for supplying drazine for the pilot trial.

REFERENCES

Imlah, N. W. (1963). *Amer. J. Psychiat.*, **119**, 109.
Leahy, M. R. *et al.* (1963). *Amer. J. Psychiat.*, **119**, 986.
O'Reilly, P. O. and Hughes, M. J. (1961). *Canad. med. Ass. J.*, **84**, 887.
Watts, C. A. H. (1957). *Brit. med. J.*, **1**, 4.
West, E. D. and Dally, P. J. (1959(a)). *Brit. med. J.*, **1**, 1491.
West, E. D. and Dally, P. J. (1959(b)). *Brit. med. J.*, **2**, 433.

CLINICAL NOTE

EPIDEMIC WINTER VOMITING IN A GENERAL PRACTICE

E. J. HOPKINS, M.B., Ch.B.
Liverpool

EPIDEMIC WINTER VOMITING IS BECOMING a well-defined clinical entity recognized as being a commonly occurring condition. The condition is characterized by vomiting, often of sudden onset, which settles within about 36 hours. It is probably due to a virus spread by droplet transmission. The incubation period is usually about two days, but can be as long as a week. A fuller description of the disease has been given previously (Hopkins 1959). However, as there seems some disagreement in the literature as to what constitutes epidemic winter vomiting it is worth while describing some of the cases which occurred in a Liverpool practice during a four-year period. Moreover, the records illustrate the epidemiology of the condition in the general population, whereas many papers on the subject dealt with the disease as it was seen in closed communities such as boarding schools.

The fact that it was possible to record at least 24 cases occurring in sporadic incidents over a period of four years tends to confirm that epidemic winter vomiting is a common endemic disease. The recorded cases are summarized in the appendix.

Clinical picture

The picture in the first six outbreaks conforms with that of epidemic winter vomiting epidemics described by several authors (Miller and Raven, 1936; Gray, 1939; Berry, 1952; Garland, 1952; Von Harnack, 1955; Wiener, 1956; Hopkins, 1958). The seventh

outbreak which has been included is atypical and may be a separate condition.

Vomiting is the main feature of this epidemic disease and it would appear to be a separate entity from outbreaks of vomiting associated with diarrhoea with which some writers have sought to identify it (Hargreaves, 1947). Moreover, it appears to be distinct from epidemic vomiting with meningeal involvement, outbreaks of which have been described by Haworth, *et al.* (1956); Kellner (1957); and Ash (1958).

Incidence and epidemiology

In addition to the cases described many single cases, which were probably winter vomiting, have been seen. Unfortunately, it is impossible to distinguish an isolated case from one of vomiting due to such conditions as staphylococcal and salmonella food-poisoning, dietetic indiscretion and cyclical vomiting.

As can be seen from the dates the family outbreaks did not occur at the same time, but were scattered over four years, and other probable cases of epidemic winter vomiting occurring in the same practice over the previous two years have been described elsewhere (Hopkins, 1958). Thus at least 31 cases were collected over a six-year period. Although this is a group practice the outbreaks described were encountered by myself, except for one of the episodes which affected the family of one of my partners. As it is probable that many cases of epidemic vomiting are not seen by a doctor this disease must be very common.

The Epidemic Observation Unit of the College of General Practitioners managed to collect approximately 1,300 cases from 106 general practitioners and other sources (*Research Newsletter* No. 8). Although all the cases recorded may not have been the same entity, this work again illustrates that the disease is widespread and common. The College of General Practitioners' study was instituted after many cases of winter vomiting had been seen in the autumn of 1954 and the large number of cases recorded could have been attributed to the timing of the investigation during an extensive and widely disseminated outbreak of the disease. However, the sporadic appearance of family outbreaks in this practice suggests that this disease is not confined to epidemics at infrequent intervals.

The fact that epidemic winter vomiting is common is also confirmed by the recording of 2,617 cases out of a population of 35,150 schoolchildren in East Sussex over a ten-month period in 1962 (Vital Statistics).

Summary

Twenty-four cases of winter vomiting were recorded in a Liverpool

practice over a four-year period. Diarrhoea was not a normal feature.

Epidemic winter vomiting is a common endemic disease in this country.

REFERENCES

Ash, I. (1958): *Brit. med. J.* **1**, 318.
Berry, R. B. (1952). *Med. Offr.*, **88**, 262.
Garland, A. (1952). *Med. Offr.*, **88**, 241.
Gray, J. D. (1939). *Brit. med. J.*, **1**, 209.
Hargreaves, E. R. (1947). *Brit. med. J.*, **1**, 720.
Harnack, G. A. von (1955). *Dtsch. med. Wschr.*, **16**, 639.
Haworth, J. C., Tyrell, D. A. J., Whitehead, J. E. M. (1956). *Lancet*, **2**, 1152.
Hopkins, E. J. (1958). *Med. Offr.*, **100**, 181.
—— (1959). *Practitioner* **182**, 358.
Miller, R. and Raven, M. (1936). *Brit. med. J.*, **1**, 1242.
Vital Statistics, *Brit. med. J.* (1962), **2**, 1337.
Watson, G. I. (1955). College of General Practitioners, *Research Newsletter*, No. 8.

APPENDIX

CASES OF EPIDEMIC WINTER VOMITING

Family A. (Six cases in December 1963)

1. 14 December 1963. Grandmother (living separately) vomitied n the night·
2. 20 December 1963. Grandchild of case 1, aged 15 months, and on a separate diet from the rest of the family, twice vomited profusely.
3. Helen, aged 10 (sister of case 2) vomited twice in the night of 22 December 1963.
4. William, aged 5 (brother of cases 2 and 3) vomited three times in the night of 22 December 1963.
5. 22 December 1963. Maud, aged 36 (mother of cases 2, 3 and 4) vomited twice in the night.
6. 26 December 1963. Barbara, aged 9½ (sister of cases 2, 3 and 4) developed nausea at about 7 p.m. and vomited approximately an hour later.

Family B. (Two cases in October 1962)

1. On 3 October 1962 Christine, aged 13 had a vomiting attack. She had a headache, but no abdominal pain or diarrhoea.
2. On 7 October 1963 at 1 a.m. Eric, the eight-year-old brother of case 1, suddenly vomited. He vomited several times during the night, but was fully recovered within 36 hours apart from a headache, which persisted until 9 October 1963. His temperature was 98.8° F. There was no abdominal pain or diarrhoea.

Family C. (Five cases in April 1960)

1. Gerard (11). Dizzy on the evening of 31 March 1960. He then developed nausea and pallor which lasted 24 hours.
2. Frank, a mentally defective child of 13, complained of nausea on 5 April 1960. He looked very pale and vomited once. No abdominal pain or diarrhoea.
3. Another sibling, a nine-month-old baby fed on milk, Farex and Heinz's tinned food only, was off its food and vomited twice on 5 April 1960. No diarrhoea.
4. The mother of cases 1, 2 and 3 developed intense nausea on the evening of 5 April 1960. (She was on stilboestrol.) No diarrhoea.
5. The father of this family developed nausea and pallor on 7 April 1960.

Family D. (Three cases in June 1959)

1. Susan (13) vomited about six times starting just before 12 p.m. 26 June 1959. Settled in 36 hours. Constipated.
2. Jean (17), her sister, vomited twice at about 8 a.m. 27 June 1959. Settled within 48 hours. No diarrhoea.
3. David (11). Brother of cases 1 and 2. Vomited about six times 29 June 1960. Abdominal discomfort. No diarrhoea. Settled in 8 hours.

Family E. (Four cases in October 1959)

1. Valerie (4). About 1 p.m. 21 October 1959. Vomited about four times. Abdominal pain. One loose motion in the night.
2. Raymond (7) 23 October 1959. Developed nausea and vomited twice. Abdominal discomfort. No tenderness. Temperature 98.2° F. Settled in 12 hours.
3. Father of cases 1 and 2. Vomited four times 23 October 1959. Abdominal discomfort. Constipation. Throbbing headache. Temperature 98.4° F.
4. Mother of cases 1 and 2. Vomited once on 26 October 1959. No diarrhoea or abdominal pain.

Family F. (Four cases in January 1964)

1. Maurice (5). Abdominal discomfort followed by vomiting (four times). Settled within 36 hours. Some looseness—but ' Andrews' salts ' had been given. 27 January 1964.
2. Mark (8). Brother of case 1. Vomited at 4 p.m. 29 January 1964.
3. Moira (6), another sibling, complained of abdominal discomfort on 30 January 1964 and was better within 24 hours.
4. The grandmother of cases 1, 2 and 3 had nausea on 31 January 1964 and 1 February 1964.

THE ADVANTAGES OF A CARRIAGE

. . . A ' town '-resident practitioner who visits his patients in gig, trap or brougham, has several advantages over a confrere who journeys on foot; not only is he enabled to see a greater number in a given time, and with much less fatigue to himself, but while proceeding from one to another, is better able to collect and concentrate his thoughts on his more serious cases; and, at the same time, reach the abode of his respective patients in a more fitting mental and physical state than would be the case, if he were simply to foot it through the glaring heat of summer, and the ever variable atmospheric conditions of winter, etc. Another distinct advantage, is that, on meeting acquaintances, he need only make a passing salute, or give a nod of recognition; whereas, if on foot, he might be compelled to stop, and lose valuable time in converse with convalescent patients, old friends, and others.

The Young Practitioner. JUKES DE STYRAP, M.K.Q.C.P. (1890). London, H. K. Lewis. P. 16.