

this view. **Measurements of dielectric polarizability also lead to the same conclusion in cyclohexane solution.**

Reactions involving free radicals are considered by Waters. Free radicals are shown to be reagents of an electrophilic type. The velocity of all reactions involving free radicals depend on their rate of production from stable covalent molecules. Recombination of free radicals involves little activation energy. One section deals with the meagre information available on the kinetics of catalysed free radical reactions. Solvent effects are considered both where the solvent is a reactant and where it is only a diluent.

The kinetics of ring closure is discussed by G. M. Bennett who summarises the work done by him and his colleagues in the last decade on a variety of ring closure reactions. The factors involved are well discussed and Carothers' work on ring closure and an explanation of Ruzicka's experiments are considered in the last section.

As is the case with all Faraday Society discussions, the discussion following each paper is an important contribution to the elucidation of the problems and the whole collection of papers provides a stimulus for further work in several fields.

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CHINESE LESSONS TO WESTERN MEDICINE

Chinese Lessons to Western Medicine.

By I. Snapper. Foreword by G. R. Minot. (Interscience Publ., New York), 1941. Pp. 380, 132 illustrations. Price \$5.50.

THE author, a distinguished Dutch physician and research worker, describes systematically the clinical experiences, well founded on laboratory investigations, collected by him as professor and head of the department of medicine, Peiping Union Medical College, Peiping, China. This teaching and research hospital, founded twenty years ago and supported since then by the China Medical Board, Inc., a branch of the Rockefeller Foundation, is of such a high standard, compared even with the best institutions in the West, that these "lessons" need careful attention. From the introduction, which contains information on organisation and administration, it should be noted that the final (fifth) year students live and work for a full year as internes at the hospital. The great difficulty in obtaining permission for the performance of post-mortems, one of the most serious obstacles in the way of medical progress in our country, was overcome to a great extent by signing post-mortem papers (permitting post-mortems) before admission of the patients. A good attempt was made towards the solution of the blood-donor question, complicated, there as here, by superstitions, multiple infections and undernutrition. The first chapter, concerned with nutritional problems and avitaminoses, shows the all-importance of malnutrition,

which modifies almost all clinical pictures in North China. Peiping-diet is deficient in proteins, calcium, vitamin A, C and D; whereas B-deficiency is prominent in the rice-eating South of China just as in South-India, the population of North-China gets all the necessary vitamin B from millet, which is eaten unmilled like ragi. The next chapter deals with infectious diseases. Diphtheria seems to be more toxic than here. Scarlet fever, which is a great rarity among Indians, is endemic in Peiping. Pneumonia presents the same picture as here, though influenzal pneumonias seem to be more common. Mumps (epidemic parotitis) is frequently accompanied or followed by neurological complications, such as encephalitis, meningitis, radiculitis or peripheral neuritis; interesting case histories illustrate the author's experiences in this as in other chapters. The description of typhus fever is not detailed enough to make a comparison with the different groups of Indian typhus possible. However, murine flea-borne rickettsias as well as human, louse-borne strains seem to be responsible there. Louse-bearing relapsing fever is very common and presents diagnostic difficulties, many cases being atypical and complicated with *Salmonella enteridis* infection. Bacillary dysentery is of astounding frequency; the differentiation of the many chronic cases from chronic ulcerative colitis is described. Cases of entero-colitis are encountered which show a degree of dehydration and acidosis, still worse than in cholera; they respond quickly to parental glucose

and saline administration. Amebiasis and liver abscess present important diagnostic problems; cases are described where amebiasis caused severe appendicitis, cecum perforation or psoas abscess; in such cases amebæ were frequently absent in the stool. Photos show amebiasis of the skin. "The parasitic disease which places its mark all over internal medicine in North China is kala-azar", comparable with the role which malaria and ancylostomiasis play in South India. The diagnostic procedure is puncture of the sternal marrow; the routine treatment: ureastibamine or neostibosan, to which even many cases of severe noma respond quickly. Sand-flies transfer kala-azar from dogs either to dogs or to men (good photos of canine k.-a.). The part on encephalitis brings valuable observations and a clear-cut diagnosis of the type B, due to the Japanese virus, from type A, which is not to be found in Peiping at present. The author's unfavourable experiences with rabies vaccination differ from those made in India. Chapter III deals with pulmonary, intestinal and peritoneal tuberculosis; a case history of tuberculosis of the pylorus is illustrated by a radiogram and the histological picture. In Chapter IV the rarity of amyloid degeneration, in spite of the frequent occurrence of chronic tuberculosis and osteomyelitis, is traced to the absence of dairy products in the local diet. Chapter V is concerned with cardio-vascular diseases. Rheumatic valvular disease, not rarely combined with vascular syphilis, occurs frequently; but a typical history of rheumatic fever preceding it, is usually absent, just as is found in India. Arteriosclerosis, coronary thrombosis, diabetic and senile gangrene are remarkably rare. The syndrome of "hypertensive cardio-vascular disease" (fundal changes, etc.) is found with a surprisingly low blood-pressure; the extreme high blood-pressure figures which we see here in essential hypertension among strictest vegetarians are not described. Pick's syndrome and aneurysms are frequent; case histories and photos show the diagnostic difficulties of the former, the various symptoms and signs of the latter. Subacute bacterial endocarditis is frequently seen, which differs from the observations in this part of India. Whereas in Peiping, thromboangiitis obliterans (Buerger's disease) is not more common than in the West, it is very frequently found in South India;

both observations point towards the independence of this condition from a previous typhus fever; in the endemic typhus area of North China thromboangiitis is not very common; here, where typhus is rather rare, it is surprisingly frequent. In Chapter VI renal affections are discussed. Glomerulo-nephritis is traced to skin affections (pyoderma) rather than to tonsillitis, etc. Some cases may be related to malaria, possibly as an anaphylactic reaction;* chronic nephrosis mostly is seen accompanied or followed by some glomerular lesion, which determines finally the renal failure. A slight renal acidosis leads to renal osteodystrophy because the chronic deficiency of calcium and vitamin D favours these skeletal changes. The rarity of renal stones in spite of vitamin A deficiency is explained by the low calcium intake. The author's experiences on coliform group infections, which are widely spread and frequently missed here, would be of interest. Diseases of the liver and biliary system are dealt with in Chapter VII. Catarrhal jaundice hardly ever leads to acute yellow atrophy and arsphenamine causes jaundice exceptionally—in spite of the poor nutritional condition, observations which are in accord with these made in South India. Hydatid cysts derived from sheep are not infrequent; cases of diagnostic interest are reported. Cirrhosis of the liver, of Laennec's or portal type is very frequent, though alcohol consumption is low; dysentery and semi-starvation are suspected as causative factors. Low albumin content of the blood plasma favours the development of ascites. The anatomical conditions for the development and the diagnostic importance of venous hum in the xiphoid region are discussed. Fever in cirrhosis indicates portal thrombosis. The frequent cases of splenomegaly with anæmia and leucopenia without a frank cirrhosis of the liver are called Banti's syndrome, though the histological picture of the spleen differs from the original description. However splenectomy causes a quick improvement of the anæmia and thrombocytopenia. Banti's disease with hæmorrhage from stomach or intestines is differentiated as splenic thrombosis, which does not lead to cirrhosis of the liver and is benefited by splenectomy

* Cf. Heilig, R., *Ind. Med. Gaz.*, 1941, 76, 512.

equally well. Primary carcinoma of the liver, usually developing in a cirrhosis, is common. Gallstones are comparatively rare; they are equally distributed between men and women; no cholesterol—but calcium bilirubinate—stones are seen and easily visualized by X-ray. Cholecystitis, mostly of *E. coli* origin, occurs frequently; hints are given here in differentiating it from hepatitis and liver abscess. Important observations on *anæmia* are communicated in Chapter VIII. Hypochromic, iron deficiency *anæmias* are common. But the author deals mainly with nutritional macrocytic forms with or without megaloblastic bone marrow; most of them respond well to yeast. Some of those cases very much resemble genuine pernicious *anæmia*; their improving on yeast or on very small doses of liver, so far as blood picture and the frequent neurological signs are concerned, the absence of hæmolysis and poikilocytosis and the reappearance of free hydrochloric acid when the *anæmia* is cured, differentiate them from it. This macrocytic *anæmia* is caused by the deficiency of the extrinsic factor in the food. A case is reported, showing hypofunction of the anterior pituitary lobe, hypogonadism, achlorhydria and macrocytic *anæmia*, a syndrome, previously defined by the author. All kinds of hæmorrhagic diathesis are frequently encountered; cases of true and sporadic hæmophilia, thrombocytopenic and anaphylactoid purpura and agranulocytosis are described. Leukæmias show the usual picture. In Chapter IX, which contains some remarks about malignant tumours, comparative figures are given on the frequency of carcinoma of the liver. An interesting discussion follows on the different types of lymph gland tumours, especially reticulosarcoma and lymphoepithelioma, the most common members of that group in North China; they are frequently small primary tumours of the lymphoid structures of the mouth or nasopharynx; they invade the base of the skull and develop large metastases first in the cervical

glands, later all over the body. Lymphosarcoma occurs frequently and causes gastrointestinal complaints. Intoxications are treated in Chapter X. Addiction is found not only to opium, which is smoked by all classes without doing much harm, but also to heroin, which is used as an intravenous injection in the final stages and ruins the addicts who belong mostly to the lowest classes. In suicide the usual poisons are opium and barbital (veronal). The very serious prognosis in opium-poisoning seems to have somewhat improved by the routine treatment with the "iron lung" (Drinker's respirator) and intravenous coramin-injections (3 c.c. maximum); those poisoned with barbiturates need heroic doses of strychnine (10 mg. = gr. $\frac{1}{6}$ repeated every half or one hour up to hundreds of milligrams) and intravenous glucose infusions. Drug poisoning is seen due to the use of indigenous mercury remedies and castor beans (ricin). In the final chapter on miscellaneous diseases it is noteworthy that cysticercosis (especially of the skin) is a very common ailment. Diabetes is frequently encountered; its benign course is explained by the low caloric intake and the absence of butter from the food; vegetable oils with their long chains of partially unsaturated fatty acids are hardly ketogenic. Endocrine disorders—apart from Grave's disease—are rare, osteomalacia and late rickets very common. The extremely well written book, which bears witness to the deep knowledge and keen interest in the new surroundings of the author as well, as to the high standard of his clinical and, especially, his laboratory staff, should be read by every clinician interested in clinical research in general and in geographical (comparative) medicine in special. One hundred and thirty-two illustrations, many of them excellent photos and radiograms, increase the didactic value of these Chinese-Dutch lessons to medicine all over the world.

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