCES

From the Pathology of Drug Abuse, 3rd Ed. S B Karch. PCA Seminar May 2000.

(Petty, C. and E. McDonough (1995) Positional asphyxia-sudden death.

Chan, Vilke et al. 1997 "Restraint position and positional asphyxia" Ann Emerg. Med. 30(5): 578-86

Chan, Vilke et al. 1998 "Reexamination of custody restraint position and positional asphyxia". Am J. Forensic Med. Pathol. 19(3): 201-5

Schmidt and Snowden 1999 "The effects of positional restraint on heart rate and oxygen saturation". J. Emerg. Med 17(5): 777-82

Elfawal 2000 "Sudden unexplained death syndrome" Med. Sci. Law 4(1): 45-51.

Positional Asphyxia, N Cary. PCA Seminar May 2000.

Excited Delirium and Positional Asphyxia, S Winbery, Ph.D.M.D. PCA seminar May 2000.

NB The Metropolitan Police have produced an excellent training video 'Preventing Deaths in Custody; which includes useful sections on restraint deaths.

GLOSSARY

Ambient temperature	Surrounding temperature (e.g. cell temperature)
Cricoid pressure	Pressure over the front of the windpipe
Hypoxia	Low oxygen
Ischemic heart disease	Heart disease due to poor blood supply to the heart
Petechiae	Minute areas of bleeding looking like very small red spots in the skin or eyes
Receptors in the brain including Dopamine, kappa2 and serotonin Receptors	Cells which receive messages from chemicals causing alterations in behaviour
Ultra structure	The heart structure as seen under the microscope