right). Of the rest the E.C.G. was otherwise normal. It is intended to conduct a follow-up on these patients.—I am, etc.,

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SIR,—Your leading article (21 February, p. 450) states: "... there is a low incidence of right or left B.B.B. among an otherwise healthy, non-patient population. ... It is this situation which faces the practitioner with a dilemma." I can see no dilemma. The simple means of dealing with this situation is to withhold the information from the victim that he has bundle branch block. Then "the risk of undue cardiac invalidism" cannot arise.

An even better solution to this problem is to refrain from doing E.C.G.s in "an otherwise healthy non-patient population." Whatever the justification for some kinds of screening in certain people, I know of no evidence that E.C.G.s done on the "healthy non-patient population" benefits anyone.—I am, etc.,

JOHN W. TODD.

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Impotence in Farm Workers

SIR,—Dr. M. L. E. Espir and his colleagues found it difficult to explain the mechanism(s) by which a heterogeneous group of insecticides might have caused impotence in four agricultural workers (14 February p. 423). One possible explanation is that since the insecticides used included a chlorinated hydrocarbon, dieldrin, the metabolism of testosterone was increased and this led to a relative deficiency of this hormone.

It is well established that chlorinated hydrocarbon insecticides are potent inducers of liver microsomal enzymes in animals.¹ While interest has been focused chiefly on the ability of these enzymes to oxidise drugs and toxic chemicals to more polar metabolites which can be excreted, they are also involved in the hydroxylation of steroid hormones. Administration of chlordane or D.D.T. to rats for ten days approximately doubled the rate of hydroxylation of testosterone by rat liver.² Dieldrin, which is closely related structurally to chlordane, and is known to reduce the sleeping time of mice following fixed doses of hexobarbitone,³ might well have a similar action. By contrast, chlorthion, an organophosphate cholinesterase inhibitor, when given to rats for ten days, reduced the hydroxylation of testosterone by rat liver.²

The relevance of these experiments to man with respect to the hydroxylation of endogenous testosterone is uncertain, but it seems likely that certain liver hydroxylation reactions are increased by exposure to chlorinated hydrocarbon compounds.¹ This conclusion is supported by the observation that the half life of antipyrine was reduced to approximately 50% in a group of Swedish workers exposed to D.D.T., chlordane, and lindane, compared with the half life measured in 33 non-exposed control subjects.⁴ In addition, it is possible that insecticides of this type might interfere with the synthesis of various steroid hormones, an

action which accounts at least in part for the reduction in corticosteroids achieved therapeutically by the related compound *o,p'* D.D.D.⁵

Chlorinated hydrocarbon compounds are eliminated slowly from the body, and this would account for the duration of symptoms. The comments of informed clinical endocrinologists would be helpful.—I am, etc.,

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- 5 Calabresi, P., and Welch, A. D. (1965) in *Pharmacological Basis of Therapeutics*. Ed. Goodman, L. S. and Gilman, A. Macmillan Co., New York.

Post-thyroidectomy Recurrent Laryngeal Nerve Palsy

SIR,—I have read with considerable interest the very complete and exhaustive article by Mr. Victor Riddell on "Thyroidectomy: Prevention of Bilateral Recurrent Nerve Palsy."¹ I am impelled to add the testimony of a laryngologist of many years' standing to draw attention to the views expressed, which may not reach those members of the medical profession who do not receive the *British Journal of Surgery*. Exposure of the nerve on the first side is essential, together with testing of its integrity by electrical stimulation as is Mr. Riddell's practice; this is carried out before operation on the other side is contemplated.

I write to support Mr. Riddell in his decision to identify the nerve and to assure himself of its integrity before proceeding further.—I am, etc.,

VICTOR NEGUS.

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REFERENCE

- 1 Riddell, V., *British Journal of Surgery*, 1970, **57**, 1.

SIR,—From a lifetime of wide experience of thyroid surgery, Mr. V. Riddell¹ gives emphatic attention to the identification and to an estimate of normal function of the recurrent laryngeal nerve on at least one side when carrying out the operation of total or subtotal thyroidectomy.

His main principle in thyroidectomy is an attempt to establish normal function of the nerve on the side first dissected before proceeding to the opposite side. Further, if there be real doubt regarding the nerve on the first side, dissection of the second side must be delayed until the function of the nerve and vocal cord on the first side is known. He emphasizes the tragedy of a bilateral recurrent nerve palsy after this type of surgery and the difficulties of really effective laryngeal surgery to restore normal respiration and voice. I am also glad to see that he lays stress on pre-operative laryngoscopy in addition to inspection of the larynx during surgery. Postoperative laryngoscopy is, I feel, also desirable.

As a laryngologist with an interest in the field of head and neck tumour surgery I would heartily endorse and support these principles. My only reservation would be that where total thyroidectomy is required for malignant disease, a more radical approach may of necessity put one or even both nerves at risk. In such cases I believe that results of functional tests of the nerves must not be allowed to delay a complete resection.—I am, etc.,

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- 1 Riddell, V., *British Journal of Surgery*, 1970, **57**, 1.

Sterilization of Curettes

SIR,—Dr. J. M. McGarry (3 January, p. 49) states that the curettes were sterilized as recommended by the manufacturers—that is, "two minutes' immersion in a ½% solution of chlorhexidine in 70% alcohol prior to use". Immersion in alcoholic chlorhexidine is not a sterilizing procedure. This treatment will kill vegetative organisms, but will not kill bacterial spores. This point is most important when it is remembered that curettes may easily be contaminated with spore-bearing organisms during use. With inadequate sterilization techniques viable spores could remain on a curette and could be transferred during subsequent use into an area which may contain necrotic tissue and would be an ideal site for the growth of clostridia. Obviously such an instrument should either be made of materials which are heat-stable so that it can be sterilized by heat, or alternatively arrangements could be made to sterilize the instrument either by low temperature steam and formaldehyde or by ethylene oxide. In the present circumstances the use of a 2% buffered solution of glutaraldehyde could also be considered.

There is an increasing tendency for new apparatus to be made of materials which are not suitable for sterilization by reliable methods such as dry or moist heat. This is a most unfortunate trend and one which should be resisted, as far as possible, by those responsible for the purchase of new equipment.—I am, etc.

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Unheard Voices

SIR,—Reading your leading article "Unheard Voices" (7 February, p. 316) we concluded that the *B.M.J.* had finally come to grips with a very real problem. Just how much we were misled was obvious when we studied "The Surgeon" (p. 358). In comparison with many, Mr. Stubton should know that one weekend on in four is paradise. What about those hospitals where there are only two consultants in the major specialties? Alternate weeks on call and, only if we are lucky, alternate weekends off. Holidays, sickness, and unexpected absence of any kind lead to continuous duty for indefinite periods.

We regard this as consultant exploitation, and if the *B.M.A.* genuinely intends to