

## Risk of death after release from prison: a duty to warn

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Prisoners have been considered to be a vulnerable group, having high levels of morbidity on entry to prison<sup>1</sup> and raised indices of social and psychological dysfunction.<sup>2</sup> Mortality from suicide is higher among prisoners than in the general population.<sup>3</sup> This report concerns deaths of people after leaving prison.

### Methods and results

Geneva prison (for men and women) has 300 beds and serves as a remand prison and for short and medium term sentences. One fifth of the prisoners are dependent on opiates at entry. For our study we cross checked prison medical records with medicolegal necropsy reports in the Canton of Geneva.

During 1982-6, 102 sudden deaths among former prisoners were recorded, of which a large number occurred during the first year after release as compared with subsequent years (table). Mortality from sudden

Deaths from poisoning or from other causes stratified by length of survival after release from prison

	No of years since release from prison																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Deaths from poisoning	26	3	5	5	2	0	0	0	0	0	0	0	0	1	0	0	0
Deaths from other causes	13	6	6	5	7	5	2	2	3	2	0	1	4	3	0	0	1

deaths during the first year after release was estimated as 4.8 deaths/1000 person years, a rate over four times the age adjusted rate in the general population. Deaths by poisoning accounted for 26 of the 39 deaths (66.7%) during the first year compared with 16 of 63 deaths in subsequent years ( $\chi^2=16.9$ ;  $df=1$ ;  $p<0.01$ ). Compared with a sample of consecutive prison entries ex-prisoners dying within one year of release had a higher average number of prison sentences (4.7 v 1.7) and a higher incidence of drug dependence (62% v 20%).

The mortality among drug users during the first year after release was estimated as 15 deaths/1000 person

years. Thirteen of the 26 deaths by poisoning occurred during the first 45 days after release. This clustering represents a mortality for the period equivalent to about 60 deaths/1000 person years. All deaths in this initial period were due to poisoning by heroin or morphine or methadone or both; alcohol and benzodiazepines were also often found at necropsy. Methadone was considered to be the main cause of six deaths, all occurring within 14 days of release from prison.

### Comment

Our mortality data were limited geographically and by cause of death, so that deaths of ex-prisoners outside the canton or due to natural causes were not recorded. Had these data been available the observed mortality would have been higher. Despite this limitation, the striking feature was the high number of deaths from opiate poisoning during the first year after release from prison and especially during the early weeks after release. Loss of tolerance may have been a risk factor<sup>4</sup> together with coincidental misuse of other drugs. The role of methadone seemed to be especially important. Whether this was due to ignorance about the quantity of drug to use, the concomitant effect of other drugs, or whether methadone was more easily available than heroin is not known.

Release from prison must be considered a stressful event, especially for drug abusers who leave with decreased or absent tolerance but still with social and psychological problems, so that further drug use is highly likely.<sup>5</sup> There therefore seems to be a clear duty for prison medical staff to warn all drug abusers about to leave prison of the risk of overdose if they take doses which normally they could tolerate. This means teaching addicts to estimate the dose appropriate to their state of tolerance and about the risks entailed by using unfamiliar drugs and by multiple drug abuse.

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2 Coid J. How many psychiatric patients in prison? *Br J Psychiatry* 1984;145:78-86.

3 Backett SA. Suicide in Scottish prisons. *Br J Psychiatry* 1987;151:218-21.

4 Gardner R. Methadone misuse and death by overdosage. *Br J Addict* 1970;65:113-8.

5 Solivetti LM. Toxicomania as desocialization: some comments on treatment problems related to the socio-cultural aspects of drug abuse. In: Daga L. *Drugs and prison*. Palermo: Council of Europe, 1982:331-67.

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## The frozen hip: an underdiagnosed condition

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Capsulitis or frozen shoulder is a well recognised clinical disorder.<sup>1,2</sup> Surprisingly, it seems to be exclusive to the shoulder joint. The cases described suggest that an analogous disorder may also affect the hip and is probably underdiagnosed.

### Case reports

**Case 1**—A 55 year old man presented with a two month history of pain of spontaneous onset in the right hip. Examination showed a painful restriction of active and passive hip movements with rotation being virtually absent. Full blood count, erythrocyte sedimentation rate, serum uric acid concentration, the results of liver function tests, serum calcium concentration, and Rose Waaler and antinuclear factor were all normal, as was a plain radiograph of the hip.

An isotope bone scan (technetium <sup>99m</sup> diphosphonate) showed increased uptake around the right hip. The results of hip aspiration and arthrography were normal. Six months after onset the pain started to ease, and this was followed by a gradual return of movement over the next year.

**Case 2**—A 41 year old man with maturity onset diabetes presented with a six week history of pain of spontaneous onset in the right hip, worse at night and aggravated by bearing weight. His movements were not initially restricted, but one week later flexion was limited, with a pronounced restriction of rotation. The results of all blood tests, as in case 1, were normal. Plain radiograph and aspiration of the hip yielded normal results. An isotope bone scan showed a high uptake in the region of the femoral head and the trochanteric area. After three months pain at night had settled with some improvement in the range of movement. After eight months symptoms had settled and examination yielded normal results.

**Case 3**—A 41 year old woman presented with a four month history of gradually increasing hip pain. Examination showed only mild restriction of flexion and extension but pronounced limitation of rotation of the hip. Laboratory investigations and plain