PHARMACOPŒIAS AND FORMULARIES

THE BRITISH VETERINARY CODEX, 1953

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The scope of this valuable new publication is defined in its preface, in which it is stated that "The British Veterinary Codex is the result of a suggestion made by the Pharmaceutical Society to the Royal College of Veterinary Surgeons and the British Veterinary Association that a book similar to the British Pharmaceutical Codex, but devoted to medicinal substances and preparations used in veterinary practice, might be a useful addition to the literature of veterinary medicine. . . . While its main purpose is the definition of standards, the British Veterinary Codex embraces most of the well-established principles of the British Pharmaceutical Codex."

The Editor, Dr. K. R. Capper, and the officials and committees also engaged in the preparation of the B.Vet.C., as the Codex will be referred to in brief, have dealt ably with the difficult task of assembling and documenting the scattered information relating to veterinary medicines, and they have rightly excluded from this first edition many substances and formulæ that are of wide but not necessarily of substantiated usage. In Part I are included 431 monographs on drugs, chemicals and related substances, and in Part II there are 65 monographs dealing with antisera, vaccines and related products. Some 307 formulæ are listed in Part III, and there follow 16 appendices dealing with various aspects of standardisation and control and including also a list of synonyms, including proprietary names, for substances included in the Codex. Finally there is a therapeutic and pharmacological index and a comprehensive general index. The main titles of substances and preparations are in English, and synonyms, where included, are given in Latin or English. The prefix "Veterinary" is used in the case of titles of substances or preparations of the same name but having standards different from those of the British Pharmacopœia or the British Pharmaceutical Codex and it is of interest that it is applied to 12 only of the 772 titles included in Parts I and III.

It is emphasised in the General Notices that all doses mentioned in the British Veterinary Codex are intended for general guidance, and should not be regarded as binding upon the prescriber. The doses of those substances possessing a greater degree of toxic hazard would appear to lie within the range that merits veterinary supervision of the actual case. Many anthelmintic and other preparations are, of course, administered as a routine to farm and other livestock as part of normal husbandry, and for such purposes, for which the veterinarian is rarely consulted, the doses appear in some instances (e.g., that of solution of chenopodium, p. 585) to be somewhat high. The doses of santonin (p. 323) on the other hand, are lower than those recommended for certain proprietary

products containing it. Among other minor points that have been noted are the surprisingly large recommended size (25 g.) of preputial suppositories or "bull cones" (p. 595), the erroneous statement on p. 120 to the effect that soft soap is a necessary ingredient of the wash prescribed by the Warble Fly (Dressing of Cattle) Order, 1948, and the somewhat gratuitous remarks on the addition of vitamins to mineral supplements in the relevant general monograph on p. 566. Such trivial blemishes are almost inevitable in a work of this kind, and those concerned with the production of the "B.Vet.C." may be rightly proud of this landmark in modern veterinary literature. ALASTAIR N. WORDEN.

(ABSTRACTS *continued from p. 271*).

on oxygen consumption in intact rats, triiodothyroacetic acid was shown to have a considerable activity in increasing the metabolic rate. It was not possible to calculate the relative potencies of triiodothyroacetic acid and L-triiodothyronine because of the high mortality rate at the higher dosage levels in the experiments. G. B.

Trifluoroethyl Vinyl Ether; Anæsthetic Action of. J. C. Krantz, C. J. Carr G. Lu and F. K. Bell. (*J. Pharmacol.*, 1953, **108**, 488.) Trifluoroethyl vinyl ether ($CF_3 \cdot CH_2—O—CH=CH_2$) is a volatile, colourless, mobile liquid, with an odour resembling that of vinyl ethyl ether. The boiling point is 42·7° C. and the specific gravity approximately 1·13 at 25° C. Its anæsthetic potency, when administered by inhalation to various species of animals, is approximately equal to that of ethyl ether. It produced no functional hepatic impairment in the dog, as shown by the bromsulphalein test, and produced no histopathological changes in the liver or kidneys of rats or dogs. Neither the monkey's nor the dog's heart showed any electro-cardiographic changes, and electroencephalograms in both animals were not dissimilar from those under anæsthesia with ethyl ether; the blood pressure of the dog was not significantly lowered. It does not appear to be decomposed readily by hydrolysis and the metabolic processes of the body do not appear to liberate fluoride. It presents less of a fire and explosion hazard than similar non-fluorinated ethers. It compares favourably with ethyl ether, ethyl vinyl ether and *iso*propyl vinyl ether as an inhalation anæsthetic in the dog, monkey and rat. The anæsthetic was administered by the open-drop method to a middle-aged woman during a rectal operation. Relaxation was good, and blood pressure and pulse essentially unaltered. Its cautious trial in man would appear to be warranted. S. L. W.

3:5:3′-Triiodothyronine, Biliary Excretion of the Glycuroconjugate of. J. Roche, R. Michel and J. Tata. (*C.R. Acad. Sci. Paris*, 1953, **255**, 1614.) A study has been made of the biliary excretion of 3:5:3′-triiodothyronine labelled with ^{131}I and followed by sodium sulphate labelled with ^{35}S. About 30 per cent. of the ^{131}I was excreted in 24 hours while only 3·4 per cent. of the ^{35}S was excreted, entirely in the first 8 hours. Chromatographic analysis indicated the excretion of 3 iodine products, one of which was 3:4:3′-triiodothyronine. The other two compounds were unknown but one of them was regenerated to 3:5:3′-triiodothyronine by β-glycuronidase and was probably a glycuroconjugate. The metabolism of thyroxine and 3:5:3′-triiodothyronine show much the same similarities. G. F. S.

(ABSTRACTS *continued on p. 280*).

3. A circuit for obtaining derivative polarograms is included, and provision is also made for the use of the instrument in *p*H measurements with the aid of the glass electrode.

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References

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(ABSTRACTS *continued from p. 273*).

BACTERIOLOGY AND CLINICAL TESTS

Isoniazid Resistant Variants of Tubercle Bacilli, Pathogenicity of. G. Middlebrook and M. L. Cohn. (*Science*, 1953, **118**, 297.) Strains of bovine (Vallée) and human (H37Rv) tubercle bacilli resistant to 10 μg./ml. of isoniazid on oleic acid-albumin solid medium were subcultured through passages in Tween-albumin medium containing 10 μg./ml. of isoniazid and then tested for pathogenicity by injection into guinea-pigs. The isoniazid-resistant Vallée strain showed striking loss of pathogenicity, the animals dying after 33 and 43 days respectively with only minimal evidence of active tuberculosis. The animals injected with the isoniazid-resistant strain of H37Rv were still alive after 60 days. 11 strains resistant to 1 μg./ml. of isoniazid, isolated from patients treated with the drug, were subcultured once or twice in Tween-albumin medium without isoniazid and injected intravenously into guinea-pigs. Organisms isolated from animals dying in less than 60 days or sacrificed at 60 days were tested for resistance to isoniazid. 3 strains, all from animals surviving for 60 days, were completely resistant to 10 μg./ml. of isoniazid and the animals showed no signs of tuberculosis. 7 strains were resistant to 1 μg./ml. but partially or completely sensitive to 10 μg./ml.; all the animals yielding these strains died within the 60-day period. 1 strain was sensitive to 1 μg./ml.; the two animals giving this strain died at 17 and 27 days respectively. Resistance of human type tubercle bacilli to 10 μg./ml. of isoniazid may therefore be accompanied by marked loss of pathogenicity for normal guinea-pigs. In similar tests on 21 strains isolated from the sputum of patients treated with isoniazid for at least 2 months, 4 strains were found to be pathogenic while the remaining 17 caused little or no tuberculosis to develop. 8 of the non-pathogenic strains failed to grow on lactic acid-albumin medium but 5 grew on American Trudeau Society egg medium. The 3 which grew on neither came from patients whose sputum concentrates contained enormous numbers of acid-fast rods, probably derived from a multiplying population in a lung cavity. The observation supports the suggestion that strains resistant to isoniazid have growth requirements differing from those of the parent sensitive strains. Possibly necrotic tissue contains a growth substance which is unavailable in normal tissue, the substance being present in moderate but not always sufficient amount in egg medium or in much smaller quantities in lactic acid-albumin medium. H. T. B.