tion, many children are born without a stable family background. Social scientists are demonstrating what traditional morality and commonsense suggest — namely that stable family relationships prevent morbidity, whether more dramatically from child neglect and abuse, or more insidiously from a lack of identity which can continue to succeeding generations. (D.H.)

Sources: Moilanen I, Rantakallio P. The single parent family and the child's mental health. *Soc Sci Med* 1988; **27**: 181-186. Cartwright A. Unintended pregnancies that lead to babies. *Soc Sci Med* 1988; **27**: 249-254.

A common aetiology for gastric and hypertensive diseases?

EPIDEMIOLOGICAL evidence has already shown a strong relationship between gastric cancer and cerebrovascular disease; both diseases are particularly frequent in countries such as Japan and Chile and relatively uncommon in the USA and Canada. In England where there is a high mortality from gastric cancer we also have a conspciuously high mortality from cerebrovascular disease. An interesting study from Wisconsin, but based on West German statistics, set out to test whether diseases related to hypertension, such as ischaemic heart disease, occur more frequently in patients with gastric cancer and gastric ulcer than would be expected by chance alone.

Date for over three million patients were collected from the German social security system; in Germany every employee holds mandatory health insurance, so that all episodes of acute illness and of rehabilitative therapy are well documented. Gastric cancer coincided significantly with ischaemic heart disease, cerebrovascular disease, chronic bronchitis and emphysema and liver cirrhosis. Gastric ulcer was associated with ischaemic heart disease, cirrhosis and rheumatoid arthritis, but not with any of the chronic lung diseases. Duodenal ulcer was significantly coincident with rheumatoid arthritis but not the lung diseases; in addition strong associations were found between ischaemic heart disease and cerebrovascular disease and between gastric and duodenal ulcer.

These results are of interest for a number of reasons. For one thing, they are at odds with a recent Japanese report suggesting that peptic ulcer disease is not associated with any specific disorders, although earlier work in the UK has associated duodenal ulcer with a number of other illnesses. In particular the coincidence of various disorders raises the question of whether these conditions might share a common aetiology. The risk factor proposed in this study is salt intake; it is suggested that increased dietary salt intake could damage the gastric mucosa and lead to gastritis and intestinal metaplasia, resulting in increased susceptibility to malignant transformation. It is known that some, but by no means all, patients with cerebrovascular disorders have salt-sensitive hypertension. The author also discusses the possibility of smoking as a causal factor but if it were the only or major risk factor, the association between gastric cancer and ischaemic heart disease would be much stronger than that with cerebrovascular disease, which it is not. Another possibility raised in this paper is that peptic ulcer and even gastric cancer might have a vascular basis. Extraordinarily, the role of alcohol intake as a possible explanatory or contributory factor for these associations is not mentioned at all. Nevertheless the study raises a number of interesting questions about the possibility of common causative factors for some of the most important diseases that we encounter.

(R.J.)

Source: Sonnenberg A. Concordant occurrence of gastric and hypertensive diseases. *Gastroenterology* 1988; **95**: 42-48.

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FILL THIS SPACE

Contributions to the Digest pages are welcome from all readers. These should be from recent papers in research journals which general practitioners might not normally read. Send to: The Editor, Journal of the Royal College of General Practitioners, 8 Queen Street, Edinburgh EH2 1JE. Please quote the full reference to the article (authors, title, journal, year, volume, page range).

INFECTIOUS DISEASES UPDATE

Delta hepatitis

The delta agent is a recently recognized defective RNA virus which can only cause infection in the presence of concurrent hepatitis B virus infection. Dual infection is increasingly being recognized and can be present in up to 50% of cases of acute hepatitis B. When this occurs a biphasic or prolonged illness is common. Risk groups for delta hepatitis are the same as for hepatitis B although delta infection is more common in drug misusers than in homosexuals. Delta hepatitis can also occur in asymptomatic hepatitis B virus carriers. A variety of serological tests are available for distinguishing these situations. It may be, although this is not yet proven, that chronic active hepatitis and cirrhosis are more common following dual infections.

Influenza

In 1986 there was a drift of influenza A H1N1 type worldwide and vaccines were adapted to include the new antigen (A/Singapore/6/86). Another A variant has now appeared, this time of the H3N2 type and antigens derived from this (A/Sichwan/2/87) are included in the current recommended vaccines for 1988/89. These changes in influenza type are examples of drift, that is, minor variations as opposed to shift which is the usual cause of larger pandemics. Fluvirin (Evans), Influvac Sub-unit (Duphar) and MFV-Ject (Merieux) are currently manufactured vaccines which include protection against these new variants. Older vaccines will of course give some protection against earlier and still current strains.

Tetanus

Three cases of tetanus (two in sportsmen, one in a gardener) occurring recently in Scotland remind us of the need for full immunization, especially of at risk groups. All these cases occurred in people who were born some years before primary childhood vaccination was offered as a routine in the UK towards the end of the 1950s. Two of these patients had received single toxoid doses following previous injuries but probably no primary course.

Vaccination sites

It has recently been shown that giving killed vaccines, such as those against hepatitis B and rabies, into the buttock may be unreliable and give a poor antibody response. This is probably because inoculations into fat make the vaccine less accessible to cells involved in the immune response. With live vaccines, which can be expected to spread through body tissues much more easily, this problem is unlikely to arise.

Suggestions for topics to include in future updates are welcomed and should be passed to the contributor, Dr E. Walker, Communicable Diseases (Scotland) Unit, Ruchill Hospital, Glasgow G20 9NB (041-946-7120), from whom further information about the current topics can be obtained.