dren over 7 who have life-long nocturnal enuresis, without symptoms of emotional disturbance. We encountered the following snags even then:

1. The child slept so heavily that the buzzer failed to wake him.
2. The child woke and lay screaming, apparently too frightened to move or turn off the bell, or became too frightened to use the bell after one or two tries.
3. The child was difficult about using the bell, disconnecting it before going to sleep or sabotaging it in some other way.
4. The parents were insufficiently interested to maintain the child's enthusiasm, and to ensure that he was using the bell properly and waking fully.

In most cases (1) was overcome by a long-acting amphetamine derivative given for a short period only: large doses may be needed, the margin was narrow between sleeplessness and no effect. (2) was sometimes overcome by a mild tranquillizer such as meprobamate 200-400 mg. In most cases (2) indicates an anxiety state which should be treated first. Fear of the dark may be one of the causes of nocturnal enuresis. (3) indicates treatment is needed for underlying emotional or personality disorder. Often we found (4) impossible to overcome. Parents of this kind have pretended the child was cured, and may be included in surveys as successes. Others have produced all kinds of arguments against the bell, apparently with the motive of avoiding the trouble entailed by its use and by having to visit the clinic. We have found the bell particularly unsuccessful in children from broken homes, in foster homes, and in children's homes unless the parent surrogate was unusually enthusiastic.

In onset enuresis, and in enuresis associated with other symptoms, we have not found the buzzer so effective; the following principles have guided our selection of treatment. If the precipitating cause is still present this should be tackled; we found anxiety to be the commonest, often relating to school, to a traumatic change of domicile, or to birth of a sibling. Anxious children did very well in group psychotherapy, supplemented in the early stages with meprobamate. Children who were enuretic day and night seldom responded to the buzzer. Frequency and unusually small bladder capacity (1½-2 oz. (42-57 ml.)) was often found, and had to be dealt with.

Symptoms of emotional disturbance did not necessarily contraindicate the buzzer. We encountered a group of dulled depressed enuretics, retarded at school and inhibited in their relationships, whose good response to the bell was accompanied by their becoming cheerful and confident.

No satisfactory explanations have emerged from the literature of why all children are not nocturnally enuretic, nor of why the buzzer cures some of those who are. Conditioning has been suggested, yet this does not account for the following observations:

- (a) Nocturnal enuresis is frequently associated with very heavy sleep.
- (b) Patients improving with the buzzer usually begin to sleep right through the night without waking to micturate, and their sleep becomes lighter. One could speculate on the role of the sleep-maintaining mechanism

of the reticular activating system. Is the habit of voiding urine and sleeping more deeply acquired in some cases to avoid the unpleasant breaking of sleep, or waking in the frightening dark, or in others to avoid the disturbing pain of stretching the bladder?

A final plea: could not some administrative measure be devised so that the buzzer can be prescribed by general practitioners and consultants? At the moment we seem dependent on the generosity of our colleagues in health departments.—I am, etc.,

C. J. WARDLE.

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Lincoln.

Serotonin and Gut Motility

SIR.—My attention has just been drawn to Dr. D. J. Fishlock and Mr. A. G. Parks's observations (September 14, p. 666) on the response of human colon and ileum to serotonin, which I have read with great interest. We in Kampala have been considering the possibility that the frequency of adult intussusception and volvulus indicates a general increase of gut motility in the local population associated with the high level of 5-hydroxytryptamine in the banana, which forms their staple diet.

Early this year I carried out the following procedure during laparotomy for resection of the sigmoid colon in three patients with recurrent volvulus. After isolation of the redundant loop and ligation of its blood supply, ½ ml. of a solution containing 10 µg./ml. of 5-hydroxytryptamine was either injected into an artery adjacent to the colon or applied direct to the surface. In no case could any local increase of activity be elicited. On the other hand, the same procedure applied to an ileal loop in another patient produced profound and prolonged contraction.

These observations, and those of your contributors, tend to strengthen the hypothesis that a banana diet (1 kg. per day is quite common) may lead to abnormal small-bowel activity resulting occasionally in adult "idiopathic" intussusception or to "double" volvulus, in which we believe a hyperactive loop of small bowel ties itself in a knot around the sigmoid colon.

In contrast, it seems that the mechanism of sigmoid volvulus must be quite different, and a study of these two common types of volvulus seen in this area shows a different pattern of sex, tribe, and behaviour.—I am, etc.,

J. J. SHEPHERD.

Department of Surgery,
Medical School,
Makerere University College,
Kampala, Uganda.

Emergency Suprapubic Catheterization

SIR.—I have read with interest the communication from Mr. J. McKenzie Buchanan (October 19, p. 1000), and may say that I have practised the method

described on several occasions where difficulty was experienced in per urethram relief due to obstruction in the prostatic urethra.

A method similar to that described by Mr. McKenzie Buchanan but using the MacGregor introducing needle will be found most useful and in my opinion an improvement on the procedure described. In the method the 2½-in. (6.3-cm.), 9-gauge introducer needle is fitted with the number 8 F.C.G. (French catheter gauge) nylon catheter, and, using a syringe with a Luer fitting mount as a handle, the needle and catheter are introduced into the distended bladder. The nylon catheter is pushed into the bladder, being guided along the needle-introducing track until 4 in. to 5 in. (10 to 13 cm.) lie within the distended organ. The introducing needle is then withdrawn leaving the catheter *in situ*.

It is conceivable that the manufacturers (Messrs. Chas. F. Thackray Limited, Old Medical School, Park Street, Leeds 1) could produce a heavier gauge introducer than 9 gauge, and that a wider bore catheter could then be used in the procedure. I may say, however, that in use I have found the available gauge 9 to be sufficient for the purpose.—I am, etc.,

Vom,
Northern Nigeria. LOUIS N. GLEESON.

Spontaneous Regression of Cancer

SIR.—With reference to the above subject it has been our lot to come across the following case since your annotation (September 21, p. 700).

The patient was a woman and was first seen in St. Giles's Hospital, Camberwell, in 1947 at the age of 58 years, when a subtotal gastrectomy was performed. Mr. G. Matheson kindly supplied the following notes:

"At operation the growth was found to be infiltrating the transverse mesocolon involving the middle colic entry. It was considered at operation that the patient would not stand both gastrectomy and colectomy, so a high partial gastrectomy with intercolic gastro-jejunostomy was carried out—section of stomach showed a diffuse infiltrating carcinoma (see Fig.). A further laparotomy was carried out on December 2,

1947, but the mass at the transverse colon was much larger than before and a biopsy only was taken, which showed the presence of anaplastic adenocarcinoma. The patient made a good recovery and was discharged home on December 20, 1947. She attended my follow-up clinic for some years and I last saw her about 10 years ago."

On October 2, 1963, the patient was admitted to New Cross Hospital in a confused senile state associated with hypertension, blood-pressure 220/130, and severe bronchopneumonia from which she died on October 7.

At necropsy there was an encysted empyema between the middle and lower lobes of the right lung, the lower lobe showing bronchopneumonia. The left lung was congested. The heart weighed 430 g. and the coronary arteries were atheromatous. The gastro-intestinal tract showed no evidence of growth. The omentum and mesentery appeared normal. No glands were present. Sections were examined from post-mortem tissues and no evidence of carcinoma was demonstrated.

We are grateful for the co-operation of Mr. Matheson, St. Giles's Hospital, Dr. K. McLean, New Cross Hospital, and the pathologist of Lambeth Hospital for the histological preparations of the original operations.

—We are, etc.,

J. M. FULLERTON.
R. D. HILL.

London S.E.14.

Cough Reflex in Animals

SIR,—At a meeting of the Section of Comparative Medicine of the Royal Society of Medicine dealing with respiratory distress in man and animals Mr. Robert Cook mentioned that the horse does not possess a cough reflex. As far as I am aware, this is the first time that this remarkable fact has been stated.¹ It is beyond doubt a most interesting and unexpected observation, and in the discussion which followed I suggested a possible explanation for the surprising absence in horses of this "watchdog" reflex which is indispensable in man.

In a later personal communication Mr. Cook added that only the cat has a cough reflex comparable with the human one. The cough reflex of the dog is somewhat weaker and that of the cow poor. In the healthy horse the laryngeal cough reflex is missing.

I would be most interested to hear from your readers of any observations regarding cough reflex in animals which they may have made.—I am, etc.,

A. B. ALEXANDER.

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St. James' Hospital,
London S.W.12.

REFERENCE

- ¹ Cook, W. R., and Roskdale, P. D., *Proc. roy. Soc. Med.*, 1963, 56, 972.

Unsuspected Chronic Glaucoma

SIR,—Whilst finding the article on the incidence of unsuspected chronic glaucoma in a population sample at Oxford

most interesting (November 16, p. 1237), there are two suggestions made therein with which I am not entirely happy—first, "Tonometry with a Schiötz tonometer is a simple test . . ." and second, "It would not be difficult for the general practitioner to perform routine tonometry . . . in the same way as beaumanometry."

Tonometry is not easy and even when carried out by experienced medical or nursing staff, as in eye hospitals, inaccurate readings are very common, especially in new patients; when both operator and patient are experienced, errors are much less common. In my view a general practitioner does not have the time to carry out repeated routine observations on each of his patients to ensure accuracy. The result of a casual approach to tonometry could well be a mass of readings between 25 mm. Hg and 32 mm. Hg, and out-patient clinics and glaucoma clinics would be swamped by normal patients.

Inaccuracy of recorded tensions cannot be proved simply by repeating the tonometry and getting a normal reading, for ocular tensions vary too much to allow this to be acceptable. Consequently, to dispose of each false reading a mass of work would be forced upon an already overburdened hospital service.

The present surveys being carried out may give some indication of the size and type of organization required for mass screening and the investigation of suspect cases. When such an organization is developed the general practitioner could send suspected cases, but even then it would be wiser to indicate only a provisional tonometer reading. It might well be that, just as in mass radiography, a higher percentage of positives would result from those cases referred by general practitioners—but an initial tonometer reading is not diagnostic, and may even be deceptive.—I am, etc.,

W. MARTIN WALKER.

Birmingham 15.

Service in Africa

SIR,—When I announced my intention of working in Africa for two years or so people who graduated with me remarked, "What a good idea. I wish I could do it, but . . .": they are married; they have to keep to recognized posts for special qualifications; they believe work here will reduce their standards and they will forget what they have learned; they have immediate prospects in practice; they have many reasons. But I cannot see why these reasons influence so many doctors, and why so few come to young countries like Uganda for a tour before they settle down.

The valuable clinical experience need not be emphasized—tropical diseases, complete clinical control of patients, operations, police post-mortem examinations—the list is endless. But in addition, and perhaps more important, the doctor gets a different, and broader, outlook to

life as a whole and to medicine in particular. He is jolted out of what could be called the Health Service rut, and inevitably takes a more critical view of medicine and medical practice both here and in the National Health Service. I have no direct intention of recruiting for these countries, but I believe that a tour in one of them benefits the doctor personally, the National Health Service if he returns to it, and, of course, the country itself.

It is generally recognized in medical circles that experienced doctors—usually senior registrars—can help in teaching posts to everyone's benefit. Is there any reason why there has been no such authoritative encouragement for doctors to work in general posts? Is there a feeling that the doctor will be worse off in years to come after such experience, or that the country needs his continual presence? Does the College of General Practitioners, for instance, think that a general practitioner will be able to give better, or worse, service to his patients after a tour abroad?—I am, etc.,

D. DALRYMPLE-SMITH.

Masaka, Uganda.

Consanguineous Marriage

SIR,—The medical conditions of the islanders of Tristan da Cunha described in the interesting articles by Mr. N. Samuels and Dr. J. A. Black and others (October 26, pp. 1013 and 1018) appear to be grouped into those due to their environment—such as a restricted diet and intestinal parasitism on the one hand and congenital physical and mental defects ascribed to interbreeding within a small isolated community. It is possible that some congenital abnormalities may be derived or intensified by a deficient nutrition independently of genetic determination, as many recent experiments on animals have shown.

The influence of consanguineous marriage on the offspring was discussed in a paper "On the Physical Effects of Consanguineous Marriages in the Royal Families of Ancient Egypt" by Sir Armand Ruffer in 1920. I had the privilege of knowing him well in Alexandria during the first world war as a man learned in the medical aspects of the historical records and the pathology of various mummies of ancient Egypt. There has been much discussion and disagreement on the effects on the offspring of the marriages of blood relations. Many, mostly geneticists, consider that the result of these unions become, sooner or later, physical and mental degenerates, but others, in field studies, are not convinced that this is true.

In the ancient world consanguineous marriage was very common, as, for example, amongst the earliest Hebrews, Persians, and especially Egyptians. The Egyptian gods set an example of incestuous union such as the marriage of Osiris with his sister Isis and Set with his sister Nephthys. Marriage of brother and sister of the royal dynasties of Egypt was so common as almost to be the rule, and yet, as Ruffer showed, some of the greatest kings and queens from eighteenth dynasty to Cleopatra VII, the last of the Ptolemaic line, were the offspring of incest.