Current Literature.

WILSON, DAGMAR C. Fluorine in the Aetiology of Endemic Goitre. Lance. 1941, Feb. 15, 211–12. [18 refs.]

This, says the author, is the first of a series of studies on fluorosis. Her findings from examination of school children in England under natural conditions are at variance with the records of experimental work carried out with rats in 1935 by W. May. The latter found that when given to rats fluorine produced hypoplasic changes in the thyroid and, having used fluorine therapy in over 800 patients with toxic goitre, he advocated it for this condition.

The author’s investigations have led her to conclude that endemic goitre [associated in places with cretinism—in this respect agreeing with May’s experimental results] existed where fluorine was found geologically. In the Punjab she observed a high incidence of mottled enamel—dental fluorosis—among villagers using well-water in goitrous districts; the rocks in the neighbourhood had a fluorine content ranging between 30 and 3,200 parts per million.

In England fluorine-containing rocks are found in Cornwall, Somerset, Buckingham, Derbyshire, Cumberland and Durham, that is corresponding with the present or former distribution of goitre. Dr. Wilson examined rural school children for dental fluorosis in the neighbourhood of known fluorine deposits and, wherever this condition was found, it was stated that goitre still occurred. She next examined in more detail 378 children in a goitrous area of Somerset and 103 others in a non-goitrous area. None of the latter showed any signs of mottled enamel, whereas 30 of the former (7·9 per cent) did, and another 25 were doubtful, as shown in the subjoined table.

It would seem, therefore, that fluorine in the drinking water is one factor in the production of goitre.

H. H. S.


This paper was written before the publication by A. Q. Wells and W. S. Brooke [Bull. of Hyg., 1940, v. 15, 515] of their striking results from immunizing guinea-pigs with the vole bacillus. The present paper also includes some observations made in guinea-pigs; 7 or 9 subcutaneous doses totalling 10 or 12 mgm. of the vole bacillus were given over a period of about
eight weeks, followed by a subcutaneous injection of either 0·001 or 0·01 mgm. of virulent bovine bacilli. In one series the surviving test animals (two having died earlier from other causes) were killed after 94 days (the controls having then all died of tuberculosis) and found to have either localized or early general infection. In the other series the test animals were allowed to die of the disease, which all did in from 109 to 225 days, average 152 days; the corresponding figures for controls were 67 to 111, average 87. It appears, therefore, that the resistance produced in the guinea-pig serves only to delay the progress of the infection.

Experiments were made in 15 calves, 4 being used to study the nature of vole bacillus infection in the calf, and 9, with 2 controls, for immunity experiments. Subcutaneous injection causes a persistent local abscess with infection of the nearest glands; intravenous injection causes small foci containing scanty bacilli in various organs. No progressive infection is produced and the intravenous injection of a single dose of 5 mgm. is recommended for immunization. Tuberculin sensitivity develops rapidly; all the calves so tested reacted, even after as short an interval as 13 days. Both routes and in some animals 2 doses were used in these experiments, and 7·5 mgm. virulent-bovine culture were given by the mouth after an interval varying from 21 to 175 days, all the calves being killed about 200 days after this. The controls were found to have extensive glandular tuberculosis; of the 9 immunized animals, 4 had no lesions, and the remainder only few and small foci in mesenteric glands. The injection of gland suspensions into guinea-pigs showed that small numbers of bacilli had survived both in these foci and in a proportion of glands not evidently affected. These results are considered "unexpectedly good and better than those which followed the use of BCG as a vaccine"; further trials are desirable. L. P. Garrod.


Reviews.


This volume is made up of nine exhaustive essays, each by a notable authority, and dealing with a particular aspect of a subject whose importance in this present day of world trauma cannot be over-estimated. In the first of these essays the reader is treated to an account by Sir Arthur Keith of Man's Posture. As might be expected from one who can match his deep knowledge of this subject with so rare a gift of exposition, which makes the complex appear simple, the essay is in the nature of a classic and would alone justify the publication of the book. After so brilliant a beginning, one might be forgiven for expecting a lowering of the standard of knowledge and erudition; but such is far from being the case for
Current Literature for J R Army Med Corps 1942; vol 78

J R Army Med Corps 1942 78: 203-204
doi: 10.1136/jramc-78-04-12

Updated information and services can be found at:
http://jramc.bmj.com/content/78/4/203.citation

These include:

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/