intervertebral joint space widens. Hence inter-
mittent or pulsating traction acts merely on
muscles, evoking the stretch reflex but not the
suction that determines the effect on the pro-
trusion.

The absolute contraindication to traction is
acute lumbago. 2 Though pain and signs cease
while the pull is maintained, the slightest
diminution in tension causes such agonising
twinges that it takes several hours to get the
patient off the couch, and some aggravation
lasts several days. I have also emphasised in
succeeding editions of my book that traction is
valueless (though not harmful, as in acute
lumbago) in sciatica with neurological deficit.
Improper conduct shows that the bulge has
become larger than the aperture whence it
emerged; reduction by manipulation or traction
is now impossible. This view was cor-
rrobated by a controlled trial in Norway. 3 As
for the "nipped synovial fringe" dear to those
who attribute back troubles to disorders of the
facet joints, the plain fact is that synovial
membrane is devoid of nerves and pain cannot
arise from it.

By all means let us have trials, as Dr B O
Scott suggests (31 January, p 284), but let them
be designed to establish new facts or to in-
vestigate findings as yet uncorroborated.

JAMES CYRIX

London W1

Cancer statistics

Sir,—May I reply to some of the criticisms
made by Professor M R Alderson and by
Dr L J Kinlen and Professor M P Vesey
(31 January, p 280) concerning my recent
paper (10 January, p 86).

Professor Alderson 1 has discussed some of
the problems of medical information systems,
but many difficulties still remain. Any alter-
atation in a national registration system, whether
it be for cancer or motor vehicle licences,
involves the technology of a work which is
justified only if the result promises to be
worth while. Collection of detailed data from
original case notes is not impossible and is
achieved at some large hospitals such as the
Royal Marsden Hospital and Institute of
Cancer Research, London, and the Christie
Hospital and Holt Radium Institute, Man-
chester. The difficulties are then those of data
abstraction, storage, and retrieval. Regional
registries often lack staff to perform any but
the most immediate tasks; they do not lack
enthusiasm.

Both Professor Alderson and Dr Kinlen
and Professor Vesey imply that I had
either overlooked or minimised the value of
epidemiological studies compared with that
of survival rate investigations. I can only reply
that perhaps a better title for my paper would
have been "Cancer treatment statistics," since
it was with this topic only that I was concerned
in that communication. Indeed, I have
recently used registry data for an epidemi-
ological study of incident age distribution for
cancer of the cervix in England and Wales,
1945-69, and I am also well aware of the
excellent epidemiological work which is
produced by Professor Doll's departments in
Oxford.

In reply to Mr F E Whitehead (24 January,
p 223) concerning SH3 returns I would like
to make three points. (1) Consultation statistics
(part 2, line 18) and treatment statistics (part
3, line E) are given for both new outpatients
(that is, numbers of persons) and outpatient
attendances (that is, numbers of visits). This
makes a total of four radiotherapy outpatient
statistics on each SH3 return, in addition to
any inpatient statistics. (2) My communication
is referred only to numbers of new outpatients,
whereas Mr Whitehead's comments were
mainly based on information relevant to outpatient
attendances. I would agree that attendance figures in parts 2 and 3 will almost
inevitably differ, but this is not the point in
question. Although the first attendance of a
cancer outpatient in a radiotherapy department
may be for treatment, the need having been
confirmed elsewhere, by the nature of most
treatment schedules the patient will be attend-
ning for treatment over a period of weeks,
and consultation with the medical staff of the
radiotherapy department is normally bound
to occur in the interim. In such cases, he will
count once as a new outpatient in part 2 of SH3,
and he will receive a series of consultation
attendances, and will also count once as a new
outpatient in part 3 of SH3, because he is
attending for a number of times for treatment.
(3) Mr Whitehead refers to both radiology
and radiotherapy departments, although only
radiotherapy statistics are under discussion.

JAMES CYRIX

London W1

2 Cyrix, J H. Tocolytic Therapeutics. Edinburgh Medicine, vol 1,

Changing patterns of cancer

Sir,—Perhaps the most interesting observation
in the changing pattern of bronchial carcinoma
(leading article, 29 January, p 301) is a fall in
the incidence of the disease in the younger
age groups in both sexes. The rates started
to fall in men up to the age of 49 in 1950 and
seemed to stabilise between 1969 and 1972 in
women under the age of 45. 5

Is it certain that this fall is entirely due to
changing smoking habits? The men reached
their present level of consumption in 1940, and
their annual consumption per head over the
age of 15 has remained reasonably steady
since then at just under 4000 cigarettes per
year; the consumption amongst the women is
still rising and reached 2560 by the end of
1972. 5 If a comparison is made between the
average consumption among women who
reached 45 ten years ago and those now
reaching that age it can be shown that the
latter had substantially higher cigarette
consumption per head than that of their elder
sisters, the difference being in the order of
3:2, but they have a falling incidence of bronchial carcinoma. Surely there must be
another factor at work.

J R B.REICHER

The London Chest Hospital,
London E2

1 Office of Population Censuses and Surveys, Registrar

Nucleus hospitals

Sir,—Your leading article (31 January, p 245) criticises the concept of nucleus hos-
pitals, suggesting that community hospitals are
going to be unable to act as supporting
units. You cannot seriously suggest that "all
patients admitted on medical grounds to
hospital nowadays require the kind of support
from laboratory and technical services that
can best be provided in one large unit rather
than half a dozen small ones." I presume that
the urban counterpart of those patients
cared for in existing rural community hospitals
are being admitted to the medical wards of
those hospitals since you imply that the latter
need such sophisticated technological support?
To suggest this suggests that a considerable
number of patients are receiving second-class
hospital care.

I agree that effective community hospitals
need rehabilitation services and good domi-
ciliary community care. Savings on large
district general hospitals that may now not be
needed should go some way towards providing
these.

A J CHAPMAN

Tewkesbury, Glos.

Psychiatric aspects of shoplifting

Sir,—I am prompted by Dr J Todd's com-
munication "Pharmacogenomic shoplifting?" (17
January, p 150) to advance some impressions
regarding shoplifting.

The practitioner, perhaps helpfully prompt-
bly and widely seeking information from
relatives or other workers, can usefully bear
in mind possible contributory or explanatory
factors, including the following: (1) The phar-
macogenetic factors mentioned, adding also
the "hang-over" effect of night sedation (and
indeed the organising effect of insomnia itself),
the possible side effects of anti-epileptic,
steroid, or antidepressive therapy, and the
confused phases during electric convulsion
therapy. (2) Schizophrenic patients—some
florid but others offending while being vague
or deluded. (3) Depressive states, in which
some endogenous cases may well reflect a
deliberate desire to be caught—that is, a
suicidal equivalent or appeal for help—and
other reactive cases with the inattentive patient
preoccupied with problems or distress—for
example, cases of recent bereavement.

Anxiety states with significantly impaired
concentration as one aspect of reduced ability
to cope normally. (5) Mentally handicapped
individuals in whom the lure of gliter and
possession is greater than their sadly ill-
developed sense of right and wrong. (6) Organic
cases with distraction through physical illness—for example, orthopaedic,
neurological, or mental symptoms, with discomfort and diminished physical
skill, or intracranial lesions, head injury, or
most frequently, a dementia or pseudo-
dementia with genuine confusion and impair-
ment of memory. (7) Abnormal brain influence—for example, trying to shop
with mentally handicapped or hyper-
kinetic youngsters. (8) The stress of crowded,
noisy stores compels some sensitive or
clumsy phobic patient to "escape", for-
getting to pay. (9) Often the combination of
several of the above factors which, when
considered together, could reasonably con-
stitute "a lack of intent." And finally (10)
genuine absent-mindedness which can beset any of us under pressure.

Shoppers are well advised not to take bags or commodious purses into stores, but rather easily-carried expandable net or plastic carriers to be loaded from baskets at the check-out point.

Thus in shoplifting cases and sometimes those where medical issues might reasonably be involved—for example, sexual offences, non-accidental injury to children, baby-stabbing, amniotic syndromes, automatism, alcoholism, compensation cases, etc. a deal can often be done, particularly where relevant medical notes in antenatal books are available. One can attempt to spare the individual and the family concerned often additional, unnecessary, and unjustifiable trauma, as this might have devastating and potentially avoidable effects upon the emotional, marital, social, and possibly employment conditions and future stability of those concerned.

MONTAGUE SEGAL
Department of Psychological Medicine,
Halifax General Hospital,
Halifax, West Yorks

Epilepsy

Sir,—I am writing in support of the letter from D. F. Gibberd (1 November, p 270) which contained several meritorious and significant criticisms relative to Dr F B Gibberd's article on the treatment of epilepsy (1 November, p 270). I am in complete agreement that Dr Gibberd's presentation of the minor motor epilepsies and their treatment is less than satisfactory and am gratified to note that Dr Addy recommends the ketogenic diet as a therapeutic regimen for this disorder. While Dr Addy limits its usage to "resistant and severe cases," we employ the ketogenic diet regimen as our therapeutic instrument of first choice for the control of minor motor seizures. Minor motor attacks are exceedingly refractory to the available anticonvulsants which, in our experience, have been essentially unrewarding. We have not obtained beneficial results with the standard antiepileptic agents—thiopental, ethosuximide, methaximide, pheno- barbitone, phenytoin, primidone, and troxidone—not with any other drugs by some physicians—for example, acetazolamide, chloretacrylamine, and pyridoxine. In addition, our experience with the use of the benzodiazepines (clonazepam, diazepam, nitrazepam) in the treatment of approximately 500 children with minor motor seizures indicates that they are of limited value in most cases. We achieved prolonged seizure control with these medicaments in only rare instances.

Our 40 years' experience with the use of the ketogenic diet regimen (4:1) in the treatment of minor motor seizures has consistently demonstrated it to be the most efficacious form of therapy for this type of epilepsy.1 2 During this period we have studied and treated approximately 1500 children with minor motor epilepsy. We prescribed the ketogenic diet regimen to 915 of these patients with the following results: seizures were controlled in 485 (53%); there was marked improvement in 238 (26%) and 192 (21%) did not respond to this regimen. An anticonvulsant medication had been given adequate trial in 732 of this group and 183 had received no previous treatment. In addition to its anticonvulsant properties, the ketogenic diet produces a marked tranquilising effect in some children, does not impair mental acuity as antiepileptic drugs frequently do, and is singularly free of toxicity. Details relative to our method of prescribing and monitoring diet regimens are presented in a recent publication.3

SAMUEL LIVINGSTON
Epilepsy Clinic,
Johns Hopkins Hospital,
Baltimore, Maryland


Cell-mediated immunity in patients with cystic fibrosis

Sir,—In their paper on this subject (17 January, p 120), Mr A R Gibbons and his colleagues make the following statement: "In those patients with cystic fibrosis (CF) who responded well to prednisolone treatment their initially depressed migration index (MI) returned to normal, while patients in whom impaired cell-mediated immunity plays a part in the pathogenesis of CF."

A low MI signifies sensitivity to an antigen. The expression of such sensitivity can be achieved only by functionally active immune competent cells. It is misleading to suggest that such a migration index represents an impairment of cell-mediated immunity (CMI). It is also to be noted that this index could reverse an impaired state of CMI. Rather the reverse is true, that steroids might cause impairment of CMI.

CONLETH FEIGHERY
ROBERT WOODS
Central Immunology Laboratory,
School of Pathology,
Trinity College,
Dublin

*We sent a copy of this letter to Mr Gibbons and his colleagues, whose reply is printed below.—Ed, BMJ

Mr. Gibbons and Mr Woods that a low migration index signifies sensitivity to an antigen which can be achieved only by functionally active immune competent cells. However, we must emphasise that the functions of active immune competent cells may or may not be impaired, depending upon the antigens to which such cells are sensitised. Since comparative cells from age-match controls and from blood donors did not show such sensitisation to those antigens to which the CF cells were sensitised, then there is no doubt that the normal function of these immune competent cells in the patients with CF is indeed impaired.

When one considers that steroids are known immunosuppressants it is certainly not surprising that treatment of the CF patients with prednisolone caused a decreased sensitivity of these sensitised CF cells to the antigens. Indeed, therapeutic concentrations of steroids were able to reduce the ability of sensitised spleen cells and of lymph-node cells to destroy target cells in vitro.1 Apart from this inhibition of sensitised cells by steroids, 90% of sensitised lymphocytes were killed when prednisolone 1 mg/l was present during the sensitisation phase.2 In addition it was observed in man that if cortisol or prednisolone was given two hours before abrading the skin, then there occurred a marked reduction of emigration of both mononuclear cells and polymorphs into the area, thus inhibiting the mobilisation of macrophages.3 We believe that the situation with regard to steroid therapy and inhibition of migration of leucocytes from CF patients is similar.

HyLton McFArLANE
ALAN R GIBBONS
Department of Medical Biochemistry
University of Manchester


Diagnosis of invasive aspergillosis

Sir,—Opportunist fungal infections in recipients of organ transplantation present many diagnostic difficulties. Indeed, diagnostic problems are beset by uncertainty in the definition of invasive aspergillosis, and by the absence of specific diagnostic tests for the disease.2

Until recently, the diagnosis of invasive aspergillosis was largely dependent on the demonstration of aspergillus in body tissues at necropsy. In many cases, however, the disease is of such a nature that it would be unethical and impractical to perform necropsy in order to make a diagnosis. Consequently, it is essential to have available both clinical and laboratory criteria for the diagnosis of this disease.

In a recent review of the clinical features of invasive aspergillosis,1 we have described the diagnostic criteria which are available in patients with the disease. We suggested that the diagnosis of invasive aspergillosis should be considered in patients with the following clinical features: fever, cough, dyspnoea, and frank pus in the sputum, and the demonstration of a fungus in the sputum or bronchial secretions. We also noted that the diagnosis of invasive aspergillosis is often difficult to establish, and that in many cases it is necessary to rely on the clinical features of the disease to make the diagnosis.

L O WHITE
M D RICHARDSON
R C WARREN

Department of Microbiology
University of Birmingham,
Birmingham B15 2TT
