Tuberculous pericarditis

EDITOR,—The case of tuberculous pericarditis presented by C P Clifford and G J Davies[1] contained a misleading characterisation of the findings on admission as classic tamponade. Kussmaul's sign and an abnormal third heart sound are inconsistent with the physiology of classic tamponade.[2] Indeed, it is the virtual elimination of the rapid filling period necessary to produce a third heart sound that is a classic feature of tamponade. It is far more likely that this patient already had, under the tamponading fluid, an epicardial constriction with its typically mixed picture; a pulsus paradoxus with a 20 mm Hg fall in blood pressure is unusual while a third heart sound and Kussmaul's sign are the rule in constriction.[2] Although acute tuberculous pericarditis can progress rapidly to acute or subacute constriction, this was not such a case.[3,4]

Finally, I wish to argue against the term "pericardial knock." The abnormal early diastolic sound of constrictive pericarditis does not usually present an auscultatory knocking quality. More importantly, this description clouds concepts even if this form of the third heart sound did always "knock." The early diastolic sound of constrictive pericarditis is an especially early and often loud third heart sound with all necessary abnormal dynamics—accelerated early ventricular filling, with abrupt deceleration, into ventricles made abnormally stiff by pericardial scarring.[4]

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1 Clifford CP, Davies GJ. Tuberculous pericarditis with rapid progression to constriction. *BMJ* 1993;307:1052-4.
2 Spodick DH. The normal and diseased pericardium: current concepts of pericardial physiology, diagnosis and treatment. *J Am Coll Cardiol* 1983;1:240-51.
3 Spodick DH. Tuberculous pericarditis. *Arch Intern Med* 1956;98: 737-49.
4 Spodick DH. *Chronic and constrictive pericarditis.* New York, Grune and Stratton, 1964:143-7, 204-9.

Surgical castration for sex offenders

Mr K's wish granted

EDITOR,—Philip Joseph suggests that Mr K was merely bluffing in requesting that he should be castrated.[1] Unless there are two such cases under debate, according to the *Observer* the man has had his operation at a private clinic in the south of England.[2] If the report is reliable and refers to the same person, what will now be interesting is clinical follow up of his behaviour and subjective feelings.

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1 Joseph P. Surgical castration for sex offenders. *BMJ* 1993;307:1141. (30 October.)
2 Child abuser is castrated. *Observer* 1993 Oct 10.

Female castration controversy deserves same attention

EDITOR,—The article on whether a sexual offender should be allowed castration is interesting because of its lack of attention to the issue in relation to women.[1] Recent hospital activity data for North West Thames region suggest that 8-10% of women are castrated in Britain before the age of 55.[2] This is usually done as a prophylactic measure against ovarian cancer, although it is a controversial method of reducing the risk of ovarian cancer. Although ovarian cancer usually presents at an advanced stage, in the United Kingdom its incidence is 1 in 2500 women over the age of 55 and 1 in 3800 women over the age of 25.[3]

Prophylactic oophorectomy is usually done as part of the routine process of hysterectomy. We have undertaken a study of the outcomes of hysterectomy in 363 women, during which we examined the issue of oophorectomy. Altogether 161 of the women had their ovaries removed. Review of the case notes showed that 26 of the removed ovaries were reported as showing signs of inflammation or endometriosis and that the rest were either normal (n=80) or contained benign cysts (n=55). Published reports show that the effects of routine prophylactic oophorectomy and its costs and benefits are unclear.[4]

We do not wish to comment on whether the (male) offender discussed in the article should be allowed castration. However, some of the arguments advanced in favour of more conservative treatment in this case might usefully be considered in the current controversy surrounding routine oophorectomy as prophylaxis against ovarian cancer.

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1 Alexander M, Gunn J, Cook DAG, Taylor PJ, Finch J. Should a sexual offender be allowed surgical castration? *BMJ* 1993;307:790-3. (25 September.)
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3 Villard Macintosh L, Vessey M, Jones L. The effects of oral contraceptives and parity on ovarian cancer trends in women under 55 years of age. *Br J Obstet Gynaecol* 1989;96:783-8.
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Human rights in Israeli occupied territories

EDITOR,—Successive reports by Amnesty International and other human rights bodies about the torture of Palestinian detainees during interrogation have become more difficult to ignore within Israel. Exposure of the institutionalised collusion of doctors during military service has recently forced the Israeli Medical Association to take a stand on this issue.[1]

At an international conference, "Mental Health and the Challenge of Peace," held in Gaza in mid-September—the first of its kind in the occupied territories—evidence was produced of the after effects of these experiences for victims. The Gaza Community Mental Health Programme, hosts to the conference, recently studied 477 men within six months of release from imprisonment during the intifada (F Abu Hein *et al*, unpublished data). The commonest form of torture, experienced by 85% of subjects, was of methodical assaults by a team of men, each of whom had an assigned task. A particular focus was the genitals, and transient suffocation was also common. One interrogator often had the job of signalling to his colleagues when the prisoner was unconscious or had indicated that he was ready to talk. Ninety five per cent of convictions in military courts are based solely on a confession. Even after release, regular surveillance and night raids on their homes conveyed to these men that they were still not safe or free.

The study found that 26% of subjects had physical symptoms associated with their genitalia, 17% were depressed, and 40% had seven or more symptoms of post-traumatic stress disorder. Their hypervigilance and suspiciousness impinged on others, with around 40% reporting family or marital problems and social withdrawal. Moreover, the communities in which they must recover have been traumatised by six years of violence that spared no one; more than 20% of the 1000 people killed by the Israeli army in Gaza and the West Bank were children, and all social, economic, and academic life has been subject to the imperatives of military occupation. Gaza's shattered infrastructure must support one of the most densely populated zones in the world; three quarters of its 800 000 inhabitants are refugees.

The report's psychological findings are worrying, given that an estimated 80 000 Palestinian men have been imprisoned since 1987 and 13 000 are still held. However, it may be a good augury that the conference coincided with the signing of the peace accord in Washington, an event unforeseen here even two weeks earlier. Recognition of Palestinians' aspirations to shape their own future and the prospect of an end to an endemic conflict will give these men the chance to rebuild their society and thus themselves. Though some will need professional help, the definitive treatment for victims of torture is not psychotherapy but social justice.

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1 Siegel-Itzkovich J. Israeli doctors banned from role in interrogation. *BMJ* 1993;307:150-1. (17 July.)

Dietary nicotine

Won't mislead on passive smoking . . .

EDITOR,—Domino *et al* have argued that the plasma cotinine concentration in non-smokers, which is taken as an index of passive smoking, may be confounded by dietary nicotine intake from vegetables of the family *Solanaceae*.[1] They report that eggplant (aubergine) had the most nicotine of any *Solanaceae*. If their data are taken at face value, daily consumption of a 174 g serving of baked eggplant with gourmet tomato sauce made from purée yields a maximum dietary nicotine dose of 15 μg (table), assuming (dubiously) that nicotine does not evaporate during baking. The mean daily total intake of all vegetables, however, is about 207 g for adults in the United States.[2] A diet in which the daily average vegetable intake consists 84% by weight of eggplant parmigiana is unlikely for even the most fanatical gourmet, much less an average person, whose consumption of eggplant is

Nicotine dose and plasma cotinine concentration resulting from diet and passive smoking in typical and most exposed non-smokers

	Estimated nicotine dose (μg/day)*		Estimated plasma cotinine (nmol/l)†	
	Diet‡	Environmental tobacco smoke[6]	Diet§	Environmental tobacco smoke[6]
Typical	0·7‖	100	0·04	5·7
Most exposed	15·0¶	1000	0·86	57·0

*All dietary nicotine [4] and 70% of nicotine from passive smoking nicotine [5] is absorbed.
†100 μg nicotine absorbed daily yields 5·7 nmol cotinine/l plasma.[6]
‡Assuming that daily consumption of 10 g eggplant, 19·2 g tomato purée, 65·4 g tomatoes, and 239 g potatoes yields dietary nicotine intake of 1 μg.[1]
§Cotinine: 1 ng/ml=5·7 nmol/l.
‖Tomatoes and potatoes represent respectively 27 g and 75 g of the 207 g daily vegetable intake for adults,[3] or 49% of the total. The corresponding American average dietary nicotine dose is ((27×1/65·4)+(75×1/239))=0·7 μg/day.
¶Consuming 116 g eggplant with 58 g tomato purée daily yields a maximum dietary nicotine dose of ((116×1/10)+(58×1/19·2))=15 μg/day.

about 0·4% of total per capita consumption of fresh, bought vegetables.[3]

The maximum intake—achievable only if the dish was consumed raw daily—would contribute only 15% of the plasma cotinine concentration due to passive smoking by a typical non-smoker and 1·5% of the plasma cotinine concentration for the most exposed non-smokers (table). However, a typical non-smoker's actual average dietary nicotine intake produces only 0·7% of a typical non-smoker's cotinine dose from passive smoking. Dietary nicotine intake does not confound cotinine in body fluids as an index of passive smoking.

The opinions in this letter are my own.

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1 Domino ET, Horbach E, Demana T. The nicotine content of common vegetables. *N Engl J Med* 1993;**329**:437.
2 Table 1.3-1: vegetables, mean intakes per individual in a day, by sex and age, 1 day, 1987-88. *Nationwide food consumption survey, individual intake data (draft report)*. Hyattsville, MD: Department of Agriculture, Human Nutrition Information Service, 1992.
3 Table 26—fresh commercial vegetables: per capita consumption, 1970-1991 (1988 selected). In: Putman JJ, Allshouse JE, eds. *Food consumption, prices, and expenditures, 1970-1990*. Washington, DC: US Department of Agriculture, Economic Research Service, 1992. (Statistical bulletin No 840.)
4 Jenner P, Gorrod JW, Bennett AH. Absorption of nicotine-1_1-N-oxide and its reduction in the gastrointestinal tract in man. *Xenobiotica* 1979;3:341-9.
5 Iwasi A, Miyoji A, Kira S. Respiratory nicotine absorption in non-smoking females during passive smoking. *Int Arch Occup Environ Health* 1991;**63**:139-43.
6 Repace JL, Lowrey AH. An enforceable indoor air quality standard for environmental tobacco smoke in the workplace. *Risk Analysis* 1993;**13**:463-75.

. . . unless subjects eat 90 kg tomatoes a day

EDITOR,—The notion that nicotine from dietary sources might contribute sufficiently to measured cotinine concentrations in non-smokers as to make objective assessment of exposure to environmental tobacco smoke unreliable or impossible has been suggested more than once, most recently by Domino *et al*.[1] This report received widespread publicity in the media, including both the *BMJ* and the *Lancet*.[2,3] If the claim could be substantiated there would be important implications for investigations of the health effects of passive smoking, which have increasingly used cotinine as a quantitative marker of exposure.

Domino *et al* measured low concentrations of nicotine in some vegetables of the solanaceae family and estimated that the amount of nicotine (1 μg) taken in by someone eating 10 g of aubergine or 244 g of tomato would be similar to that breathed in by a non-smoker who spent three hours in a room lightly polluted by smoke. What is at issue is not the reported concentrations of nicotine in vegetables but their biological significance.

It is known that cotinine concentrations bear a linear relation to nicotine intake and that this remains true at the low levels of exposure characteristic of passive smoking.[4] At a rough approximation, a salivary cotinine concentration of 10 ng/ml corresponds to a nicotine intake of 1 mg. Thus, on Domino's figures, the 1 μg of nicotine derived from 244 g of tomatoes would be expected to generate a salivary cotinine concentration of some 10 pg/ml. This is below the detection limit of even the most sensitive assays.

I and others examined the determinants of salivary cotinine in 7 year old children in Edinburgh.[5] Geometric mean concentrations were 0·2 ng/ml in children from non-smoking households, 1·70 ng/ml where one smoker was present, and 3·71 ng/ml where there were two or more smokers. Similar findings have been reported by others. To explain this pattern of results, dietary nicotine would have to be perfectly confounded with parental smoking. Furthermore, it would be necessary to eat the equivalent of some 90 kg tomatoes a day to give rise to the cotinine concentrations seen in children where two or more family members smoked.

We were able to identify a number of predictors of cotinine concentrations in children from non-smoking homes. These included social class, crowding in the home, and season of the year. These effects could be readily interpreted in terms of passive smoking, but not as dietary effects. For example, higher exposures were seen in children from lower socioeconomic groups (consistent with exposure due to the generally higher levels of smoking among more deprived groups in the community), whereas higher intakes of nicotine containing vegetables would be expected in children from more advantaged backgrounds.

Thus, while dietary nicotine has curiosity value, it is essentially irrelevant for passive smoking. As a measure of passive smoking, cotinine has enabled more precise assessment of exposure and has considerably strengthened the evidence of adverse effects on health.

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1 Domino EF, Hornbach E, Demana T. The nicotine content of common vegetables. *N Engl J Med* 1993;**329**:437.
2 Minerva. *BMJ* 1993;**307**:692. (11 September.)
3 Ramsay S. Passive smoking or vegetables? *Lancet* 1993;**342**:487.
4 Curvall M, Kazemi Vala E, Enzell CR, Wahren J. Simulation and evaluation of nicotine intake during passive smoking: cotinine measurements in body fluids of nonsmokers given intravenous infusions of nicotine. *Clin Pharmacol Ther* 1990;47:42-9.
5 Jarvis MJ, Strachan DP, Feyerabend C. Determinants of passive smoking in children in Edinburgh, Scotland. *Am J Public Health* 1992;**82**:1225-9.

Care of mentally ill people in the community

EDITOR,—From a survey of psychiatrists, community psychiatric nurses, and approved social workers we concluded that the attitudes of mental health professionals towards some form of community supervision order were considerably more positive than expected.[1] Graham Thornicroft contests our conclusion,[2] citing the written and oral evidence to the House of Commons Select Committee on Health of 21 national organisations representing the whole range of agencies concerned.[3] It was precisely the discrepancy between the public utterances of national organisations and the private opinions expressed by mental health professionals that stimulated our survey. Our findings confirm that there is a more positive attitude (though clearly not total acceptance) among this group than their representatives may know.

Thornicroft also suggests that our data do not support our conclusions and that only psychiatrists favour a community supervision order without reservations. If those who declared themselves prepared to use a form of community supervision order are taken as including those with some reservations the figures rise from 71% to 96% for psychiatrists, from 25% to 69% for community psychiatric nurses, and from 32% to 72% for approved social workers. Apart from the reservations that we ranked in the table in our previous letter the reservation most commonly expressed by both community psychiatric nurses and approved social workers was that they did not know enough about possible proposals. Indeed, a number of community psychiatric nurses bemoaned the almost total absence of discussion of such an important issue within their profession.

Psychiatrists are clearly the group most positively disposed to community supervision orders. This should not be interpreted as professional expansionism. It may reflect the fact that their professional body has expended most effort in examining the issue and informing its members. Serious misunderstandings of the proposal expressed by many respondents (for example, that force would be used in patients' homes or that healthy patients would be compulsorily returned to hospital for breaches of the order) underline the need for wider discussion of the problems and the proposals.

It is essential that the wide ranging consultation required for such decisions should be as well informed as possible. Psychiatrists must ensure that others fully understand why they wish for some form of community supervision order.

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1 Burns T, Goddard K, Bale R. Mental health professionals favour community supervision orders. *BMJ* 1993;**307**:803. (25 September.)
2 Thornicroft G. Community supervision orders. *BMJ* 1993;**307**:1213. (6 November.)
3 House of Commons Select Committee on Health. *Community supervision orders*. Vols 1 and 2. London: HMSO, 1993.

How much alcohol is sensible?

EDITOR,—I could not have wished for a better illustration of the main point of my recent letter[1] (that is, that evidence of harm from alcohol consumption rapidly becomes received wisdom while evidence of benefit is disregarded) than that contained in Bruce Ritson and Jonathan Chick's letter.[2] A cursory mention of possible benefit is followed by a litany of harm culminating in a disappointing, but to me unsurprising, endorsement of the status quo.

Ritson and Chick remark that I forgot "social and physical problems associated with hazardous drinking." They both know me well enough to know that this is hardly likely. My concentration on cirrhosis was speculative because speculation is unavoidable in the absence of any published rationale for the royal colleges' guidelines.

I require no convincing that alcohol can be harmful. I have seen enough of the damage it can do in the course of my professional practice and during years of involvement with councils on alcohol. But nor do I need convincing that alcohol in due measure is beneficial in the widest sense. I do need convincing that the relation between the health costs and benefits is receiving sufficient balanced discussion. Times change, new evidence emerges, and open review of current guidelines is overdue.

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1 Moore DA. How much alcohol is sensible? *BMJ* 1993;**307**:684. (11 September.)
2 Ritson B, Chick C. Guidelines on sensible drinking are invaluable. *BMJ* 1993;**307**:1144-5. (30 October.)

Violence at work

EDITOR,—We welcome the Department of Health's announcement that general practitioners will soon be able to remove violent or abusive patients from their lists immediately[1] but wish to sound a note of caution. As Coid pointed out, people who are violent or difficult to manage do not disappear when one group ceases to deal with them.[2] Social services and accident and emergency