virus enteritis described by Gordon (1954). Its more general recognition might protect some infants from the misapplication of antibacterial drugs, which appear to be ineffective in treatment. Our experience has been that sulphonamides often provoke vomiting, but seldom control the diarrhoea.

The summer incidence of diarrhoea, as represented by the numbers of stool specimens sent to the laboratory, was lower than that in winter. Epidemic steatorrhoea was responsible for many winter cases, and such cases were often part of a household outbreak of vomiting and diarrhoea. Only salmonellae and *E. coli* O 26 showed a summer increase in prevalence, perhaps representing food-borne infection, since these organisms and O 114 have been found in animal infections (Ørskov, 1951; Charter, 1956).

Bacillary dysentery accounted for only 11.1% of all cases of diarrhoea. This and the low incidence of salmonella infection corresponds with the experience of Boardman, Cassel, and Kahn (1955), who studied 200 African children, but contrasts with the view put by Felsen (1945) that most cases of diarrhoea were demonstrably due to shigellosis. During and after epidemics shigellae may predominate temporarily, but any aetiological picture must alter as circumstances change.

Summary

Faeces were examined from 1,135 children aged up to 4 years within five days of the onset of a diarrhoeal illness. Excess fat globules were found in 13.1% of these cases, and the significance of the finding is discussed. *Sh. sonnei* was found in 11.1%, *Salmonella* species in 3.2%, and serological types of *E. coli* in 8%. The incidence of the latter and of *Proteus* species was very much higher in those under the age of 2 years. Diarrhoea was more common in winter than in summer months, and affected more boys than girls.

We are grateful to the several laboratories which have carried out fat analyses for us. Much of the bacteriological technical work was carried out with great care and accuracy by Mr. J. H. Cowland and Miss M. Kinsley, to whom our thanks are due. We are grateful to Dr. Joan Taylor, Colonel H. Bensted, and Dr. G. S. Wilson for reading the manuscript and for helpful advice.

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Speaking on July 27 at Aston Hall Hospital, a mental deficiency hospital near Derby, the Minister of Health, Mr. R. H. TURTON, reviewed the problem presented by the long waiting-lists for beds in such hospitals. The position was far from satisfactory, he said. At the end of last year there were nearly 7,000 mentally deficient patients on local authorities' waiting-lists, more than half of them really urgent cases; but in spite of wars and financial difficulties there were 51,334 patients in mental deficiency hospitals, although some of these hospitals, like Aston Hall, were very overcrowded. The Government's programmes for building "that we have at present approved or are considering," continued Mr. Turton, would provide 5,400 new beds for mental defectives. Of these beds 4,400 came into the centrally financed programme announced by his predecessor two years ago. This was building work of essential national importance. "This was recognized," said Mr. Turton, "when the Government declared that nearly alone of all building programmes, this hospital building programme should suffer neither postponement nor cut."

A FAMILY HISTORY OF UTERINE AND GASTRO-INTESTINAL CANCER

BY

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Since Paget (1857) reported uterine cancer in a mother, daughter, and granddaughter, numerous pedigree charts showing familial occurrence of uterine cancer have been published. Atthill (1868) related that a woman of 28 years, her mother, and two sisters died of uterine cancer, and Cullen (1900) reported cancer of the uterine body in three sisters. Hutchinson (1901) details a family in which the grandmother, mother, two maternal aunts, and two sisters all died from uterine cancer.

Sir Halliday Croom (1912) recorded uterine cancer in identical twins. Both began to menstruate on the same day; both developed menorrhagia at the age of 30 years; both reached the menopause at 50. At 53 years one sister had the uterus removed; it contained a degenerating fibroid and a fundal carcinoma. Her sister died in the same year, and necropsy revealed a uterus with a degenerating fibroid and a carcinoma of the fundus.

More recently, Auvray (1927) reported cancer of the corpus uteri in a grandmother, mother, and daughter; and Purdie (1944) recorded that two sisters, one a multipara of 34 and the other a nullipara of 32 years, had cancer of the corpus, their mother having died from rectal cancer.

Warthin (1913, 1925) investigated a very comprehensive pedigree of "family G." The family consisted of 146 members, of whom 28 died from cancer. In females the cancers predominantly involved the uterus and in males the gastro-intestinal tract. The uterine cancers were all adenocarcinomas. When followed up in 1936, 174 members had reached the age of 25 years. There were 43 cancers in 41 members, and with two exceptions all involved the gastro-intestinal tract or uterus. The 23 uterine cancers were endometrial in origin, and no cancers of the cervix were found.

Cholewa (1932) published two family pedigrees showing a genetically determined localization of cancer. In one of the families the mother had cancer of the uterus and the father carcinoma of the stomach. Of the eight children, one of three sons died from gastric cancer and three of five daughters died from uterine cancer. In the other family the mother developed uterine cancer at the age of 70, unilateral breast cancer at 71, and breast cancer in the other side at 72, from which she died. Two sons were cancer-free, but of 10 daughters three have died from uterine cancer, one from ovarian cancer, and one from breast cancer.

History of "Family N"

In three generations there are 19 members of this family, and nine members have had confirmed cancers (see Family Tree). One of the four male members has had cancer and died, and of the 15 female members eight have had cancer and six have died: one had carcinoma of the rectum, one had carcinoma of the stomach, and four had carcinoma of the uterus (see Table). The two surviving females had multiple primary cancers and are still alive.

Case 9.—In November, 1949, when the patient was 48, total hysterectomy and bilateral salpingo-oophorectomy were performed and a uterus containing a small intramural fibroid and a columnar-cell papillary adenocarcinoma of the body was removed. The patient kept well until January, 1956, when a mass

developed in the right iliac fossa. Laparotomy revealed two carcinomas; a mucoid adenocarcinoma in the ascending colon and a poorly differentiated columnar-cell adenocarcinoma of the transverse colon. There were metastases in the adjacent lymph nodes, and both tumours had penetrated the muscle coat of the colon. A right hemicolectomy was performed.

Case 15.—In May, 1954, laparotomy, performed at the age of 46, revealed a carcinomatous ulcer of the caecum without involvement of mesenteric glands. The patient remained well until June, 1955, when an ovarian cyst was found filling the right half of the pelvis and causing lower abdominal pain. Right oophorectomy and subtotal hysterectomy were performed, and section of the cyst revealed an adenocarcinoma of the ovary with necrosis and suppuration. The uterus contained multiple fibroids and the endometrium was hyperplastic, but no evidence of malignancy was found.

In two members of "family N" (Cases 6 and 14) the cause of death could not be traced. In one member (Case 2) the cause of death was certified as "diverticulitis." The hospital records of this case are scanty, but it is known that the patient was admitted with a mass in the left iliac fossa. The uterus was noted to be retroverted but otherwise normal. The patient was treated with a succession of enemata and purgatives, and died five months later. The last note made before her death was "per rectum—nil." No post-mortem examination was performed. This case has been classified as a non-cancer death although the case history strongly suggests the presence of a colon carcinoma.

Discussion

Brøbeck (1949) traced the relatives of 90 cases of corporeal cancer, comparing them with the relatives of unselected non-cancer controls. He concluded that in relatives of patients with cancer of the corpus uteri the incidence of uterine or mammary cancer is 50% higher than among relatives of non-cancer controls. This increased incidence is mainly found in near relations (sisters and mothers). He was unable to find an increase in uterine cancer among the relations of 200 patients with cervical cancer. It would appear that a genetic factor operates in corporeal but not in cervical cancers, and of the five cases of uterine cancer in "family N" four were carcinomas of the uterine body, and in one patient (Case 7) a cervical biopsy showed a columnar-cell carcinoma.

Brøbeck (1949) further points out that pedigrees are of importance in the study of cancer only if information is available for all the members of the family group, together with sufficient registration of deaths due to cancer, preferably accompanied by reports of necropsies and microscopical examinations. In "family N" all nine cases of cancer were confirmed at operation or necropsy, and microscopy of the tumours was performed in six. In all the cases examined microscopically the tumour was an adenocarcinoma except Case 8, in which an anaplastic tumour was found. This

Details of "Family N"

Generation	No. in Chart	Sex	Year of Birth	Age at Death	Cancer Yes or No	Site	How Confirmed	Findings	Death Not Due to Cancer
1st	1	F	1854	76	Yes	Rectum	Necropsy	Carcinoma of rectum	—
2nd	2	F	1874	55	No	—	—	—	Diverticulitis
	3	F	1878	47	Yes	Stomach	Operation	Carcinoma of stomach	—
	4	M	1881	75	No	—	—	—	Influenza
	5	M	1884	60	Yes	Stomach	Operation	Carcinoma of stomach	—
3rd	6	F	?	?	?	—	—	—	—
	7	F	1899	48	Yes	Uterus	Biopsy	December, 1937: cervical biopsy—columnar-cell carcinoma. Treated with radium	—
	8	F	1901	41	..	..	Operation	December, 1940: subtotal hysterectomy for fibroids. Histology—anaplastic spheroidal-cell carcinoma of uterine body	—
	9	F	1901	Alive	..	..	..	November, 1949: Panhysterectomy for columnar-cell papillary adenocarcinoma of uterus	—
	10	M	1902	8 months	No	—	—	January, 1956: right hemicolectomy for two primary adenocarcinomas of ascending and transverse colon	Hydrocephalus
	11	M	1904	Alive	..	—	—	—	—
	12	F	1905	..	..	—	—	—	—
	13	F	1906	..	?	—	—	—	—
	14	F	1906	45	?	—	—	—	—
	15	F	1908	Alive	Yes	Caecum	Operation	May, 1954: right hemicolectomy for carcinomatous ulcer of caecum	—
						Ovary	..	June, 1955: right oophorectomy and subtotal hysterectomy for adenocarcinoma of ovary. Uterus contained fibroids and hyperplastic endometrium but no carcinoma	—
	16	F	1909	44	..	Uterus	..	April, 1952: subtotal hysterectomy for adenocarcinoma of uterus with secondary carcinoma of ovary	—
	17	F	1912	38	..	..	..	September, 1949: total hysterectomy for adenocarcinoma of uterus with secondary adenocarcinoma of ovary	—
	18	F	1913	Alive	No	—	—	October, 1953: total hysterectomy for fibroids—no carcinoma	—
	19	F	1913	..	..	—	—	—	—

predominance of adenocarcinoma in the studies of cancer pedigrees is emphasized by Schinz and Buschke (1935).

Murphy (1952) compared the incidence of cancer among the female relations of 201 women suffering from cancer of the uterus with that in 215 control families. He concluded that hereditary factors increase the frequency with which cancer appears in the uterus in the relations of uterine cancer cases but does not significantly predispose to cancer in other sites, thus confirming Brøbeck's (1949) findings.

Penrose *et al.* (1948) reached similar conclusions in a comprehensive investigation of the families of 510 cases of breast cancer. They found that breast cancer occurred with significantly increased frequency in the sisters and mothers of the breast-cancer cases. The rate of non-mammary malignant disease in these and other relations was not increased.

In "family N" the age at death is reduced in each generation, the average age at death of those members dying from cancer in each of the three generations so far studied being 76, 54, and 43 years. It should be noted, however, that cancer in the first two generations involved the gastro-intestinal tract, and in the third generation predominantly the uterus. This tendency for each succeeding generation to die from cancer at a progressively early age occurred in Warthin's (1925) "family G."

In many of the previously reported pedigrees, the male members have a tendency to gastro-intestinal tumours, whilst in the females cancer of the uterine body predominates; this occurred in "family N," the only male cancer death being due to carcinoma of the stomach (Case 5), and of the eight female members with cancer five have had primary cancer of the uterus.

Summary

Nine of the 19 members of a family in three generations ("family N") have had 12 confirmed primary cancers. No significant conclusion can be drawn from this observation, since cancer is bound to occur with exceptional frequency in a certain number of families simply because of its high incidence in the general population. It would, however, appear likely that a genetic influence in this family predisposes to uterine and gastro-intestinal cancer.

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The British Standards Institution announces the publication of two British Standards for sphygmomanometers. They relate to the mercury and to the aneroid type respectively. The standards were prepared on the basis of the joint experience of manufacturers and of the medical profession in relation to the factors leading to general technical efficiency. Provision is made for quality of materials and certain design features. British Standards 2743 and 2744 may be obtained from the Sales Branch of the British Standards Institution, 2, Park Street, W.1, price 3s.

TRENDELENBURG TILT AN OBSOLETE POSITION

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The Trendelenburg position, providing steep head-down inclination of the anaesthetized patient, was originally devised to assist the surgeon working in the pelvis; this it did by maintaining the small bowel within the upper abdomen through the aid of gravity. This extreme position came into use as a necessary aid at a time when anaesthesia produced a degree of relaxation less perfect than can now be achieved as a result of the introduction of relaxing agents, and when the nature of the patient's breathing in the deeper planes of anaesthesia was often jerky and rapid. To-day with the aid of relaxants and balanced anaesthesia it has become possible to prevent the encroachment of the upper abdominal contents upon the pelvic fields without moving the patient from the horizontal position; in most cases two abdominal packs are all that are required to hold back those viscera with mesenteric attachment. Nevertheless, Trendelenburg's position is still popular in gynaecological, urological, and proctological practice.

FIG. 1.—A vertical radiograph and outline drawing of the pelvis with the patient lying horizontally.