approach to the management of patients with head injuries admitted to hospital. Routine investigation of selected groups of patients may lead to an earlier diagnosis of traumatic intracranial lesions. This need not necessarily lead to an increase in the number of patients undergoing operation but, we hope, in appropriate cases, to earlier and more successful surgery.

We gratefully acknowledge the collaboration of the division of neuroradiology, not only in the conduct of this study but in obtaining the original scans in the trying circumstances associated with the admission of acute head injuries. We also thank Professor Bryan Jennett for his interest and advice.

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Today's Treatment

Diseases of the alimentary system

Anorexia and loss of weight

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British Medical Journal, 1976, **2**, 1373-1375

Appetite is a pleasant sensation related to previous gustatory experiences, whereas hunger—less common in a society where eating three or four meals daily has become a social habit—is disagreeable and associated with hunger pangs sometimes caused by unrequited gastric peristalsis. Appetite bears no relation to the need of the body so the amount of food eaten by man, which depends on social and environmental factors, is usually greater than he needs. Although obese people are blamed for their unrestrained appetite, some experiments¹ suggest that they may be less influenced by their viscera than people of normal weight. Normally, eating behaviour correlates closely with gastric motility and whether the stomach is empty or full; but the feeling of satiety may be absent or take longer to develop in obese people—so there is no brake to limit the appetite. Perhaps, however, this is acquired rather than constitutional and the result of disregarding the sensation of satiety.

Appetite is rightly regarded as an index of health, hence inquiry about it is part of the routine of every case history. Yet surprisingly little is known about the physiology of appetite. Animal experiments suggest the presence of a feeding centre in the lateral hypothalamus and a satiety centre situated more medially, which, if stimulated by cold or hypoglycaemia, could activate the lateral centre. So the hypothalamus is thought to regulate eating, and clinical pointers to this are the alleged rare tumours of the pituitary gland or suprasellar region that cause the patient either to starve or to over-eat. Yet the psyche exerts great influence: for the appearance, sight, smell, colour, texture, and consistency of foods are such important external stimuli. Every dietitian knows this, and convalescent patients easily

lose their appetite if served meals that are too large or look uninteresting.

The stomach itself may play only a minor part. Pavlov described the conditioned reflex sparked off by the sight of food—salivation with increased gastric tone and secretion. Patients suffering from pernicious anaemia, however, who have neither gastric acid nor pepsin eat normally unless their tongue is sore from B₁₂ deficiency. Lesions of the stomach, even early cancer, do not diminish appetite. Gastritis, as seen endoscopically, is common in healthy people with normal appetite. Peptic ulcer does not cause anorexia but appetite may be depressed for fear of eating. Gastric operations such as partial gastrectomy, however, reduce appetite, probably because of an inability to eat large meals owing to the small size of the stomach. Fear inhibits motility, and sudden loss of gastric tone can be seen by the radiologist when bad news is given to someone during a barium meal; but this loss of tone may be the effect of the psyche and not the cause of anorexia, for one sees patients whose appetite is normal despite gastric hypotonia. Hypoglycaemia increases appetite, but there is no indication that hyperglycaemia depresses it—for example, the obese diabetic patient whose blood sugar is high still finds it difficult to diet.

Causes of anorexia

Anorexia, when it occurs alone, is usually psychogenic; but because it is an expected symptom of many conditions organic disease must be excluded. All types of fever depress appetite as do chronic inflammatory states like active rheumatoid arthritis or granulomata of the bowel such as ulcerative colitis or Crohn's disease. Abnormal metabolic states may present with anorexia. Uraemia, which also causes early morning sickness, is usually excluded by testing the urine. The apathy and anorexia of early Addison's disease may be caused by either hyponatraemia or hypercalcaemia. Hypercalcaemia can mimic neurosis by causing anorexia and depression; this occurs in sarcoidosis, hyperparathyroidism, carcinomatous deposits in the bone,

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excess vitamin D medication, and the milk-alkali syndrome—still occasionally seen in those who drink excess milk and take too much alkali.

Anorexia is seldom helpful in diagnosis or as a specific early symptom. It may herald acute hepatitis before jaundice appears. Mental change and loss of appetite may usher in carcinoma of the pancreas, though rarely. Patients with congestive cardiac failure are anorectic, and this is either due to gastric oedema, ascites, electrolyte changes from diuretics, or digoxin. Protein deficiency, as in kwashiorkor, causes anorexia and ultimately destroys all desire to eat. It is a late sign of carcinoma and may suggest secondary deposits in the liver.

DRUGS

Anorexia, nausea, and vomiting are mentioned on almost every data sheet issued by pharmaceutical firms as possible side effects of drugs. How drugs cause this, whether they act on the stomach or brain, is virtually unknown. Nevertheless, although gastrointestinal reactions account for up to 40% of all adverse drug reactions, only a few are responsible for most. Diagnosis of drug-induced anorexia is easy if this cause is kept in mind.

Drugs that are easily overlooked are alcohol and narcotics, for addicts conceal their addiction. In hospital, digoxin causes many patients to develop anorexia due to nausea; indeed some are wrongly investigated for gastrointestinal disease or malignancy because of this. The loss of appetite is insidious and the toxic effect of digoxin may be increased by hypokalaemia, especially in the elderly. The return of appetite when the drug is stopped or the dose reduced is striking. Amphetamine and other anorectic drugs are unlikely to be overlooked, unless, for example, amphetamine is being used by an addict. Cytotoxic drugs may add to the anorexia of advanced malignant disease. Diguanides such as phenformin or metformin cause anorexia, but this may help the obese diabetic patient to reduce weight.

Nowadays more and more patients are given an ever increasing number of drugs so the possibility of drugs either alone or in combination causing anorexia must be remembered.

DYSGEUSIA

Disturbances of taste commonly cause anorexia, and little is known about the pathogenesis of dysgeusia. It may afflict patients when recovering from operations so that, for example, a man who normally enjoys a gin and tonic finds it too unpleasant to swallow. Sometimes, though not necessarily so, this is due to loss of large amounts of fluid and electrolytes. One study suggested that the hypogeusia that occurs after severe burns may be attributed to a disturbance of trace metals such as zinc.² Drugs certainly may disturb taste: chelating agents like penicillamine may cause metallic or other sensations that prevent patients eating. Sometimes the sense of taste is disturbed from psychogenic reasons or because of age. Bizarre tastes may arise in pregnancy and cause a reduced calorie intake when the woman yearns for watercress or enjoys munching coal, some even preferring the black shiny type as it tastes more crisp and nutty.

PSYCHOGENIC CAUSES

Loss of appetite with fastidiousness about food is often part of the make-up of the neurotic patient, the extreme form being anorexia nervosa, when, without treatment, patients may starve themselves to death. Any simple worry like a forthcoming examination or marriage may cause anorexia; sometimes instant cure is possible when a patient, for example, with cancerophobia, is reassured.

Nervous dyspepsia is common; sometimes appetite may be satisfactory but feelings of fullness start after a few mouthfuls

and the meal has to be stopped. Eating is further restricted because of "allergy" to various foods but this usually lies in the psyche rather than in the gastric mucosa. An indication of the nervous origin is that even the sight or smell of food causes anorexia. Depressive states often cause anorexia and weight loss. Patients may have to be investigated fully before organic disease is excluded, but diagnosis is often needlessly delayed because of the fear of missing some untreatable disease; this also inhibits a positive attitude towards the illness. Other important pointers to psychogenic disease, apart from anorexia, are unexplained tiredness, loss of interest in sex, and insomnia.

Mild cases of anorexia nervosa may be treated and cured by a sympathetic general practitioner who finds time to talk and listen. Many will need to go into hospital. This provides discipline so that the amount of food consumed can be measured and secret routes of disposal (hiding it in the locker or self-induced vomiting in the lavatory) blocked. The patient may have to be confined to bed at the start, and rewards such as increased privileges are given for gaining weight. Feeding by tube or vein is rarely done today. No specific drug is available, and management may have to go on patiently over months or years. An altered and abnormal attitude to body size may account for the morbid fear of even reaching a normal weight, apart from becoming fat. Some have suggested that the cause is a faulty setting of the regulating mechanism of appetite in the hypothalamus—the opposite to obesity; or perhaps people just develop a habit of eating too much or too little and the stomach adjusts itself accordingly. Whatever the psychological explanation, the habit of eating properly must be regained in spite of the remarkable resolution to shun food—especially anything considered fattening, such as carbohydrates. A liquid diet to begin with may help as calorie content is concealed. Later, the aim will be to give solid food with a 3000-5000 daily calorie intake.

Measures to increase appetite

The presentation of food for a sick person may easily be overlooked in hospitals, partly because of an increasing technological approach to the patient. Formerly, doctors took more interest in this and had the time to do so, and matrons, especially in small hospitals, took a personal interest in the patient's food and in supervising the cooks and service to the wards.

Appetite is depressed if food looks uninteresting (see figure), is luke-warm and tasteless, and served in too large portions. There should be close rapport between the person serving the food and the patient, so that it can be tailored to the individual need; otherwise portions are served up to frail old ladies that are more suitable for tough healthy young men recovering from a minor operation. Unfortunately the tendency is more and more for a plated meal service to be dispensed from the main kitchen and then the catering staff do not know whom they are serving. Convenience foods such as packaged frozen vegetables may be

Unsuitable breakfast served inadvertently to woman with high temperature and anorexia: bacon, baked beans, cold toast without butter, and no tea or coffee.

dull. The present cut-backs in spending on food has affected some patients' appetite and brought complaints. Sometimes, however, these are due to the rigid conventional eating patterns commonly seen in certain social strata: good plain food is preferred to variations liked by the gourmet—for example, rice served occasionally instead of potato was criticised. Relatives should be encouraged to bring in delicacies that the National Health Service cannot reasonably provide. In any hospital the large-scale catering of an institution with food cooked in bulk is likely to compare unfavourably with food at home but by no means always so.

Fresh air, exercise, and cold are thought to stimulate appetite, and certainly many ate less during the summer heat wave. Relief of anxiety may improve appetite. This may explain the possible effect of aperitifs such as sherry; their action upon the psyche in causing relaxation is probably more important than stimulating a flow of gastric juice. Diazepam may overcome anorexia in phobic and anxiety states, and a short rest before rather than after a meal may help the tense person. Antidepressive drugs may restore appetite for the depressed.

The *British National Formulary* mentions no drugs that improve appetite—just those that depress it. Martindale's *Extra Pharmacopoeia* records prolintane hydrochloride and the antihistaminic drug cyproheptadine hydrochloride; one small drug trial suggested that the latter might be more than a placebo and increase weight by some means other than by inducing slight hypoglycaemia. *MIMS*³ lists 11 preparations under "tonics and appetite stimulants," usually concoctions containing a mixture of vitamins and substances varying from strychnine to manganese glycerophosphates flavoured with bitters such as gentian, orange, or cherry elixir—these placebos provide a colourful link with the apothecaries of bygone days. Bitters, commonly alcoholic extracts of herbs, were used before accurate diagnosis became possible to encourage appetite and assist eructation; indeed, Hippocrates prescribed wormwood for intestinal obstruction.⁴ Bitters are the basis of most tonics, and these may cost the NHS over £1m each year.⁵

Some drugs may stimulate appetite indirectly—for example, patients with anorexia nervosa have been treated by small doses of insulin in the past. Corticosteroids and corticotrophin induce a sense of well-being and so increase enjoyment of food. An elderly person suffering from polymyalgia rheumatica may improve dramatically with a small dose of prednisolone—for instance, 5 mg daily. Corticosteroids in larger doses may improve the lot of the patient dying of carcinoma and reduce temperature to normal. The Brompton Hospital mixture (listed in *BNF* under diamorphine and cocaine elixir, *BPC*) can relieve the pain and fear of advanced malignant disease so that food is again enjoyed.

Loss of weight

Loss of weight is usually caused by insufficient intake. This fact is sometimes difficult to uncover, and relatives may be more aware of it than the patient who hotly denies any change in eating habits; an example is bereavement. Physiological weight loss may occur at certain ages such as when a teenager leaves school to start an active job. The lay idea of good health is often that of a plump red person, a tribute to the wife's cooking. So loss of weight sometimes causes unnecessary anxiety and may even be judged by the look of the person rather than by measurement on scales.

Failure to eat may be due to causes other than anorexia, such as new dentures, painful gums, or sore tongue. Oesophageal obstruction, whether from achalasia or carcinoma, may be overlooked. Conversely, intake may be good but food is not absorbed. This happens in patients with malabsorption such as adult coeliac disease and is so common after gastric operations that patients should be warned to expect some weight loss. Obesity operations such as the 14 × 4 procedure when much of the small intestine is bypassed may be effective not because food

passes through without absorption but because appetite is depressed owing to the operation itself.⁶

Any systemic illness is likely to cause weight reduction, partly by depressed appetite and partly from increased catabolism. Thyrotoxicosis affects catabolism only. Textbooks list numerous disorders as presenting with weight loss, especially tuberculosis and malignant disease; but this may mislead for it is not an early sign of either. Patients admitted for investigations for loss of weight with few other symptoms but a high erythrocyte sedimentation rate (Westergren) are more often found to have a connective tissue disorder than carcinoma.

Treating loss of weight alone seldom arises as it corrects itself when the underlying disease is cured or controlled. The increased catabolism with negative nitrogen balance of illnesses like granulomatous disease of the bowel or connective tissue disorders calls for adequate intake of calories with increased protein, and proprietary supplements like Casilan or Complian may be needed. Androgenic steroids, which have an anabolic effect, may be used. Wasted patients—for example, those suffering from carcinoma of the oesophagus or stomach—may need preoperative feeding⁷ as this may help to counteract possible impaired wound healing and immunological defense mechanisms. When, as is often possible, this can be achieved by oral rather than intravenous feeding, the help of a dietitian in providing high calorie drinks and foods suited to the capricious appetite of these patients is invaluable.

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Annual influenza immunisation in residential schools is recommended but I am concerned at the prospect of administering foreign protein, egg and viral, annually for possibly 13 years to young people, particularly atopic children who superficially might seem to be in most need of it.

There is no official national recommendation for annual influenza immunisation in residential schools. The decision must be reviewed annually in the light of the efficacy of current vaccines, epidemic predictions, and attitudes within the school to influenza and immunisation. This winter many believe that vaccine should be given only to those at special risk, since there is so far no indication of any recent major antigenic change in the wild virus.

What are the complications of genital herpes during pregnancy?

Genital herpes is usually caused by infection with herpesvirus type 2 (HSV-2). If the fetus should become infected with it the outcome may be fatal, and necropsy may show encephalitis and nodular necrosis of the liver, spleen, lungs, and adrenal glands. Short of this the baby may show evidence of microcephaly and microphthalmos. If transplacental infection does occur it seems to be uncommon, and it is usually believed that the fetus is infected only after rupture of the membranes, when it may come into direct contact with the virus in the birth canal. It is therefore often advised that delivery should be by elective caesarean section when there is overt genital herpes. A firm policy on what to do when there is a subclinical infection, detected only by virological methods, cannot yet be given, but it has been suggested that it is the amount of HSV-2 in the maternal lesions that determines whether the newborn will be seriously affected or not.¹

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