Oesophageal cancer and distilleries in Scotland

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The incidence of oesophageal cancer in men is higher in Scotland than elsewhere in Europe, excepting only parts of France and Switzerland.1 Within Scotland some of the highest rates are in the main whisky distilling areas,2 and the hospital discharge rate for the disease in the period 1975-83 has been reported as being particularly high among residents of Speyside, where there are many distilleries.3 Hospital discharge diagnoses are often provisional and may include readmissions. We investigated mortality from oesophagus cancer in the main whisky distillery areas of Scotland.

Methods and results

An area of northern Scotland was defined that included 86 of the country’s 103 malt distilleries, comprising: Highland and Grampian regions (except Aberdeen, which has a large population but no distillery), the Argyll and Bute district of Strathclyde region, and the island areas of Orkney, Shetland, and Western Isles. The 203 relevant postcode sectors were then ranked by density of distilleries per 1000 total population. By accumulating the populations of the sectors ordered in this way, sectors could be grouped to represent different proportions of the study area’s population.

Details of deaths from oesophageal cancer by postcode sector in the period 1976-85 were provided by the registrar general’s office. Observed numbers were compared with those expected, calculated by applying Scottish age and sex specific mortality to the corresponding populations obtained from the small area statistics of the 1981 census.

From a ranking of postcode sectors in descending order of distilleries per 1000 population, heavy exposure groups were arbitrarily defined as those containing the highest 1%, the remainder of the highest 5%, and the remainder of the highest 10% of the study population. In men (but not women) there was a significant trend (p<0.05) of deaths from oesophageal cancer with increasing prevalence of distilleries (table). The increase was greatest (threefold) in the 1% of the study population in the area with the greatest prevalence of distilleries—eight postcode sectors in Speyside (in the districts of Moray and of Badenoch and Strathspey) and Islay (in Argyll and Bute district). Five of the 12 affected men in the highest 1% (“exposure”) groups were connected with the distillery trade (four distillery workers and one customs and excise officer).

When such workers were excluded, neither the excess in the “highest” 1% (7 observed, 3.97 expected; p=0.20), nor the trend across the categories was significant.

Comment

We confirm a high incidence of oesophageal cancer in Speyside, as implied by the observation that prompted this study.1 This area, together with the island of Islay, represents the area of Scotland with most distilleries, and here a significant threefold increase of deaths from oesophageal cancer was found. This was mainly due to cases in men whose work was connected with whisky distilling. There was no corresponding excess in women; also, few women work in distilleries. A non-significant excess among other men in the same areas might have been due to chance, to previous employment in distilleries, or simply to the popularity of a local product. The industry allows for the “ disappearance” of a small proportion of its production, but we have no relevant data on theft of whisky from distilleries, though there is extensive lore about this in Scotland. A relation between oesophageal cancer and alcohol consumption, often compounded by smoking, is well known; indeed, an excess associated with alcohol related occupations was among the first observations in cancer aetiology. This will, however, affect incidence in the general population only exceptionally, as in the present study, and then only in restricted areas.

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Unnecessary hospitalisation in a psychiatric rehabilitation unit

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Recent Scottish studies have claimed that 38% of “new chronic” patients and 32% of “old long stay” patients did not require inpatient care.1,2 We looked at a third group—admissions to a rehabilitation unit—to identify ways to reduce inpatient stay and to estimate the potential savings in inpatient time that could be achieved. The unit cares predominantly for patients with acute psychosis transferred from admission wards and patients with chronic psychosis admitted directly from the community.

Patients, methods, and results

All admissions to the psychiatric rehabilitation unit from July 1984 to July 1986 were included in the study. When the multidisciplinary rehabilitation team thought that a patient was ready for discharge or required transfer they decided on required accommodation. Accommodation was categorised by level of staffing into (in ascending order) low staffed housing, high staffed housing, hostel (rehabilitation, long stay or residential home for the elderly), or hospital ward (acute or long stay). When the required accommodation was not available the patient was offered the option of early discharge with the best support we could arrange. The Morningside rehabilitation status schedule was completed when the patient was ready for discharge. Follow up was until discharge or for one year, whichever was earlier.

Of the 102 admissions to the unit, 63 were men, 71 were under 55, and 73 were suffering from schizophrenia or paranoid psychosis; their illnesses were long standing and severe. Mean ratings on the Morningside rehabilitation status schedule at discharge or transfer were dependency 6-1, inactivity 4-8, isolation 4-7, and current symptoms 4-6.

Discharge was delayed in 48 of the 102 admissions, with 50% of the total time in the unit being unnecessary. Mean duration of delay and total delay for each category of required accommodation at discharge are shown in the table. Delays were greatest for rehabilitation hostel, residential home for the elderly, and high staffed housing. The commonest causes of delay were non-existence of the required resource (18 patients), lack of places in an existing resource (13), and underuse of an existing resource (12), with only five patients refusing an available resource.

Fifty one of the 63 patients requiring supported accommodation at discharge were not discharged to the required option. Most of these (35) went to an inadequate level of support. The remaining patients went to relatives rather than staffed housing (seven), to the rehabilitation hostel rather than long stay hostel (eight), or to high staffed housing (one).

Comment

In an earlier study we concluded that admissions to the rehabilitation ward were appropriate.1 The conclusion of the present study into duration of admissions is quite different—the audit identified considerable potential savings in the hospital stays of this group of patients. The patients in our study were predominantly community based and, unlike long stay patients, often had personal knowledge of the available options. Those who remained inappropriately hospitalised were there of their own informed choice.

In the government’s view, “the successful implementation of community care depends crucially on the availability of, and ease of access to, adequate and appropriate services in the community.” Our study highlighted major problems in both access and availability. Even after unnecessarily prolonged hospitalisation most of our patients were discharged to inappropriate accommodation.

The Dundee mental health unit, providing a comprehensive psychiatric service to its compact city catchment, is similar to many around the country and has relatively well developed community supported accommodation by Scottish standards (a rehabilitation hostel and staffed group homes). The extent to which it is possible to draw general conclusions from a single study is limited, but this study does suggest that rehabilitation units elsewhere should review their current practice to determine the extent of unnecessary hospitalisation and inadequately supported discharge. Unless priority is given to ensuring appropriately staffed accommodation on discharge it is unlikely that the cycle of recurrent inappropriately prolonged hospitalisation will be broken.

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