

associated with bradycardia; when the bradycardia is replaced by tachycardia, either naturally or as the result of atropine, the blood pressure does not necessarily rise and the patient may remain unconscious. These are just a few of the many examples of the varying relationship between blood pressure and pulse rate. The whole subject is fully described in any standard textbook of physiology.

Tuberculosis from Pets

Q.—*A child of 11 was given a kitten. For seven months the kitten ailed, coughing and sneezing, and was thought to have cat asthma. The kitten died. Post-mortem examination showed extensive pulmonary tuberculosis. What are the chances of the kitten infecting the child? Is it known how often tuberculosis is derived from pets, and, if not, what is your estimate?*

A.—Cats are said to be susceptible only to the bovine tubercle bacillus. This, of course, might be transmitted to the child in question, as the kitten had pulmonary tuberculosis. The child should therefore be treated as if he were a contact of a human case; a Mantoux test should be done, and, if positive, he should have his chest radiographed. If the Mantoux test is negative it should be repeated in six weeks. Rich¹ quotes figures suggesting that 1 to 5.6% of cats living in large cities are tuberculous. But these figures date from before 1923; with the decrease in dangerous milk in the last 20 years the figure must now be much lower. For dogs Rich quotes figures of 0.3–9.0%. Dogs are susceptible to the human bacillus and are liable to develop pulmonary tuberculosis, so that they must be regarded as potential sources of infection. With the large number of human sources in the community, pets have, possibly unjustifiably, been neglected. Perhaps we should start veterinary contact clinics. Beyond the above facts, we know no evidence on which to base an estimate of the frequency of infection from pets.

REFERENCE

- ¹ *The Pathogenesis of Tuberculosis*, 1951, 2nd ed. Blackwell.

Alpha-naphthylamine and Cancer

Q.—*A chemist now aged 71 has a carcinoma of the bronchus. A few years ago he did three months' work on the purification of alpha-naphthylamine. Is there likely to be any connexion between this and his present condition?*

A.—It is most unlikely that the work in connexion with the purification of alpha-naphthylamine has had anything to do with the carcinoma of the bronchus. Alpha-naphthylamine is one of the group of intermediate dyestuffs suspected of causing cancer of the bladder, but the evidence is not as strong for alpha- as it is for beta-naphthylamine. Few cases of bladder cancer have been described in alpha-naphthylamine workers, and when they have arisen the chemical has been found to contain beta-naphthylamine as an impurity. Both chemicals gain access to the body mainly through the respiratory tract, and no cases of cancer of the lung have been recorded in the exposed workers.

Nerve Impulses and Tumour Growth

Q.—*Is there any evidence that interruption of the nerve supply of a limb protects it from the development of new growths?*

A.—There is no evidence that tumour growth is stimulated or inhibited by nervous impulses. It may be that if denervation of a limb produced arteriolar dilatation this would tend to favour cellular multiplication rather than the reverse.

Adrenaline Test

Q.—*What are the details of the adrenaline test for pituitary-adrenal function? How should it be interpreted and how reliable is it?*

A.—The adrenaline test for pituitary-adrenal function is quite unreliable, and should not be used for this purpose.

NOTES AND COMMENTS

Reliability of Mass Miniature Radiography.—Professor R. C. BROWNE and Mr. D. J. NEWELL (Newcastle-upon-Tyne) write: Although the findings of Birkelo *et al.*¹ ("Any Questions?" September 18, p. 711) show that there is little to choose between miniature and full-size film for the detection of tuberculous pulmonary abnormalities, the same may not be true for all pulmonary abnormality. In a recent investigation into the radiological diagnosis of coal-miners' pneumoconiosis (Newell and McCallum²), full-size (15 by 12 in.—38 by 30 cm.), 4 by 5 in. (10 by 12.7 cm.), and 70-mm. chest radiographs were compared. Each of 139 miners was radiographed by the three techniques, and each of three experienced viewers independently classified the films three times as Category 0 (Normal), 1, 2, 3, or Complicated. As in the American work, there were considerable differences between observers reading the same set of films, and between the readings of one film made by the same observer on different occasions. The main finding of the investigation, however, was that the 4 by 5 in. films gave results on the average one whole category lower than the large films, while the 70-mm. film readings were 0.6 of a category lower. This unfavourable result for small films is not surprising when the size of the lesions in simple pneumoconiosis is considered. Scattered opacities which are just large enough to be seen in the large film might easily become invisible in the 70-mm. or the 35-mm. film. Although miniature techniques appear to be as effective as the large film in detecting the larger lesions found in tuberculosis, it may be unwise to assume that this is true for all radiological abnormality of the chest.

OUR EXPERT writes: My answer was in reply to a question which asked about the effectiveness of radiography in detecting pulmonary neoplasm and pulmonary tuberculosis (not chest diseases in general), and the relative efficiency of miniature and full-size radiography for these purposes. In fact, most of the work in this field has been done in relation to the detection of tuberculosis, but it was a reasonable assumption that the results could be applied also to the detection of pulmonary neoplasm. I entirely agree with Professor Browne and Mr. Newell that the assumption cannot be carried outside those fields, and indeed that in the specific example of coal-miners' pneumoconiosis it would not be justified. The results they quote, however, refer to an assessment of degree of pneumoconiosis, not the detection of abnormality—though I suspect that some cases of pneumoconiosis would be missed by miniature methods. The point is that miniature radiography, as a result of dual reading, has been adequately established as a satisfactory method of tuberculosis case-finding, but further work is still required before it is accepted as satisfactory for case-assessment or detection of other conditions; it may further be accepted that on the evidence at present available miniature methods are not suitable for the detection of pneumoconiosis.

REFERENCES

- ¹ *J. Amer. med. Ass.*, 1947, **133**, 359.
² *J. Fac. Radiol.*, 1954, **6**, 67.

Itching in Hodgkin's Disease.—Dr. F. ARNOT BEARN (Buxton) writes: On three occasions I have found that the itching in leukaemia ("Any Questions?" September 11, p. 657) was relieved by daily injections of adrenaline. Why, I do not know.

Correction.—We regret that in Dr. G. L. Jones's letter on pancreatic carcinoma (*Journal*, September 25, p. 753) Professor Allen O. Whipple's name was wrongly spelt.

Refresher Course Books.—The first two volumes of collected articles from the Refresher Course for General Practitioners published in the *Journal* are now available. The first volume contains 55 articles and the second 60. Each article has been revised by its author. Copies of both volumes may be obtained, price 25s. (postage 1s.) each, direct from the Publishing Manager, B.M.A. House, Tavistock Square, London, W.C.1, or from book-sellers. The second book of "Any Questions?" is also available, price 7s. 6d. (postage 6d.).

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