

ABSTRACTS OF CURRENT LITERATURE

THIBAudeau, A. A. and BURKE, E. M.: Carcinoma of the cervix uteri: The relation between the histological findings and the results of radiation therapy. (1929) *Jour. Cancer Research*, 15 (3): 20.

Of twenty-eight cases without remission throughout five years, in eight, malignancy was confined to the cervix. According to Broders classification of these tumors into three groups, histologically, of increasing malignancy, one belonged to Group I and two to Group III. In eight control cases of similar clinical type which died, two fell in Group I and four in Group III. Of eighteen cases without remission in the same time period, and pertaining to three clinical groups which had spread beyond the cervix into the pelvis, six were classified histologically as belonging to Group I and four to Group III. Of eighteen control cases of similar clinical type which died, four were placed histologically in Group I and nine in Group III. The conclusion of the authors is that histological grouping and malignancy indices are of limited value in prognosis in cases of epithelioma of the cervix uteri. Of the twenty-eight cases which suffered no remission throughout five years, twenty-five per cent fell in histological Group I, fifty per cent in Group II and twenty-five per cent in Group III.—*B. K. Ashford.*

OSMAN, A. A.: Asthenia in children; the value of sugar in its prevention and treatment. (1929) *Lancet*, 217 (5545): 1187.

Four cases of bronchial asthma were rendered free from attacks for from one to two and a half years by simply adding sugar to the diet. This treatment was found not to be applicable to adults. The author uses three grams of glucose in lemonade, three times a day. Sugar is also of some value in the treatment of infantile eczema. Seven cases were thus treated successfully.—*B. K. Ashford.*

SOMERFORD, A. R.: Glucose intolerance in various dermatoses. (1929) *Lancet*, 217 (5544): 1140.

One hundred and twenty cases were studied. A fasting blood-sugar reading was made in each case; then 50 grams of glucose in 150 cc. of water was administered and readings were again made

three quarters and one and a half hours thereafter. Only 23.3 per cent gave normal sugar readings. The maximum fasting normal is 120 mgm per cent and the maximum reading after ingestion of the glucose is 170. Of 120 cases of dermatoses, 76.7 per cent were abnormal, with a fasting average of 130 mgm. rising to 188 mgm. in three quarters of an hour, and falling to 150 in another forty-five minutes, thus demonstrating some defect in the mechanism of glucose storage in the liver as glycogen. The most pronounced increase in blood sugar occurred in the lichen and pruritus groups. No one lesion showed itself histopathologically to be associated with glucose intolerance. Of the patients who complained of itching, 86.7 per cent demonstrated some glucose intolerance.—*B. K. Ashford.*

HANSEN-PRUSS, O. C., LONGCOPE, W. T. and O'BRIEN, D. P.: Skin reactions to filtrates of hemolytic Streptococci in acute and subacute nephritis. (1929) *Jour. Clin. Invest.*, 7 (4): 543.

The skin of rabbits and guinea-pigs, previously inoculated with living cultures of one strain of a hemolytic Streptococcus, becomes sensitive to filtrates from many strains of these organisms. The reaction is allergic in nature. There is much evidence to show that both the Dick reaction and the eruption in scarlet fever are dependent upon a previous sensitization of the skin to hemolytic Streptococci. The same may apply to erysipelas, and sensitization of the joints in this manner may explain the arthritis in rheumatic fever. They now apply this principle to acute glomerular nephritis on the ground of a renal allergy. Using eighteen strains of hemolytic Streptococci, they find a plus skin reaction to the filtrates in twenty-two, and a four plus in eighteen of twenty-seven cases of nephritis, or 81.4 per cent and 66.6 per cent, respectively, as against 62.2 per cent and 25 per cent in sixty controls.—*B. K. Ashford.*

BAER, W. S.: Arthritis deformans; diagnosis, treatment, and rehabilitation. (1929) *South. Med. Jour.*, 22 (1): 873.

Three types are recognized; the infectious, the atrophic, and the hypertrophic. The infectious is usually found in young people. Bacteria seem to be the determining cause, probably a non-hemolytic streptococcus from some focal infection but the author believes that there must be some complementary factor which he designates "X". Removal of the focus should be attempted but usually this is not sufficient as the infection has been distributed and has become con-

stitutional. He makes an effort to cultivate the causative organism from the lymph node nearest the lesion and uses vaccines therefrom with favorable results. Heliotherapy and discrete exercise are important in treatment. He secures a satisfactory result in seventy-five per cent of his cases. Rehabilitation is not permissible in the acute stages, but correction of deformity in the case of spondylitis can be accomplished by hyperextension under anesthesia and plaster casts. The use of nitrous oxide as an anesthetic is dangerous, due to an expanded fibrous lung, combined at times with a dry pericarditis.

In the atrophic type the lesions are more severe. Ankylosis always takes place in hyperextension. Instead of finding organisms in the lymph nodes in sixty-six per cent of the cases, as in the previous type, we only find them in five per cent. There is usually no means of cure.

The last group, hypertrophic arthritis, should not be included under this caption but deserves a separate designation such as rheumatic gout. It appears in people of age, who are apparently robust, and no infection is to be found. The treatment is chiefly dietary with prohibition of sugars starches and acids. There is no need to eliminate the foods of animal origin. Hardly any measure used for the infectious type is applicable to hypertrophic arthritis.—*B. K. Ashford.*

CORNELL, V. H.: The bromsulphalein hepatic function test. (1929) *Archiv. Int. Med.*, 44 (5): 818.

Rosenthal and White, in 1925 found in the serum of twenty-five normal persons, injected intravenously with a given amount of bromsulphalein, from twenty to fifty per cent of the dye after five minutes and practically none at the end of thirty minutes. The average normal retention after five minutes was thirty-five per cent. Method: 2 mgms. per kilo of weight is injected intravenously, using a five per cent solution of the dye. Five minutes, and again thirty minutes later, a sample of blood is drawn from the other arm. The serum from each sample is centrifuged, and to a portion of the first add one drop of a five per cent solution of hydrochloric acid; to the other portion, three drops of a ten per cent solution of sodium hydroxide. The serum of the second sample needs only the alkali, as the acid tube suffices for both tests. This acid tube is used as a serum control and behind it in the usual comparative pH block is placed the standard, furnished by Hynson, Westcott and Dunning, to match the alkali tube.

The author made 130 tests on one hundred persons, without general reaction or subsequent thrombosis. He found thirty-seven of these to conform with Rosenthal's normal and fifty-five to show retention in both samples. Forty of the hundred cases were not considered to have any hepatic involvement and the average five-minute retention was forty per cent in thirty-four cases. Diseases of the gall-bladder and bile duct showed no retention save in the presence of hepatic involvement. Of twenty-five cases of hepatic cirrhosis, forty-four per cent showed five per cent less retention at thirty minutes and the average five-minute reading was sixty-one per cent. All seven cases of arsenical hepatitis showed retention. All but one of fifteen cases of hepatitis showed definite retention.

The conclusion is that Rosenthal's test is of distinct value in determining the presence and degree of hepatic dysfunction and is "safer, less toxic, less irritating, and easier to use than phenolte-trachlorphtalein." The normal retention at five minutes is thirty-five per cent to thirty-eight per cent. Between forty per cent and fifty per cent should create a suspicion of hepatic disorder; above fifty per cent is strongly suggestive of hepatic disease or dysfunction, and when combined with retention after thirty minutes, is almost diagnostic of injury to the liver.

The test is valuable to determine damage to the liver by gall-bladder and bile duct disease, to determine hepatic involvement in malignancy, to control antisyphilitic arsenical treatment, to determine residual disorder after acute disease of the liver, to determine hepatic involvement in cases of tertiary syphilis, and to confirm any suspicion of disease of the liver without jaundice.—*B. K. Ashford.*

TSYKALAS and RIEGEL, R.: L'émétine et la papavérine contre les affections bilharziques. (1929) *Rev. de Méd. et d'Hyg. Trop.*, 21 (5): 137.

Emetin and stibium tartrate are both powerful schistosomacides. Emetin is to be given in daily doses of 0.1 for from ten to twelve days. It is only efficient when the worms are alive and neither it nor tartar emetic are of any use when the organisms have perished. The treatment by emetin is more certain than that by tartar emetic. It is less toxic than the salts of antimony and acts on the muscle of the heart and vessels, giving signs of impending accident in time to permit of remedy. Antimony causes fatty degeneration of the cells of such vital organs as the heart, kidney and liver and the damage is done before symptoms appear. The successful treatment of schis-

tosomiasis is more prompt as antimony takes about a month to cure, if a cure is affected.—*B. K. Ashford.*

BRUNS, E. H.: Heliotherapy in the treatment of tuberculosis. (1929) 4 (Thirty-ninth series.)

Heliotherapy was first utilized in Switzerland in 1903 by Rollier, at Leysin. It is an excellent agency in the treatment of bone and joint, glandular, and genito-urinary tuberculosis, and tubercular peritonitis. But heliotherapy for pulmonary tuberculosis has distinct limitations and may do harm in the wrong type of case for such treatment. Favorable cases for heliotherapy are those with fibrosing or quiescent lesions and those of pneumothorax or thoracoplasty with contralateral, non-involved lung.—*B. K. Ashford.*

WHEELON, H.: Geographical factors in calcium metabolism. (1929) *Endocrinology*, 13 (4): 363.

Blood calcium determinations were made on 425 adults in Seattle. The average blood serum calcium was 10.34 mgm. per cent. Of these, 18.33 per cent had less than 9 mgm. and 14.34 per cent had over 12.4 mgm. Of the thirty-nine cases with less than 8.5 mgm. fifty per cent had a history of spasmophilia. The water supply of the Puget Sound Basin has an average of 11.2 parts of calcium per million, therefore he considers the low calcium contents a matter of insufficient supply.—*B. K. Ashford.*

RATCLIFFE, H. L.: The relations of *Endamoeba muris* and *Chilomastix bettencourti* to the diet and intestinal conditions of rats. *Jour. Parasit.*, 16 (2): 75.

The effect of three diets (*a*) containing a high-percentage of carbohydrate, (*b*) containing sixty per cent protein from dried beef liver and yeast, (*c*) containing sixty per cent protein from casein and yeast, upon the cecal flora and fauna of rats are noted. Observations at twenty-five day intervals indicate that diet with a slightly acid pH supports a large number of aciduric bacteria and relatively few amoebae and *Chilomastix*. Diet *b* gave rise to more acid condition and caused an increase of sacchrolytic and coli type bacteria as well as of amoebae and the flagellates, a decrease in aciduric and proteolytic bacteria. Diet *c* with an average pH of 7.60 resulted in a decrease of all organisms except proteolytic bacteria which became especially abundant.—*W. A. Hoffman.*

CALDWELL, F. C. and CALDWELL, E. L.: A study of the anthelmintic efficiency of higuero-latex in the treatment of trichuriasis, with comment as to its effectiveness against ascaris infestation. *Am. Jour. Trop. Med.*, 9 (6): 471.

The authors emphasize the pathogenicity of whipworm in heavy infestations. Leche de higuero, or higuero-latex, the fresh latex of *Ficus laurifolia* a South American species of fig has long been used by natives as a vermifuge. Tested in single doses of 30 c.c. in 1927, 60 c.c. in 1928, with or without a subsequent purge the whipworm egg output decreased 89.5 and 85.4 per cent respectively, with cures of 22.2 and 53.8 per cent. Two treatments are advised for effective cures. Against this, worm oil of chenopodium proved far less effective. Against *Ascaris*, higuero-latex compared favorably with oil of chenopodium, egg reduction being 89.7 per cent, with 70.3 per cent cures, similar figures for the oil being 83.2 and 83.8 per cent. Higuero-latex hitherto has had a restricted use owing to its tendency to rapidly deteriorate. Kept cool in dark green bottles it retains its efficiency for a year. In one instance a ball of 1900 whipworms was expelled.—*W. A. Hoffman.*

SABLES, M. P.: The effect of age and size of infestation on the egg production of the dog hookworm, *Ancylostoma caninum*. *Am. Jour. Hyg.*, 10 (3): 658.

With dogs kept under controlled conditions and other dogs naturally infected the number of eggs laid per female was less with a large number of worms present than if there were but a few. With but five females present in one infection the daily egg output averaged 28,400, with ninety females the individuals production reached 7,200. Size of worms played no part since variations of length were but slight. The egg production increases during the first month, but then it may either decline or increase.—*W. A. Hoffman.*

SABLES, M. P.: The length of life and rate of loss of the dog hookworm, *Ancylostoma caninum*. *Am. Jour. Hyg.*, 10 (3): 667.

In these experiments a counted number of infective larvae were administered chiefly *per os* in capsules. Egg counts indicated the ova output over the time of the experiment. The number of ova increased rapidly for a short period then tended to decrease at a fairly constant rate, in one set seven to eight per cent; in another fifteen to twenty per cent. The life of these worms is relatively short as females ceased to produce ova after an average of sixty-five weeks.

In succeeding infections egg output was much lower; in some cases the invaders failed to establish themselves. Usually the second infestations were of shorter duration. The increased resistance the author considers was due chiefly to age, though a minor part may have been acquired.—*W. A. Hoffman.*

KUMM, H. W.: The geographical distribution of the malaria carrying mosquitoes. *Am. Jour. Hyg.*, 10 (1): 178.

In this contribution to our knowledge of the anophelines the author has assembled much of the data pertaining to the distribution of those species considered to be malaria carriers. In addition through personal inquiries he has appended supplementary data to that previously published. Maps graphically representing species dispersal are included. The anophelines of the West Indies are treated.—*W. A. Hoffman.*

RATCLIFFE, H. L.: The oral administration of certain alkyl resorcinols and their effects upon the intestinal protozoa and bacteria of rats and upon intestinal protozoa in chicks. *Am. Jour. Hyg.*, 10 (3): 643.

N-butyl, n-hexyl, n-heptyl and n-octyl resorcinol were added to the normal diet of rats (1 per cent) to test their action not only on the aerobic bacterial population of the caecum, but also on its protozoal fauna, *Trichomonas muris*, *T. parva* and *Endamoeba muris*. The effect upon the various organisms became more marked with the use of those substances having more methyl groups on the side chain. The pH of the caecum usually became more alkaline. *T. muris*, and *E. muris* were entirely eliminated, while with *T. parva* if total disappearance did not occur, at least its numbers were greatly diminished. Aciduric bacteria disappeared but the lactose fermenters increased tremendously. It is suggested that the results may be partly due to the lowered surface tension brought about by the presence of these chemicals. These substances are proportionately less soluble according to the number of methyl radicals present, which properly may be an important factor in their bactericidal and protozoacidal properties. Chicks experimentally infected with flagellates, one group with *Trichomonas gallinarum*, the other with *T. hominis* were entirely free of them after the addition of one per cent n-heptyl resorcinol to their diet. Controls had heavy infections. The use of these chemicals in human infections is indicated.—*W. A. Hoffman.*

SOESILO, R.: The experimental susceptibility *Anopheles rossi* for malarial infections. (1928) Overgon. Med. Dienst. Volksgez. Med. Ind.

The natural infection rate of *A. rossi* throughout the Dutch East Indies has on a number of occasions been shown to be very low, ranging from .2 to .7 per cent, while that for *A. ludlowi* has repeatedly been shown to be considerably greater varying from 1.3 to 35 per cent. The low rate for *A. rossi* is due to its preference for animal blood. Soesilo ran a comparative series of experimental infections of both species. The saltwater race of *A. rossi* had an infection rate of 85.7 per cent with subtertian malaria, its freshwater form 80, *A. ludlowi* 86.9. Corresponding figures resulted with tests of tertian malaria. Differences in nature are then not due to a lesser susceptibility of *A. rossi* for malarial infection.—*W. A. Hoffman.*

FAUST, E. C.: Human Helminthology. (1929) Lee and Feibiger.

"Human Helminthology" by Dr. E. C. Faust of Tulane University satisfies a need long felt. Quite obviously a comprehensive publication of this type cannot be adequately reviewed. Therefore attention will be called merely to its general organization. The writer, well qualified for the preparation of such a treatise has spent a number of years in the orient in helminthological investigations, especially of schistosomiasis. Chapters relating to history, distribution, taxonomy, structure and biology precede the detailed investigation of the various helminths. This last phase receives quite adequate treatment. Not only are the salient structures of the various species indicated, but their life cycles when known, means of control, clinical and pathological aspects are carefully outlined. Discussion of the less common helminths of man is also included. The description preceding the illustration of the anterior end of *Ankylostoma duodenale* is so lucid that no explanatory labelling is required—nor has any been included. This instance has merely been cited as an example of the book's clarity of style. Many others could serve fully as well. A representative bibliography follows each section. The latter portion of the volume deals with technique and methods of identification of the various stages of worms, including keys. Serological methods used for the diagnosis of helminths are also presented. The conclusion section furnishes a condensed consideration of the relation of intermediate hosts, lists many of these, gives direction for locating the parasites within them, and indicates their taxonomic affinities.

The publishers too, deserve praise for the manner in which the numerous illustrations of excellent quality have been reproduced, and for the practical absence of typographical errors. Furthermore they have completely utilized the available page space, a policy which some publishers might well follow.

The writer has drawn upon numerous sources (in addition to his own wide experience) such as only an extensive library could supply. He has admirably summarized all these data; Medical investigators and practitioners as well as biologists should have a copy of the book available for reference.—*W. A. Hoffman.*

CORT, W.; SHAPIRO, L. and STOLL, N. R.: A Study of Reinfection After Treatment with Hookworm and Ascaris in Two Villages Near Panama. *Am. Jour. Hyg.*, 10 (3): 614.

Series of egg counts were made by the authors in two villages in Panama, one partially sanitized and the other entirely without latrines, before and after treatment, the first counts coming early in the rainy season and the last after its close. It was clearly demonstrated that the group with the best sanitation showed a much less rapid reinfection with hookworm about six months after treatment than the people living in houses without latrines or where the latrines were only partially in use. The counts for trichuris showed no reduction after the treatments since the drugs given were not effective for this parasite. In the case of ascaris the authors report a very rapid reinfection after treatment, in some groups the level at the end of the rainy season reaching a point considerably higher than the pretreatment level. In most cases of untreated groups there was also, a decided increase in infestation with this parasite during the course of the rainy season.—*P. Morales Otero.*

WILLIAMSON, R.: The Increase in the Number of Red Cells and the Percentage of Hemoglobin in Acute Oxygen Want. *Brit. Jour. Exper. Path.*, 10 (4): 246.

By fitting a closed mask over mouth and nose of patients the author produced acute want of oxygen. Observations on percentage of hemoglobin and number of red blood cells were made before, after, and during the experiment. Results indicated that acute oxygen want was accompanied by an increase in the number of red cells and in the percentage of hemoglobin in the blood.—*P. Morales Otero.*

HERTIG, M. and HUANG, T. F.: A Rat-Flea Survey of Peking. *Am. Jour. Hyg.*, 10 (2): 521.

In a rat-flea survey of Peking extending throughout one year, 6,286 rats were examined. *Xenopsylla cheopis* (98 per cent) and *Ceraphyllus anisus* (2 per cent) were the only rat-fleas found. The average number of *Xenopsylla* per rat was 1.33 for the whole year with a maximum of 3.10 in August and a minimum of 0.30 in February.—*P. Morales Otero.*

BURNET, F. M.: A Method for the Study of Bacteriophage Multiplication in Broth. *Brit. Jour. Exper. Path.*, 10 (2): 109.

A method is described by which the author claims that the first stages of multiplication of a single phage particle in broth can be followed. In two cases described, there is a sudden appearance of about ten and forty demonstrable particles of phage where one was present initially. The time of the first increase after addition of phage may vary widely for different types of phages and for different particles of the same filtrate.

Phage increase in broth is in the early stages at least due to the liberation of lysis of particles that have multiplied in or on a sensitive bacterium says the author.—*P. Morales Otero.*

ELFORD, W. J.: Ultra-Filtration Methods and Their Application in Bacteriological and Pathological Studies. *Brit. Jour. Exper. Path.*, 10 (2): 126.

The author describes a method for preparing impregnated acetic acid collodium membranes with uniformity of thickness throughout the complete concentration range. The applicability of this membrane in bacteriological studies is investigated. The filtrability of red blood corpuscles, *B. coli*, *B. prodigiosus*, *B. bronchisepticus*, bovine pleuro-pneumonia and bacteriophage are studied. The size of the particulate phase of the bovine pleuro-pneumonia organism has been estimated as $0^{\circ} 125-0^{\circ} 150$ while that of bacteriophage is said to be much smaller.—*P. Morales Otero.*

BLAKE, A. V. and OKELL, C. C.: Seasonal Variation in the Susceptibility of Mice to Dysentery (Shiga) Toxin. *Brit. Jour. Exper. Path.*, 10 (2): 175.

The authors concluded:—"In titrations of dysentery (Shiga) toxin and antitoxin, not only are variations in individual susceptibility to the toxin met with, but also variation effects in groups

of mice used at intervals. The variability appears to be seasonal, the mean susceptibility of the mice to the toxin being greater in winter than in the summer months."

"The possibility of variations of this type must be considered in titrations of any biological reagent where the degree of accuracy demanded, approaches nearly to the extreme limits permitted by the method test."—*P. Morales Otero.*

BISHOP, L. F. and BISHOP, L. F. Jr.: A Study of Amebiasis in New York City. *Am. Jour. Trop. Med.*, 9 (5): 297.

An interesting critical review of the cases of amoebic dysentery that have been recorded at the Bellevue Hospital is published. The authors concluded, that the frequency of amebiasis occurring endemically in New York City is probably far greater than is commonly supposed. They are unable to reach any conclusion as to epidemiology of the endemic cases, but they believe that a great deal more attention should be paid to the diagnosis of carriers of *Endamoeba histolytica*.—*P. Morales Otero.*

CRAIG, CHAS. F.: The Technique and Results of a Complement Fixation Test for the Diagnosis of Infections with *Endamoeba histolytica*. *Am. Jour. Trop. Med.*, 9 (5): 277.

The author describes a complement fixation test to be used in the diagnosis of infections with *Endamoeba histolytica*. The technique is practically the same as the standard Wasserman technic used by the United States Army with a few modifications made necessary by the difference in character of the antigen used. A human hemolytic system is used. The antigen is an alcoholic extract of cultures of *Endamoeba histolytica* grown upon a modified Boeck-Drbohlav medium.

Results of six hundred and twenty-three tests in individuals whose feces have been examined and cultured are also published.—*P. Morales Otero.*

CORNBLEET, T.: The Use of Gentian Violet in Erosio Interdigitalis Saccharomycetica. *Arch. Dermat. & Syph.*, 20 (2): 184.

A method is described which has been used in twenty cases of erosio interdigitalis saccharomycetica with good results. Case reports are cited.

With a cotton-wool applicator the lesion is liberally painted with

a 2 per cent solution of aqueous gentian violet and after this has dried, Gram's solution of iodine is applied. Applications are made twice daily. The use of rubber gloves in household work is advised, and contact of the affected areas with soap and water and ordinary irritants is avoided whenever possible.—A. L. Carrión.

WHITE, G. F. and DOVE, W. E.: A Dermatitis Caused by Larvae of *Ancylostoma Caninum*. Arch. Dermat. & Syph., 20 (2): 191.

While conducting experimental studies on creeping eruption, a somewhat similar dermatitis was produced using larvae of *Ancylostoma caninum*, that infests the dog and the cat. Whereas papules followed by linear lesions characterize infections with *Ancylostoma braziliense* (creeping eruption), papules without linear extensions characterize infections with *A. caninum*. Owing to the extended geographic distribution of *A. caninum* and the ability of its infective larvae to invade the human skin, it seems likely that infections of the skin with this species may occur in widely different localities.—A. L. Carrión.

KINGERY, L. B.: Thymol and Cinnamon Oil in the Treatment of Ringworm of the Scalp. Arch. Dermat. & Syph., 20 (6): 797.

The results obtained in twelve patients suffering from tinea capitis treated exclusively with thymol and cinnamon oil are presented. The method carried out was as follows:

1. Clipping of the hair to the extent of $1\frac{1}{2}$ inches (3.8 cm.) around the border of the lesions when only one or two lesions were present.
2. Clipping of the hair of the entire scalp when the disease was generalized.
3. Constant wearing and frequent changing of a washable cap.
4. Bi-weekly soapsuds shampoo.
5. The application three times daily of a solution of gutta percha B.P.C., 12 containing one half of 1 per cent oil of cinnamon. In cases in which this resulted in irritation, the frequency of the application was decreased.

The results of this treatment were most promising. Tinea of the scalp has long been considered an obstinate disease. Considering the inevitable risk implicated from the use of the x-rays and of thallium acetate which are our most powerful therapeutic agents at the present time, any simple and efficient method to substitute the above mentioned should be most gladly welcomed.—A. L. Carrión.

BAKER, B. M.: Undulant Fever Presenting the Clinical Syndrome of Intermittent Hydrarthrosis. *Arch. Inter. Med.*, 44 (1): 128.

The author reports a case of unquestionable infection with *Brucella melitensis* in which joint symptoms, appearing and disappearing with regularity every seven days, were singularly striking. Definite disappearance of the signs and symptoms of the infectious diseases followed the administration of *B melitensis* vaccine and serum from a patient who had recovered from undulant fever. There was amelioration of the subjective joint disturbances and a temporary alteration in the hydrarthrosis following this treatment.

It is concluded that in this case the intermittent hydrarthrosis was part of the general picture of infection from *Brucella melitensis*, and it is suggested that infection by a member of this group of organisms might prove to be the cause of the clinical syndrome, intermittent hydrarthrosis, in other patients. It should be emphasized that during the period in which *Brucella melitensis* was cultured from the blood and urine, there were no agglutinins in the patient's serum. Thus differential diagnosis cannot be based solely on agglutination reactions.—A. L. Carrión.

CARBAT, A. L. and JACOBI, H. G.: Secretion of Bile in Response to Rectal Instillations. *Arch. Inter. Med.*, 44 (3): 455.

The authors offer the first proved experimental demonstration of the possible efficacy of this form of therapy. In each of eight cases it was uniformly noted that within a period varying from three to twelve minutes after the instillation of various solutions high into the rectum, a flow of bile was obtained from the duodenal tube. This flow would continue for a period varying from eighteen to even as long as sixty-one minutes without any interruption. In three of the patients the rectal instillations were repeated once and one of them twice. The solutions employed for instillation were, physiologic solution of sodium chloride, indigo, carmine, peptonized milk, methylene blue, dextrose and phenolphthalein. This variety certainly precludes the possibility of any specificity in the response on the part of the liver. In one instance air was used to inflate the lower bowel, but no flow of bile was obtained as a result of this procedure, although the response had been obtained twice before in this patient after the use of physiologic solution chloride and a solution of indigo carmine.

This fact would speak against a mechanical or nervous stimulation resulting from the mere filling of the rectum as being a cause

for the secretion of bile. In the cases in which indigo carmine, methylene blue and phenolphthalein were employed, it was proved that these solutions were actually absorbed from the lower bowel, as they were detected in the urine at varying intervals after rectal instillations. Similarly, in a diabetic patient on whom dextrose solution was employed the blood sugar determinations showed a progressive rise at the one and three hours periods.

These facts thus reveal that the introduction of various solutions into the lower bowel causes a definite flow of bile into the intestines. This method of bile drainage may prove of therapeutic importance in those cases in which the bile drainage by means of Lyon's method is impossible or inadvisable.

Another group of cases was studied for the purpose of determining whether such flow of bile was the result of stimulation of the bile-secreting or bile-expelling organs. Conclusive proof that this flow comes directly from the liver without contraction of the gall-bladder was offered by means of the X-ray picture.—*A. L. Carrión.*

LAMBIE, C. G. and REDHEAD, F. A.: The Antagonistic Action of Pituitrin and Adrenaline Upon Carbohydrate Metabolism with Special Reference to the Gaseous Exchange, the Inorganic Blood-Phosphate and the Blood-Sugar. *Biochem. Jour.*, 23 (4): 608.

In the human subject pituitrin frequently causes a transient fall in metabolism followed by a rise. Sometimes only a rise is observed. In small doses it causes a slight fall in the inorganic phosphate of the blood. Pituitrin apparently inhibits the slight rise in metabolism which occurs after the administration of insulin; but the changes produced by either insulin or pituitrin are not sufficiently marked to be of much significance. Pituitrin delays and reduces the rise in metabolism and the fall in blood-sugar following the intravenous administration of dextrose or dihydroxy-acetone.

Pituitrin in small doses sufficient to prevent the fall in blood-sugar resulting from administration of fifteen units of insulin did not prevent the fall in inorganic blood-phosphate.

Pituitrin administered in large doses to rabbits causes a transitory rise in the inorganic blood-phosphate and for a short period inhibits the fall in inorganic phosphate resulting from administration of dextrose or dihydroxy-acetone. A dose which just suffices to prevent the fall in inorganic phosphate following administration of dextrose may fail to overcome the fall due to dihydroxy-acetone. In animals rendered hypoglycaemic as a result of insulin administra-

tion pituitrin causes the blood-sugar and inorganic blood-phosphate to return to the normal level or even to exceed it.

Adrenaline administered alone causes a marked and rapid rise in metabolism which is not solely dependent upon the rise in blood-sugar. It does not inhibit the rise in metabolism following an intravenous administration of dextrose.

Adrenaline administered in large doses to hypoglycaemic animals causes a rise in the inorganic blood-phosphate.—*L. G. Hernández.*

COLLISON, D. L.; HUME, E. M.; MACLEAN, I. S. and SMITH, H. H.: The Nature of the Vitamin A Constituent of Green Leaves. *Biochem. Jour.*, 23 (4): 634.

The vitamin A activity of the unsaponifiable fraction from white cabbage is very small compared with that of the corresponding fraction derived from green leaves; this fraction, is active if given in sufficient amount. The respective minimal doses are about 10 and 0.25 mg.

The vitamin A substance of green spinach and cabbage leaves and of carrots is contained in the most highly unsaturated fraction of the unsaponifiable matter, and, as far as the process of purification here employed extends, remains associated with the carotene crystals.

The carotene crystals obtained from cabbage softened at 174° and melted at 178°, those from spinach at 163-4° and from carrots at 164-9°. The vitamin A activity is certainly not diminished in the specimen of higher melting point and of therefore presumably greater purity; in the specimen the active dose lies between 0.002 and 0.005 mg. No claim to a great degree of purity in the specimens of carotene separated is made, since the work carried out was on too small a scale to admit of sufficient recrystallization to ensure the separation of all impurities.

It is possible that the crystals may themselves be homogeneous and active, or that they may consist of two or more closely related substances only one of which possesses vitamin A activity.—*L. G. Hernández.*

YATES, T. M.: Treatment of Kala-Azar with Report of 92 Cases from Hope Hospital, Anhwei, China. *China Med. Jour.*, 43 (11): 1053.

Comparison is made of sixty-one casts of Kala-Azar treated with tartar-emetic and thirty-one cases treated with new organic salts of antimony (Stibsan'' and Neostam'').

By using the new preparations of antimony in place of tartar

emetic the mortality was decreased as well as the hospitalization period.

A study is made of the quantity of antimony necessary to produce a liver puncture from admission. In the group of thirty cases treated with organic salts of antimony who had liver punctures made, one only, was consistently negative. A notation of "ascites" C was made, possibly explaining difficulty in making a success puncture in this case. This case improved under treatment so it was probably true Kala-Azar.—*L. G. Hernández.*

HENDERSON, J. M.: Studies on the Sedimentation of Erythrocytes. *Indian Jour. Med. Research*, 17 (1): 40.

The statement that rise in temperature causes an acceleration in the sedimentation rate of erythrocytes does not in every instance hold true for samples of blood obtained from pathological cases. Ninety samples of blood from patients suffering from naturally acquired disease or from the effects of injuries were tested in duplicate, one sample being put up at ordinary room temperature, the other in the incubator. In thirty-two instances, the rate of sedimentation of the erythrocytes at incubator temperature was either equal to (two cases) or less than (thirty cases) that of the same sample of blood simultaneously tested at room temperature. The tendency for this abnormal type of reaction to occur seems to be roughly in inverse ratio to the deviation of the particular sample from its iso-electric point. In the absence of further evidence, it is idle to speculate on the intimate cause of the electric change which occurs in those cases showing an abnormal type of reaction. It seems possible that it is due to some alteration in the relative or absolute distribution of the plasma proteins.

The distance of the point of maximum sedimentation rate from the time of commencement of observation varies inversely as the sedimentation index of the sample.

Where it is desired to trace the variations in the sedimentation index of the blood of any particular case over a period of time, it is desirable that the successive observations should be made at constant temperatures.—*L. G. Hernández.*

CHAKRABARTI, S. N. and DHAR, N. R.: Investigation on the Products Obtained by Exposing Oils and Carbohydrates to Sunlight in Presence of Air. *Indian Jour. Med. Research*, 17 (2): 430.

It was shown by the authors that if olive, mustard, cocconut,

Mahua, castor oil, and linseed oils, butter and some carbohydrates are exposed to sunlight, and air is passed through them, peroxides are formed. These peroxides have been estimated by the amount of iodine liberated by them from an acid solution of potassium iodide.

If the oils are only exposed to sunlight and air is not passed through them, the amount of peroxides is decreased to a great extent. The amount of peroxide formed is due to the layer of air which comes in contact with the oil surface.

All these oil-peroxides have the property of oxidizing a solution of glucose when mixed with them and kept at 40°C for eighteen hours. The amount of this oxidation is dependent upon the availability of oxygen from the peroxide.

From the experiments on metabolism of pigeons using exposed and unexposed, oils, iron and sunlight, they have proved that sunlight is the best preventive for diseases like polyneuritis, and beriberi. Olive oil exposed to sunlight and air comes a close second. Whereas iron and unexposed oils are harmful to these pigeons.

The natural food with plenty of sunlight seems to be the best kind of diet for the maintenance of health.—*L. G. Hernández.*

YOUNG, E. G.: Endocellular Enzymes of *Bacillus Coli Communis*. *Biochem. Jour.* 23(5): 831.

The authors prepared emulsions of *B. coli communis* from stock cultures by growth on nutrient broth and agar, attaining concentrations of about 5×10^{12} cells per cc. These cells were destroyed by repeated freezings and thawings over a period of several hours, cellular debris has been centrifugalized off and the cellular extract passed through a Berkefeld candle. This liquid was tested for its enzymic activity on certain substrates anaerobically at 37°C. It hydrolyzes peptone at pH 7-8. It does not decompose glucose in the absence or presence of phosphate, and no hexosephosphate is formed.

The correlating studies of cell death by the freezing method with rate of mythelene blue decoloration by the Thumberg technique have shown that dehydrogenase activity on succinic and formic acids is independent of living cell concentration, but associated with cell stroma. Dehydrogenase activity on acetic and lactic acids, alcohol and glucose has been shown to be temporarily independent of living cell concentration, but is rapidly destroyed by the freezing technique. Toluene acts in a similar manner toward dehydrogenase activity. The conclusion is drawn that glucose and its fermentation

products may be dehydrogenated by "dead" organisms, judged by their reproductive powers, as well as by the living.—*L. G. Hernández.*

GUHA, B. C. and DRUMMOND, J. C.: Observations on the Concentration of Vitamin B. *Biochem. Jour.*, 23 (5): 880.

The authors describe the method of preparation of a concentrate vitamin B, from wheat embryo, thus giving the pigeon-curative day-dose of which is 0.005 mg., and which promotes good growth in rats in daily doses of 0.015 mg., when supplemented by vitamin B₂.

There is evidence presented which points to the multiple nature of vitamin B₂. There is a description of properties and reactions of the concentrates.—*L. G. Hernández.*

KOSER, A. S. and REITER, O. D.: Botulism Resulting from Consumption of Canned Onions. *Jour. Prevent. Med.*, 3 (6): 499.

The authors report two cases of botulism (one fatal) which developed in Chicago on January 25 and 26, 1929. The cases were due to the consumption of canned Italian onions (shalots). Botulism toxin type B. was demonstrated in the blood serum of the fatal case. The spinal fluid failed to show the presence of this toxin. Cl. botulism, type B, was also demonstrated in the ilium. Four hundred cans of onions from the same shipment examined showed over one per cent swelled cans. Cl. botulism type B. was isolated from one of the cans.—*E. Garrido Morales.*

AYCOCK LOYD, W.: Seasonal and age studies of poliomyelitis and what they suggest. *Am. Jour. Pub. Health*, 20 (1): 41.

The author reports on age and seasonal studies of poliomyelitis and makes comments on what they may suggest. He states that the age distribution of the disease suggests a widespread immunization of the population and consequently a widespread distribution of the virus. He further states that the seasonal prevalence of poliomyelitis strongly suggests that increased opportunities for contact due to closer aggregation of persons in winter is not the true explanation for the seasonal prevalence of common contact diseases such as measles, diphtheria, etc.

The author suggests the term "antarcesis" to express the power to resist infection which resides within the individual's normal physiologic functions and which does not require the provocation of the infectious agent for its production. He further suggests that an

initial infestation with the virus of poliomyelitis produces the clinical disease or an immunity largely according to the season of the year when infestation takes place.

In view of the hypothesis advanced he recommends that the field of antarciesiology should be explored to search for the means of prevention of the disease.—*E. Garrido Morales*.

GILBERT RUTH and GROESBECK, W. M.: Study of cultures monilia isolated from sputum. *Am. Jour. Pub. Health*, 20 (1): 1.

The authors report the isolation of strains of monilia pathogenic for white rats from the sputum of eleven patients among a large number of specimens received at the laboratories of the New York State Department of Health. In all the patients tuberculosis was suspected and no monilia examination was requested. Although the clinical picture of two cases reported, closely resembled that of tuberculosis, no tubercule bacilli were found in repeated sputum examinations. Monilia were found in their sputum. One of these two patients was a woman of fifty-one years of age who recovered completely in about a years time. The other patient, a man sixty-six years of age died nineteen months after onset of illness.

Proof is not presented nor claimed that the strains of monilia isolated from the sputum produced pulmonary lesions in the patients from whom sputum specimens were obtained. Authors admit some of the organisms were probably secondary invaders and some may have been derived from unobserved lesions of thrush in the mouth, throat or bronchi.

The authors conclude that the finding of such a large number of monilia capable of inducing characteristic lesions in laboratory animals among such a small percentage of sputum from patients with pulmonary lesions justifies a more careful investigation of the etiological relations of the organisms to the pulmonary symptoms present.—*E. Garrido Morales*.

SCAMMAN, C. L.: Milk-borne septic sore throat and scarlet fever. *Am. Jour. Pub. Health*, 19 (12): 1339.

A review of the literature, concerning milk-borne septic sore throat and scarlet fever in the United States from 1893 to 1928 is presented in this paper. Eighty-seven outbreaks of scarlet fever caused 8,368 cases and 39 deaths. Forty-five outbreaks of septic sore throat caused 22,431 cases and 187 deaths.

About three fourths of the recorded outbreaks of both diseases occurred between the months of December and May. In eighty-two per cent of the outbreaks of scarlet fever a milk handler was the probable source of infection as compared with fifty-five per cent of the outbreaks of septic sore throat. An unusual proportion of persons over fifteen years of age was recorded in certain milk-borne outbreaks in Massachusetts.

Bacteriological evidence is reported for streptococcus epidemicus as the causative agent of the Lee, Mass. outbreak. The Charlton outbreak was produced by the scarlatiniform strain of streptococcus while the Plymouth investigation showed cultures of both the epidemicus and scarlatiniform types.—*E. Garrido Morales.*