expected from the incidence of leukaemia, about one-third of the cases are in the age range 0-4.

The cell type was specified for 1,081 of the 1,671 cases. At ages 0-19 the summer excess was noticeable

TABLE II.—Percentage of Cases of Leukaemia by Season of Clinical Onset

Age	March-May	June-Aug.	Sept.-Nov.	Dec.-Feb.*	No. where Month of Clinical Onset Stated
Acute:					
0-4	25.9%	28.8%	20.6%	24.7%	559
5-9	21.3%	31.3%	23.4%	24.0%	367
10-14	25.5%	27.5%	23.1%	23.9%	251
15-19	26.4%	28.6%	22.5%	22.5%	262
Subacute and chronic:					
0-19	31.0%	26.0%	24.0%	19.0%	100

* Meteorological Office grouping of months.

in the lymphatic cases but not in the myeloid (Fig. 2) or in the monocytic.* It is present in the cases of unspecified cell type.

FIG. 2.—Month of clinical onset of leukaemia (excluding subacute and chronic cases). Stated to be lymphatic or myeloid. Patients aged 0-19. (Same scale as Fig. 1.)

DISCUSSION

No explanation of these variations in the onset of the symptoms of leukaemia with season can be offered. The leukaemias of different cell type are clinically very similar in children, and the apparent restriction of the seasonal variation to the lymphatic type suggests that the variations are in the genesis of the disease rather than in its progress or recognition. It is interesting that the recent possible "outbreaks" of leukaemia among schoolchildren in the Chicago area have been lymphatic in cell type (Heath, 1961; *Med. Wld News*, 1961). The study reported here was suggested by the evidence of Cridland (1961) that the clinical onset of Hodgkin's disease is most commonly in the winter, but leukaemia in young people seems to behave in a different way.

These studies are being extended to older age-groups. The distribution of the cases by small areas, and their possible grouping in time, will also be studied. We are analysing other cases collected under different administrative arrangements as a check on the possible production of artifacts by the working of the system

* The numbers of cases of lymphatic leukaemia aged 0-19 reported in 1946-59 were: January 38, February 33, March 39, April 40, May 46, June 60, July 44, August 51, September 32, October 44, November 30, December 37. This variation is not significant by the χ^2 test, but if the more powerful test for cyclic trend (Edwards, 1961) is used, $P < 0.01$. Apart from lymphatic leukaemia, this latter test gives similar results to the χ^2 test on the data reported here.

used for the cases now reported. Clinical studies need to be done both on the reliability of the dating of onset and to see whether the mode of onset is relevant to the present problem.

SUMMARY

Analysis of the dates of clinical onset of the cases of leukaemia in patients aged 0-19 reported to the National Cancer Registration Scheme of England and Wales has shown that more of the cases begin in the summer than in the winter, and that the incidence is at a peak in June. This variation is not restricted to any particular age-group within the range 0-19. The seasonal variation appears to be present in the lymphatic cases, but not in the myeloid.

ADDENDUM.—Since this report was written nearly all the cards which had been sent back to the hospitals for follow-up have been returned, and a few late notifications have been made. The distribution of all these additional cases by period of clinical onset is as follows: March-May, 29; June-August, 46; September-November, 29; December-February, 23.

The Registrar-General generously made the National Cancer Registration Scheme data available. I am most grateful to Professor J. N. Morris and my colleagues of the Social Medicine Research Unit for much help.

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Medical Memoranda

Preputial Calculi

Preputial calculi are extremely rare, and very few case reports are to be found in current literature. Two cases are reported here, one of which was a case of recurrent preputial calculi.

CASE REPORTS

Case 1.—An agricultural labourer aged 55 was brought to hospital at midnight in December, 1960, with acute urinary retention. Since childhood he had phimosis, and for several years had irritation at the penis and difficulty in passing urine. He had been aware of a swelling under the prepuce for a year. He had no children and some time ago had been divorced. He was in good health save for the above trouble. On examination his urinary bladder was full and tender. The preputial sac was very distended and the preputial opening was pin-point. Two foreign bodies and the glans penis could be felt separately in the preputial sac. The testes were drawn up near the symphysis pubis. When the preputial opening was pressed lightly with a fine probe urine began to ooze out. On circumcision two stones were removed from the preputial sac. The first was greyish white, oval, and faceted, having a maximum diameter of 2.5 cm. The second was also oval and faceted, the maximum diameter being 0.7 cm. The patient made an uneventful recovery.

Case 2.—An agriculturist aged 60 was referred for the treatment of preputial calculi in May, 1961. He had had

dribbling of urine for one month, a burning sensation on the penis for one year, and stones near the tip of his penis for three years. He had phimosis for a long time. About 20 years ago he had acute retention of urine, which was treated with some local application. A stone was discharged through an ulcer on the dorsum of the penis, and cure resulted. For three years he had felt stones in his preputial sac, and these gradually increased in size and number. For the past month he had been dribbling and

FIG. 1.—The two preputial calculi in Case 1.

experienced irritation of the penis. He had had two daughters, who had died young. His wife died 20 years ago. The preputial region was swollen, hard, and indurated. The preputial opening was very small and was pushed to the dorsum of the penis near the root of the glans. The prepuce in the lower part and in the front of the glans was bag-like and contained many stones and some urine. There was evidence of chronic infection in the prepuce. On circumcision five faceted stones of pale grey colour were recovered. The maximum diameter of the biggest was 2 cm. and that of the smallest was 1 cm. The urethral opening was normal. He recovered in 10 days.

Physico-chemical Properties of the Calculi.—The calculi on section revealed a nucleus around which concentric

FIG. 2.—Section of preputial calculus showing growth in concentric lamellae around a nucleus, which is not shown. (Uncrossed nicol. $\times 23$.)

FIG. 3.—Section of preputial calculus showing deposition of irregular, shapeless grains of white or grey colour along lamellae. (Crossed nicol. $\times 100$.)

lamellae had formed. The nucleus was hard and compact, whereas the lamellae could be crumbled relatively easily on pressure. The bigger stone (Fig. 1) weighed 3.48 g. and its density was 1.62 g./c.cm., whereas the smaller stone weighed 0.3 g. and its density was 1.88 g./c.cm. A thin section of the bigger stone was mounted on a glass slide and photomicrographs were taken. Fig. 2 shows concentric lamellae of the stone and Fig. 3 shows deposition of irregular shapeless grains of white or grey colour. The stone contained both organic and inorganic matter, and gave positive tests for calcium, magnesium, phosphate, carbonate, and urate.

COMMENT

Both patients had phimosis for a long time, probably since birth, and in both cases stones had been felt by the patient for some time but had been ignored, until the precipitating symptoms—acute retention of urine in Case 1 and dribbling of urine in Case 2—made them seek medical advice. Similar observations were made by Herman (1938) and by Ingraham (1935), who stated that preputial calculi almost invariably occur in adults and only in association with phimosis, and that the patients usually present with retention of urine. In the present cases the diagnosis was obvious on clinical examination: stones could be felt in the preputial sacs, and the treatment given was circumcision.

Case 2 was rather interesting. The patient had had retention of urine 20 years previously which had been relieved after passage of a stone from the dorsal aspect of the preputial swelling, possibly after ulceration and necrosis. Clarke's (1749) case was similar to this case. He described precisely the course which this condition takes if untreated.

However, in Case 2 preputial calculi re-formed after an apparent cure for a number of years. The calculi in both cases were formed in the preputial sac on a nucleus of inspissated smegma around which concentric lamellae were deposited from urinary salts. Tight phimosis allowed the accumulation of urine in the preputial sac, which favoured calculus formation.

We are grateful to Dr. S. A. Hussain, of Jehanabad, for kindly referring Case 2 to us for surgical treatment. Our thanks are due to Drs. S. P. Sinha, S. N. Ghosh, and R. C. Mishra, of the Patna University, for their help. We are also grateful to Mr. S. N. Roy for the photomicrographs.

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Hyperparathyroidism Revealed by Renal Biopsy

The microscopical findings of a percutaneous renal biopsy in a patient thought to have chronic nephritis suggested hyperparathyroidism, and this diagnosis was subsequently confirmed. We are not aware that this unusual sequence in the investigation of this condition has been previously recorded.

CASE REPORT

The patient, a man aged 43, developed dyspeptic symptoms in 1955, and these had continued intermittently.