

ABSTRACTS

MUIR, ERNEST: (1931.) The Treatment of Leprosy. Trans. Roy. Soc. Trop. Med. & Hyg. 25:87.

The following is the summary to this most interesting and practical paper:

(1) Raise and maintain the patient's general health, removing all causes of lowered resistance.

(2) The sedimentation test is recommended as an index of the patient's resistance.

(3) As far as consistent with maintained resistance, promote the resolution of leprous lesions.

(4) Intradermal infiltration with hydnocarpus esters is specially recommended as the most effective means known at present.

(5) The irritative qualities of the hydnocarpus esters should be of carefully standardized degree, ethyl esters washed with steam and iodized, as used in the Philippines, being specially recommended as a uniform standard.

(6) The uncontrolled allergic condition, commonly known as the "lepra reaction", is to be carefully awarded. When lepra reaction occurs it should be carefully treated, the special treatment for the resolution of lepromata being meanwhile suspended.

(7) The mental attitude of the patient is an important factor. Without the active cooperation of the patient, treatment should not be attempted.

(8) The length of treatment depends upon the persistence of active signs for which very careful and repeated examinations must be made.—*R. M. Suárez.*

LONGCOPE, WARFIELD, T.: (1931.) Variations in Manifestations of Rheumatic Fever in Relation to Climate. Ann. Int. Med. 5:401.

Conclusions: The available statistics concerning the geographical distribution of rheumatic fever indicate that the disease is very rare or almost unknown in the tropics, and much less commonly observed in the warmer portions of the mid-temperate zones than in the colder portions.

In some regions where rheumatic arthritis is said to be rare mitral stenosis is quite frequently observed.

At the Johns Hopkins Hospital in Baltimore the admission rate

to the adult medical wards for rheumatic fever, in all its forms and in all its stages, over a period of five years, was 1.37 per cent. The autopsy rate for rheumatic heart disease over a period of twenty-one years was 1.66 per cent. The disease, therefore, is comparatively common.

In a series of one hundred forty-two cases of rheumatic fever studied, 95 per cent showed cardiac disease. Only six cases presented symptoms and signs of arthritis alone, but in 77 per cent arthritis, often of mild degree, occurred at some time during the illness for which they were admitted to the hospital.

It is suggested that the infrequency of severe acute arthritis, the great frequency of carditis and the comparative insidiousness of the disease during the acute and subacute stages, renders the clinical picture of rheumatic fever somewhat different in Baltimore from that generally described for more northern sections of the United States.—*R. M. Suárez.*

BARACH, ALVAN L.: (1931.) *The Therapeutic Use of Oxygen in Heart Disease.* *Ann. Int. Med.*, 5:428.

In this communication, the author presents the results of studies of the effect of oxygen therapy on twenty cardiac patients who may be classified as follows: (1) Congestive heart failure due to primary cardiac disease. (2) Cardiac insufficiency developing as a sequel to chronic pulmonary disease. (3) Acute coronary thrombosis. (4) Coronary arteriosclerosis with chronic cardiac pain.

The Barach oxygen chamber and oxygen tent were employed to administer 40 to 50 per cent oxygen. In the oxygen chamber a constant temperature and humidity regulation was achieved and in the oxygen tent the temperature was kept below 70 degrees and the humidity below 50 per cent. Oxygen therapy will not be successful if types of apparatus are used which do not effectively remove the heat and moisture eliminated by the patient.

In the eight cases of congestive heart failure the most striking effects observed were (1) relief of dyspnea and orthopnea, (2) diuresis and disappearance of edema and (3) a marked rise in the carbon-dioxide content of the arterial blood. There were also noted relief of cyanosis, increased arterial oxygen saturation, decreased pulmonary ventilation, lowered pulse rate and decrease in blood lactic acid.

In the cases of acute coronary thrombosis life appeared to be prolonged by oxygen until the heart was able to recover from its acute functional disturbance. The cases of coronary arteriosclerosis with

chronic cardiac pain were relieved by residence in a high oxygen atmosphere.

The clinical improvement which patients suffering from the various forms of heart failure experience suggests a new employment of oxygen therapy by effective methods in these conditions.—*R. M. Suárez.*

DAVIES, DANIEL T.: (1931.) *Studies on Achlorhydria and Anemia.* Quart. Jour. Med. 24:447.

The gastric juice was examined in the fasting stage and after the subcutaneous injection of histamin (0.3 and 0.5 mg.) in forty-five patients who were known to have achlorhydria. There were fifteen cases of pernicious anemia, fifteen cases of secondary anemia, five cases which did not exhibit a definite clinical entity and ten cases which in spite of the achlorhydria did not show any hematological departure from the normal.

For comparison, the author gives a table containing the results obtained by the examination of the gastric secretion in a normal person, without the introduction of any diluent. The analyses of the remaning juice and of the samples withdrawn, 10 and 20 minutes after the injection of 0.5 mgm. histamin, reveal an increase in volume from 28 cc. to 48 cc., an increase in pepsin from 286 to 600, an increase in HCl from 22 to 63. None of the samples showed any mucus or deposit and pH was —3 in all.

This study shows that there are degrees of impairment of the gastric secretion, the most advanced being that found in primary or pernicious anemia.

Some patients, although showing achlorhydria on ordinary gastric analysis, show a good proteolytic secretion following stimulation with histamin. These patients as a rule do not show any constitutional effects as the result of their minor gastric impairment.

In the cases of secondary anemia with achlorhydria there was an excessive mucus output, a diminished pepsin content and in some of them a fixture of the pH. The response of these cases to iron and the necessity for continued dosage with it are suggestive of delayed and defective alimentary absorption. The disease appears to be more common than the primary anemia.

Intermediary grades are found, and in these the anemia may possess primary and secondary characters, both in diagnostic and therapeutic features.

In primary anemia there is no mucus, the pepsin is diminished or absent, and the pH is fixed. The deposit of squamous cells obtained

in the gastric secretion, indicates the complete inability of that secretion to digest the cells that normally are shed from the esophagus and are carried down into the stomach.

The few cases of pernicious anemia that secreted some ferment required less liver dosage than those which had no pepsin in their secretion after stimulation. Therefore, the author suggests that the "intrinsic factor of Castle" must be a product of gastric secretion which fails in the majority of cases when and as pepsin fails.—*R. M. Suárez.*

McSWEENEY, CHRIS. J.: (1931.) The Clinical and Epidemiological Characteristics of Variola Minor and its Differential Diagnosis. *Quart. Jour. Med.* 24:487.

During the last eight years a type of smallpox characterized by the mildness of symptoms and a relatively slight degree of infectivity has been prevalent in England and Wales. In the year 1929 there were ten thousand nine hundred and sixty-seven cases reported with thirty-nine deaths, a fatality of 3.56 per 1,000.

The incubation period varies from ten to fifteen days. It may occasionally exceed by several days the maximum laid down for the classical disease.

The period of invasion lasts from 48 hours to 5 and even 6 days. Influenza-like symptoms are almost invariably present: headache, shivering, malaise and pyrexia. Prodromal rashes were not observed.

The rash never appears before the third day of the disease, most commonly on the fourth or fifth day. It is first seen on the face, a few hours later on the forearms and trunk, and within twelve hours it can be seen on the lower extremities. The eruption never comes out in crops and it goes through the usual stages of evolution characteristic of classical smallpox, but maturation, though proceeding in an orderly fashion from papule to scab, is more rapid in the non-classical type. "The appearance of the eruption in variola minor coincides with cessation of all constitutional symptoms." The papular stage lasts from thirty-six to forty-eight hours and by the fifth day the vesicles have usually commenced to pustulate. On the seventh day scabbing will have commenced on the face, but it may be much later before the peripheral lesions begin to scab. The distribution of the eruption is essentially that of the classical smallpox. The rash is centrifugally disposed, affecting the face and extremities rather than the trunk. The vesicle is firm and definitely "in", rather than

"on" the skin. The rash is probably never found in the axilla. Those few points will help in the differential diagnosis from chicken-pox or varicella.

From the epidemiological point of view the author discusses the all-important question as to whether the non-classical can produce the classical type and in doubt as to this question, he favors the necessity for control of the disease by prompt segregation of patients and supervision of contacts for at least twenty-one days, but in view of the negligible mortality of the minor type and the reports concerning post-vaccinal encephalitis, he recommends discretion in the use of vaccination as an instrument of prophylaxis. "Even when the non-classical type of the disease", he says, "has assumed epidemic proportions in a community, it is doubtful whether the enforcement of generalized vaccination is ever justifiable".—*R. M. Suárez*.

ANDERSON, J. S., HAPPOLD, F. C., McLEOD, J. W., THOMSON, J. G.: (1931.) On the existence of two forms of diphtheria bacillus—*B. diphtheriae gravis* and *B. diphtheriae mitis*—and a new medium for their differentiation and for the bacteriological diagnosis of diphtheria. *J. Path. Bact.* 34:667.

Two types of diphtheria bacillus are described: the one associated with the severe toxic cases of the disease; the other with milder cases in which there may be extensive membrane formation without serious intoxication. *B. diphtheriae gravis* grows with a granular deposit and pellicle in broth, has a flattened lusterless colony of irregular outline and actively ferments polysaccharides. *B. diphtheriae mitis* grows with uniform turbidity in broth, has a convex light-reflecting colony and does not ferment polysaccharides.

A new medium is described which simplifies determination of *B. diphtheriae* and enables the severe type to be recognized.—*Richard Thompson*.

FROBISHER, MARTIN: (1931.) Electrophoresis experiments with the virus and protective bodies of yellow fever. *J. Exp. Med.* 54:733.

The yellow fever virus behaves in electrophoresis experiments like an amphoteric colloid—acting as though positively charged in alkaline fluids and as though negatively charged in acid fluids. The virus is inactivated by a pH of 5.00. The isoelectric point is in the neighborhood of pH 7.00.

The protective bodies in yellow fever immune serum carry a negative charge in slightly alkaline saline dilutions.—*Richard Thompson*.

SABRY, IBRAHIM: (1931.) On the Chemical Nature of Pellagra toxin and the Discovery of the Thiosulphate Treatment for Pellagra. Jour. Egypt. Med. Assn. 14:603.

The writer's view on the chemical nature of pellagra is founded on Bolch's studies on human pigment, the so-called "Bolch Dopa Reaction". The author discards the vitamin theory in the etiology of pellagra and assumes that the cause of the disease is a toxin which may be of chemical or bacterial origin. This toxin, he believes, is deposited in the layers of the skin and is the initiative of the extra-pigment, when stimulated by sunlight. The ultraviolet rays when absorbed by the basal layer of the skin seem to activate the dopa reaction and increase the manufacture of melanin locally. This explains the occurrence of pigmentation on the exposed parts of the body. The maize theory is well supported on the chemical nature of pellagra toxin, as it appears very probable that in the seeds of maize there may be a substance which turns to melanin when acted upon by the oxydase in the basal layer of the skin.

In treating the disease the author presents a series of twenty-two cases of pellagra which he claims responded promptly to intravenous injections of 10 per cent sodium thiosulphate. The drug, he believes, acts as a catalyzer or else it neutralizes the toxin rendering it absolutely harmless. Altogether an average of twenty injections of sodium thiosulphate were administered.—*Jenaro Suárez.*

JAMES, P., NICOL, W. D., and SHUTE, P. G.: (1931.) On the Prevention of Malaria with Plasmoquine. Lancet, 2:341.

The administration of 0.02 gram of plasmoquine three times a day to ten volunteers, all students of St. Mary's Hospital, London, who were bitten by mosquitoes heavily infected with the sporozoites of benign tertian malaria, was found to be sufficient to prevent the development of the disease. On the contrary, four control cases who had no plasmoquine were all attacked by malaria within fourteen days. One of the controls was given quinine prophylactically for eight days but when it was stopped it failed to prevent the attack. It is concluded that quinine is not effective in prophylactic doses.—*Jenaro Suárez.*