

Police Custody: Deaths and Medical Attention

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ABSTRACT: Information was obtained from all the county constabularies regarding deaths and medical attention given to those in police custody. It was presumed that this information covered all deaths in custody in Denmark during the period 1981 through 1985. There is no apparent increase in the absolute number of deaths during detention during the period 1969 through 1985. The number of deaths occurring in custody in relation to the annual number of persons incarcerated has fallen during the period 1955 through 1985. Simultaneously, a marked rise has occurred in the number of persons held in police custody. During the period 1981 through 1985, 7.9 persons were incarcerated per 1000 population per year. One homicide and nineteen other deaths occurred. The most frequent cause of death was asphyxiation as a result of aspiration of gastric contents during alcohol intoxication, drug poisoning, and intracranial hemorrhage. A physician had been consulted but had not diagnosed the seriousness of the condition in 42% of the deaths. All the deceased were men, and all suffered from the effects of social, psychiatric, and physical diseases. The lethality evaluated from hospitalized clients with the same type of life-threatening conditions was found to be 25%. A discussion is presented of the costs which will be incurred if a large group of those kept in police custody were admitted to hospital. Similarly, changes in the present arrangements are suggested that could ensure a greater certainty of avoiding deaths in detention.

KEYWORDS: criminalistics, police, death, detention, surveys

There are very few foreign studies regarding deaths and medical attention of persons who, as a result of suspected or presumed severe alcohol intoxication, have been held in custody because they represent a danger to others or to protect them from themselves when in a helpless condition [1-4].

In Denmark, these persons are incarcerated in jail cells. The guidelines with regard to the surveillance of such persons by the police while in their care are given in official regulations [5]. Medical attention is only provided when deemed necessary by the police. A few deaths occur each year of persons held in custody for this reason. They are often the subject of considerable newspaper comment as well as political attention. Thus, a White Paper considered the possibility of reducing the duty of the police in favor of increased medical and social care [6]. This opinion has been expressed in several studies of deaths while in detention [7-9] where, similarly, the quality of medical attention has been the subject of evaluation [10]. However, these investigations did not cover all such deaths.

My investigation comprises all deaths while in police custody in Denmark during the period 1981 through 1985. At the same time it elucidates the extent of medical care of those individuals detained in police custody. The investigation is confined to a discussion of the

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possibility of preventing such deaths, and does not presume to comment on the social-medical problems presented by this group of persons, nor on the special judicial problems which arise as a result of erroneous administrative detention.

Material

Police and postmortem examination reports were obtained through the Home Office from county police constabularies regarding all deaths occurring in police custody during the period 1 Jan. 1981 through 31 Dec. 1985. The deaths occurred while the persons were in police custody or immediately thereafter, following transfer from detention to hospital. It may be presumed that the investigation comprises all deaths during or directly following such detention.

The police reports contained information regarding both the period during which the persons were in custody and social information collected by questioning relatives and friends of the deceased.

All of the deceased were subjected to medicolegal autopsy at one of the Medicolegal Institutes of the Universities. A quantitative toxicological study was carried out in the majority of cases.

The individual police constabularies were also requested, via the Home Office, to provide information as to the number of persons held in custody each year, how often medical care was given, and whether this had caused the police any difficulties. Similarly, information was provided regarding the accommodation and the technical surveillance systems in the detention centers.

In a number of representative police forces, comprising 45% wherein the annual number of persons were held in custody, the police carried out for a period of one month a registration of all cases in which the police deemed medical care necessary for those held in custody. This occurred during October–November of 1986. In particular, information was presented as to why medical care was considered necessary and also the results of such treatment.

Further, information was available from the records of the National Board of Health, inasmuch as in some cases enquiries had been made as to whether medical errors had been made by physicians involved in providing care for those in custody.

The chi-square test has been used for calculation of probability, with a level of significance of 0.05.

Results

During the period under study, 192 000 persons were held in police custody, or 7.9 per 1000 population per year, without any significant variation between the individual years.

Exact information regarding the frequency of medical attention was provided in only 2.2% of the cases, while an estimate of the frequency was given in 41.4%. There was no definite dividing line between medical attention given for investigational purposes and that provided to determine whether treatment was required. The latter was estimated to be 2 to 5% of those cases in which police custody was necessary. In October–November of 1986, 1.5% of those taken into police custody were given medical attention to determine the necessity of treatment. Of these, approximately 20% were admitted to hospital, 15% were transported to their home, and the remainder were kept in detention.

Medical attention was carried out in various ways by the different police authorities. There was no example of the police having difficulties with the medical care given to those in custody.

There were no instances of suicide, but one of homicide during the period under study. In addition, there were nineteen natural or accidental deaths. Two deaths were considered to be natural (10.5%). Four deaths resulted from intracranial hemorrhage (21%), five from drug

intoxication in combination with alcohol (26%), and two from alcohol poisoning (10.5%), whereas hypothermia was presumably an important contributory cause in one case. The remaining six deaths were the result of asphyxia caused by aspiration of the gastric contents, secondary to alcohol intoxication (32%).

All of the deceased were men. Their average age was 40.2 years, with a variation of 24 to 62 years. Only 4 of the decedents had been employed (21%). The remainder were receiving social security payments. Only 1 did not have a history of alcohol abuse, while 2 had a known alcohol problem of less than 10 years duration. The remainder had alcohol histories of 10 years or more. In addition, 5 had known addiction to minor tranquilizers or opiates (25%), and of these, 2 were by injection (10.5%). In 14 cases (74%), histological or macroscopic signs of liver disease, either as fatty degeneration, steatosis, or cirrhosis were present at autopsy. The presence of minor psychiatric diseases was noted in more than one half. Chronic diseases, especially degenerative, were often present, as evaluated from the postmortem findings, even though these were not related to any risk group. Table 1 gives a survey of the 19 deaths.

In three cases the police considered that there was reason to give the officer responsible a reprimand because the person in custody had not been properly observed as stated in the police instructions (Patients 4, 5, and 17). Three cases were reported to the National Board of Health to determine whether the physician involved had made an error (Patients 3, 6, and 17). This was considered to have occurred in one case because the patient had not been kept under observation for a sufficiently long period of time in the emergency department to ascertain that his symptoms were the sole result of alcohol intoxication (Patient 6).

In no case could the technical surveillance systems of the cells be considered subject to criticism or to be a contributory cause of death. It was not possible to demonstrate any definite difference between the effectiveness of the various electronic auditory or television surveillance systems used in the various jails.

Discussion

The annual number of persons held in custody per 1000 population has almost doubled during the period 1981 through 1985, as compared to the investigation of Juul for the period 1955 through 1969 [7]. My investigation offers no explanation of this fact, nor is any explanation provided by other sources. During the period 1955 through 1969, Juul [7] found 34 deaths in custody, but without any certainty that his survey covered all such deaths. A minimum of 2.3 deaths occurred in custody per year, indicating that the frequency of death remained the same throughout the period under investigation.

During the period 1969 through 1984, Olsen [8] found 29 deaths in custody, in a well-defined geographical area of the country in which 60% of the cases of detention occur. Based on the study by Olsen and the present investigation, as well as the prerequisite that the frequency of death is similar throughout the entire period, it can be calculated that 4.2 deaths in custody occurred per year during the period 1969 through 1980.

There were 3.8 deaths (if the homicide case is included, the figure becomes 4.0) in custody per year during the period 1981 through 1985 in my investigation without any significant variation between the individual years. The calculated number of deaths during the period 1969 through 1980 and those demonstrated during the period 1981 through 1985 reveal a slight fall, but the difference is not significant.

Juul [7] found that 1 death occurred in detention per 8000 cases of incarceration, and in my investigation there was 1 per 10 000. As the number of deaths in Juul's investigation was a minimum figure, the number of deaths in detention has fallen in relation to the number of annual cases of persons being taken into police custody during the period 1955 through 1985.

TABLE 1—Survey of the 19 deaths.

Patient	Age	Marital Status	Income	Known Alcohol Abuse for More Than 10 Years	Reason for Incarceration	Medical Attention	Clinical Appearance on Incarceration (Evaluated by Police or Physician)	Number of Hours in Detention	Alcohol Concentration at Autopsy in g/%		Other Important Autopsy Findings	Cause of Death	Estimate of Lethality of Corresponding Conditions Treated in Hospital
									Blood	Urine			
1	57	divorced	social security	+	via accident dept.	+	Could hardly be contacted, normal respiration. Alko-meter from nose 0.16%, quiet	16	...	...	...	Brain hemorrhage due to increased blood pressure. Not traumatic.	100-95
2	61	divorced	social security	+	unruly behavior	+	Hardly able to walk without support, unintelligible speech	4	0.195	0.362	...	No definite cause found. Probably heart failure due to enlarged arteriosclerotic heart in connection with severe alcohol intoxication.	100-50
3	31	single	social security	+	via accident dept.	+	Could hardly be contacted, unable to stand, quiet	11	...	...	...	Hairline fracture on top of cranium.	0-10
4	37	single	social security	+	found in street	...	Could hardly stand, unintelligible speech	7	0.246	0.456	...	Acute epidural hematoma 200 mL withdrawn. Otherwise presumably no primary brain damage.	25-35
5	47	single	unskilled laborer in work	+	found in street	...	Unable to walk, could hardly be contacted, grunting	9	0.111	0.153	...	Acute epidural hematoma about 350 mL. Otherwise presumably no primary brain damage.	5-15

TABLE 1—(Continued).

Patient	Age	Marital Status	Income	Known Alcohol Abuse for More Than 10 Years	Reason for Incarceration	Medical Attention	Clinical Appearance on Incarceration (Evaluated by Police or Physician)	Number of Hours in Detention	Alcohol Concentration at Autopsy in g/%		Other Important Autopsy Findings	Estimate of Lethality of Corresponding Conditions Treated in Hospital
									Blood	Urine		
6	48	married	self-employed	...	via accident dept.	+	Complained of headache, vomited. BP 140/100, pulse 100, increasing restlessness and unquiet	3	0.038	...	...	100-95
7	24	single	unskilled laborer in work	...	arrested for theft	...	Affected speech, able to walk	6	0.143	...	+	5-20
8	29	married	social security	...	found in street	...	Affected speech, could walk with support	4	0.324	...	+	0-15
9	32	single	social security	+	found in street	...	Unintelligible speech, had to be carried	4	0.289	...	+	5-20
10	33	single	social security	+	via accident dept.	+	Comatose, unintelligible grunting, had to be carried	3	0.367	0.368	+	5-20
11	36	single	unskilled laborer in work	+	unruly behavior	+	Slightly affected speech, insecure gait	9	0.180	0.334	+	0-10
12	34	single	social security	+	found in	+	Clinically very drunk,	12	0.437	0.612	...	0-10

Several fractures at base of skull, acute subdural hematoma. Presumably severe primary brain damage.

Alcohol poisoning in combination with ketobemidone (higher than therapeutic dose).

Alcohol poisoning in combination with methaqualon (or Sovinal®) (therapeutic dose).

Alcohol poisoning in combination with morphine (lethal concentration) and ketobemidone (higher than therapeutic dose).

Alcohol poisoning in combination with methadone (lethal concentration).

Alcohol poisoning in combination with estazolam (slightly higher than therapeutic dose).

No definite cause.

13	62	single	social security	+	street	+	no visible lesions, equal pupils	3	...	...	0-10	must be presumed to be alcohol poisoning. No definite cause. Alcohol concentration presumably under 1. Considerable coronary artery arteriosclerosis. Probably heart failure due to hypothermia and alcohol.
14	24	single	social security	...	found in street	...	Could hardly walk, unintelligible speech	2	0.115	0.247	5-20	Asphyxia due to pulmonary aspiration of gastric contents. Alcohol poisoning in combination with amitriptylin and oxazepam (higher than therapeutic dose).
15	27	single	social security	+	found in street	...	Could hardly walk, unintelligible speech	2	0.210	0.396	0-10	Asphyxia due to pulmonary aspiration of gastric contents. Alcohol poisoning.
16	40	divorced	social security	+	unruly behavior	...	Affected speech, could walk with support	6	0.130	...	0-10	Asphyxia due to pulmonary aspiration of gastric contents. Alcohol poisoning.
17	42	divorced	social security	+	via accident dept.	+	Affected speech, walk with support	4	0.253	0.427	0-15	Asphyxia due to pulmonary aspiration of gastric contents. Alcohol poisoning.
18	48	divorced	social security	+	found in street	...	Unintelligible speech, walk with support	4	0.306	0.510	0-10	Asphyxia due to pulmonary aspiration of gastric contents. Alcohol poisoning.

TABLE I—(Continued).

Patient	Age	Marital Status	Income	Known Alcohol Abuse for More Than 10 Years	Reason for Incarceration	Medical Attention	Clinical Appearance on Incarceration (Evaluated by Police or Physician)	Number of Hours in Detention	Alcohol Concentration at Autopsy in g/%	Other Important Autopsy Findings	Estimate of Lethality of Corresponding Conditions Treated in Hospital
									Blood	Urine	
19	52	single	social security	+	found in street	...	Unintelligible speech, although talking continuously, walk with support	1	0.164	0.159	0-10
										...	Asphyxia due to pulmonary aspiration of gastric contents. Alcohol poisoning.

Forty-two percent of the prisoners who died during the period 1981 through 1985 had been seen by a physician before being incarcerated. This is a considerably lower figure than that found by Juul [7] and Olsen [8], who found that 59 and 52%, respectively, of those who died in detention had been seen by a physician before jailing. This difference is significant, and would indicate that the medical care of such prisoners is improving and resulting in better judgements as to actions to be taken.

An attempt can be made to estimate how effective the supervision by the police has been. Such supervision was carried out by the police only in 58% of the cases evaluated. The police themselves found that the surveillance instructions had not been correctly followed in 3 cases. Thus, 1 death occurred per 24 000 cases in which a person was held in custody, either as a result of an unpredictable incident or because the police misjudged the situation.

It can be estimated regarding supervision and examination by physicians that 5% of all those in police custody have been examined by a physician before being placed in the cells, either at the request of the police or because the prisoner was taken from the emergency department after medical observation. In one case, the National Board of Health reached the conclusion that a medical error had been made. Therefore, 1 death occurred per 1500 medically examined persons in police custody that could be attributed to an unpredictable incident. However, only 3 deaths were reported to the National Board of Health for review with regard to a possible medical error. From the above, and from the other limited evidence available, the possibility cannot be excluded that other examinations carried out by physicians were not up to an acceptable standard. Even in the 2 cases in which the National Board of Health found that the physician involved had not made an error of judgement, there is still the impression that the quality of the medical examination left much to be desired, and was not up to the standards wanted by the National Board of Health [10].

As only a very few deaths occurred in the present study, as earlier [7,8], there is no basis for determining whether a change has occurred in the frequency of the various causes of death. However, no suicides or deaths from accidental causes occurred while a person was in custody during the period 1981 through 1985. This would suggest that the segregation of the prisoners and the removal of objects likely to be used to commit suicide, as well as the organization of the cells, have been sound. On the other hand, a homicide occurred when several prisoners were incarcerated in the same cell owing to overcrowding. Asphyxiation as a result of aspiration of gastric contents, however, occurred more frequently in this study than previously [7,8]. Despite the fact that those in custody were placed in a fixed lateral recumbent position, as stated in the instructions, the police reports rarely stated whether due caution had been taken noting that the prisoner could change position; in the majority of deaths the deceased was found in the supine position.

Juul [7] was of the opinion that a diagnosis as to a "life-threatening condition" of the prisoner should have been made earlier in 80% of the deaths, but Olsen [8] thought this was possible in only 60%. However, no criteria are given in either investigation on whether this judgement could be made. The problem can be better elucidated from an estimate of the lethality based on corresponding groups of hospitalized patients with the same type of life-threatening conditions. The groups comprising those in custody will presumably belong, within the various life-threatening conditions, to those most threatened, because they suffer from the effects of social, psychiatric, and physical disabilities. Table 1 presents an estimate of the lethality of the corresponding conditions treated in hospital, as estimated from several studies [11-14].

From an optimistic point of view, three deaths per year could possibly have been avoided if admission to hospital had been decided upon instead of detention. In all probability it would merely require more hospital admissions than at present. It is difficult to determine, however, just how large this group would be. The police estimated in a study [9] that 74% of those in custody should ideally be under medical supervision, but no criteria were given as to how this estimate was reached. It is difficult to find reasonably certain and practical predic-

tors as to when medical attention is required. There is the possibility that the use of an Alkometer®, which is able to determine the alcohol level in blood rapidly, would be an expedient tool for determining which patients require hospitalization [15], as the clinical estimation of alcohol intoxication is of limited value [16].

It is, of course, difficult to estimate the costs of changing the practice used at present, as it is impossible to know whether this would entail savings in the other hospital services or in police costs.

An attempt can be made at estimating the costs for a countrywide arrangement employing a recently published study [9]. In this the prerequisite is made that the police shall still be responsible for roughly 26% of those detained, and that within the area covered by the study, 3 hospital beds be reserved, together with extra staff, for treatment of these persons. From the present study, it can be seen that this arrangement would cover a geographical area with 800 cases of custody per year. The expense on a countrywide basis for such an arrangement would amount to 17 million dollars per year. However, there is no guarantee that a reasonable standard can be maintained during peak periods, which may be expected under such circumstances [9,17]. If this is taken into account, then the expense of such an arrangement countrywide would increase to 34 million dollars per year to avoid approximately 3 deaths in custody per annum. However, it is obvious that such a plan would not only be of value in preventing these deaths but would also presumably improve the treatment of alcoholism [7]. The overall effect of such a plan, however, has not been calculated [7-9], nor can one know whether this plan would be able to prevent the large number of poisonings which occur outside detention and hospitals among this group of persons [18,19], or reduce the otherwise high mortality typical of this group [14,20-22].

Conclusion

My investigation was unable to document any well-defined single factor which is responsible for deaths in detention. The present arrangements for such prisoners could, in all probability, be improved. A central register could be established, thus permitting developments and improvements to be followed, providing additional information to physicians regarding this difficult problem. Further, encouragement of local agreements between the police and local physicians to improve existing arrangements, and the increased use of the Alkometer would also aid proper diagnostic and therapeutic regimens.

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