consider a lurking neoplasm or indeed any lurking organic disorder as a patho-anatomical factor in a depressive illness occurring for the first time in a man over 70 years of age. However, he is over-stating his case when he suggests that the depression in the case presented should have alerted the clinicians, there being at least three other possible causes of a depressive illness in this instance.

Firstly, the patient was reported as being ostensibly depressed following the sudden accidental death of his grandson six months before. A prolonged bereavement reaction postmortem, he was noted to be depressed four years after his first consultation. During this time he had been receiving that well-known depressant of both blood pressure and mood alpha-methyldopa. Thirdly, over the following months the patient had almost continuous abdominal pain unrelieved by medical treatment. He had numerous and repeated investigations, including biopsies and endoscopies. At one time he was treated with a haematemesis and developing a urinary tract infection he went into urinary retention as a result of his antidepressant medication. After all he had chest pain, dyspnoea, haematemesis, and haemoptysis. It is then said that "during the next 10 days depression was the most striking feature." Might I venture to suggest that any other mood would have been highly unusual considering what he had endured?

Finally, while Dr. Sircus and I agree on the importance of being suspicious of such a depression I note that in Mr. A. N. Smith’s table of 11 symptoms occurring in carcinoma of the pancreas nowhere is there any mention of depression—I am, etc.,

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Protection of Cytomegalovirus-infected Cells by IgG Antibody

SIR,—You recently published a letter (12 May, p. 364) from this laboratory recording the immunological destruction in vitro of cytomegalovirus (C.M.V.)-infected cells. We have recently repeated these experiments with the same ground squirrel cell cultures infected with C.M.V. and by means of the same laboratory techniques, but using in addition pooled ground squirrel sera reactive in the complement fixation test and also its IgG fraction separated by zonal (etha-

cridine) treatment1 and checked by immunodiffusion tests performed with anti-ground-
squirrel-protein serum and the extracts prepared from infected cells. The results were similar to those obtained in the first experiment. Zonal separation of the IgG class do not lyse C.M.V. inclusion cells in the presence of fresh guinea-pig serum referred to as complement (C). Moreover, when monolayers treated with 20% IgG were infected and incubated in the presence of complement, lysis of C.M.V.-infected cells required an incubation time 2-6 hours longer than in control cultures not treated with IgG. Control tests were also performed omitting either the antibody or the complement.

Our findings indicate that the major portion of antibody activity against C.M.V. inclusion cells lies in the IgM fraction. On the other hand, the delay of cell lysis caused by IgG antibodies suggests that the antigenic sites on the cell surface are far apart and that bridging of attached IgG molecules is not possible. Hence there is no lysis, but IgG molecules are trapped by the antigenic determinants. Such blocking effect of IgG molecules has also been observed in the course of C.M.V. immunofluorescence tests. Thus an imbalance of the relative amounts of different classes of immunoglobulins may protect C.M.V. inclusion cells against the lytic action of IgM antibody.

These results obtained with the ground squirrel C.M.V. model are not necessarily pertinent with respect to human C.M.V. disease. Two facts should be remembered, however. First, the human newborn receives IgG from his mother as almost the exclusive immunoglobulin, and it fails to confer on him effective protection against the appearance of C.M.V. inclusion cells in various tissues and organs and the associated severe clinical symptoms emerging during newborn disease. Secondly, commercially gammaglobulin preparations which provide only IgG in appreciable amounts and practically no IgM were widely used during the 1950s and failed therapeutically ineffective.

—We are, etc.,

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GEORGETA HERZOG
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Antibiotic-induced Meningitis

SIR,—The leading article "Antibiotic-induced Meningitis" (18 August, p. 336) creates mysteries where none exist. The initial misconception is in the first paragraph where it is stated that "it is a novel idea that a fresh infection arising during treatment should be caused by a sensitive organism and should involve the meninges." Review of the eight cases cited,1,4 shows that adequate information is available for six. In each of these there is ample evidence to support the view that meningitis represents an extension of a primary infection situated outside the central nervous system. In each there was conclusive evidence of blood-borne infection. In each the meningal infection was apparently caused by the same organism...
was a consequence of the bacteremia and, hence, of the primary infection. The fact that meningitis, once established, did not respond to therapy with cephalothin is a reflection of the low and erratic penetration of this antibiotic into the cerebrospinal fluid. There is absolutely no evidence to suggest that the meningeal infection was truly a "fresh infection" or, indeed, that it was "antibiotic induced."

The second misconception also occurs in the first paragraph. The comment is made that "apparently cephalothin is the only antibiotic against which this infection can be treated by"... and it is not accurate. Mangi et al., who state that "meningitis is a possible complication when septicaemia is treated with any antibiotic that does not easily pass the blood brain barrier. A high degree of suspicion of meningitis is warranted for any patient with bacteremia who does not respond to cephalothin or any other antibiotic with moderate cerebrospinal fluid penetration." Even a superficial review of the literature shows that meningitis developing during appropriate antimicrobial therapy has been reported for other antibiotics—for example, tetracycline, penicillin, lincomycin, colistin. In fact, a series of children had received such antibiotics as penicillin, tetracycline, ampicillin, erthro- mycin, and sulphonamide for respiratory tract infections, etc., prior to the development of meningitis. There is, therefore, nothing unusual or unique to cephalothin in this complication. Furthermore, the leader writer chose to ignore Mangi and colleagues' comments regarding such contributing factors to meningitis as a mechanism introducing bacteria into the spinal fluid in three patients; debilitating disease with orobable diminishing host resistance in four; and rather low cephalothin dosage in two.

The conclusion in the leading article—namely, "what is in question here is not the treatment of meningitis but that of infections located elsewhere which may apparently be followed by meningitis if cephalothin is used in their treatment," requires clarification. Since cephalothin was introduced many millions of patients have been treated with it in infections the world over. During that time the concomitant occurrence of meningitis has been mentioned in four reports involving a total of eight patients. It would be quite illogical to restrict the use of cephalothin for this reason.

Finally, the article refers to two reports from Paris and Rouen respectively, in each of which three patients are described who developed renal failure during treatment with cephalothin. As gentamycin is known to have nephrotoxic potential it is difficult to determine what role, if any, cephalothin played in this matter.---I am, etc.,

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Hypomagnesaemia after Parathyroidectomy

Sir,—Having had a similar experience to that described by Dr. C. T. A. Jones and others (18 August, p. 391) we wish to confirm their suggestion that hypomagnesaemia should be regarded as an important complication after parathyroidectomy in patients with bone disease in hyperparathyroidism.

Our patient, a man aged 35, presented early this year with pathological fractures. Radiologically there were characteristic changes of hyperparathyroidism and gross demineralization. Serum calcium concentration was 7.3 mEq/l., with total protein 6.9 g/100 ml, plasma phosphate 0.9 mg/100 ml, and serum alkaline phosphatase 414 IU/l. Serum parathyroid hormone concentration was 1388 ng/ml. A carcinoma of the left upper parathyroid gland was excised (Mr. C. W. A. Falcioni).

As a rapid fall in serum calcium was anticipated, a single dose of 15 mg of calciferol was given intravenously immediately after the operation and calcium gluconate was infused intravenously in an amount equivalent to 20 g of elemental calcium in five days. Mild symptoms of paraesthesiae in the extremities and around the mouth appeared when oral calcium (Sandoz) was substituted. These symptoms became more severe, with a positive Chvostek's sign and occasional spontaneous facial twitching, despite increasing the oral calcium intake to 4 g of elemental calcium daily along with 2.5 mg daily of oral calciferol. On the 20th day he developed dysarthria and weakness of the right lower face when the serum calcium had fallen to 2.5 mEq/l., with serum alkaline phosphatase 115 mEq/l. Intravenous calcium gluconate (20 ml of 10% solution) raised the serum calcium to 3.3 mEq/l. but had little effect on the symptoms. The dysarthria and facial weakness disappeared immediately after the intravenous injection over two minutes of 500 mg of magnesium chloride. Intravenous infusion of magnesium chloride and calcium gluconate was maintained for 48 hours and then oral magnesium (Sandoz Ltd.) and calcium (Sandoval) were given. Despite the subsequent fall of serum calcium concentration to a level at which a positive Chvostek's sign with moderate hypomagnesaemia had previously occurred, these features did not return, possibly because the serum magnesium was now normal.

We would therefore support the contention implied by Dr. Jones and his colleagues that it is important to monitor the serum magnesium concentration after parathyroidectomy for hyperparathyroidism in patients with bone disease. We hope to publish a more complete account, including balance data, in the future.

We wish to thank Dr. J. L. H. O'Riordan for the parathyroid hormone assay.

---We are, etc.,

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Incidence and Prevalence

Sir,—It is apparent that the author of your leading article "Screening for Glaucoma" (8 September, p. 511) has regretfully failed to realize that the terms "incidence" and "prevalence" are not synonymous.

Prevalence covers all cases detected at a designated time in a certain population whereas incidence implies new cases occurring during a defined period of time in a certain population. Thus the 55 cases detected from examining a population of 5,941 on a single occasion (a cross-sectional or point prevalence study) represents a prevalence (not incidence) of 0.9%.

However, the five new cases detected from following up 212 persons over five to seven years (a prospective, follow-up, or longitudinal study) represents an incidence of 2.63% (presumably allowing for patients lost to follow-up)—I am, etc.

ROSS ULMAN
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Impatient Patients

Sir,—One appreciates Dr. J. Mahmood's (8 September, p. 546) over-sensitivity and possible frustration at the mini-epidemic of patients requesting referrals for investigation before asking his advice on diagnosis and treatment. Granting these desires and then having the patient removed from his list is certainly one possible remedy, as Dr. Mahmood suggests. Another possible approach is to put the patient at ease by agreeing to all the demands for investigations, or pills and opinions, and then gently explaining what is necessary.

This can be quite revealing and rewarding to both doctor and patient, and usually dispenses with the need for any tests, potions, or opinions. (Description before prescription.) Should however the patient be correct in his guess he can be complimented and appropriate tests, or therapies, instituted.

Though this approach takes longer initially, the doctor fulfills his role as teacher.