

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

293

Acute Polyarthritis

K. MOTZFELDT (*Norsk Mag. f. Laegevid.*, August, 1934, p. 905) prefaces his study of acute polyarthritis with an analysis of all the rheumatic diseases treated in his hospital in the nine-year period 1924-33. Among the 10,000 cases were 615 of rheumatic disease, acute polyarthritis heading the list with 140 cases. There followed sciatica with 115, muscular rheumatism with 103, osteoarthritis with ninety-four, chronic polyarthritis with eighty-four, gonorrhoeal arthritis with thirty-five, lumbago with thirty-two, rheumatic fever (without articular manifestations) with ten, and arthritis urica with two cases. Ninety of the 140 patients suffering from acute polyarthritis were women. It was most common in the late winter and spring, and between the ages of 20 and 30; it was rare after 40. Of the forty-eight patients with a record of one or more earlier attacks of acute polyarthritis as many as twenty-five showed signs of heart disease. In only one case was there a history of exposure to cold—that of a boy of 15, who had betted that he could be out all one night in the winter. In no fewer than sixty-two cases (44 per cent.) the disease was associated with tonsillitis, and in ten other cases with a catarrhal infection without tonsillitis. Six patients developed their first attack of acute polyarthritis after they had undergone tonsillectomy. Since 1926 the sedimentation test has been systematically employed by the author and found invaluable in the clinical control of the disease. The sedimentation rate was never normal in this disease, and during convalescence this test was the only means of ascertaining whether the disease was smouldering or not. Before 1926 the average stay in bed was six weeks; since then it has risen to nine weeks in response to the warnings of the sedimentation test. Electrocardiography has convinced the author that heart disease is an integral component of acute polyarthritis, for which the best treatment is prolonged rest in bed. He does not regard salicylates as a specific.

294 Fatal Intoxication by Sodium Salicylate

G. PAISSEAU, E. FRIEDMAN, and C. VAILLE (*Bull. et Mém. Soc. Méd. des Hôp. de Paris*, July 16th, 1934, p. 1201) record a case (a child aged 10 years) of rheumatic endocarditis in which, after five days' salicylate treatment (2 grams intravenously and 5 grams rectally), symptoms of intoxication, due to an acidoketosis of salicylate origin, together with renal insufficiency, developed. Despite intensive alkalinization death occurred three days later. The post-mortem revealed discrete renal lesions and massive fatty degeneration of the liver. Two peculiarities were noted in this case (*ibid.*, p. 1211): a lowering of the cell-plasma chlorine ratio and hyperglycaemia. Insisting on the rarity of death following this medication, the authors suggest an individual predisposition as a factor. They still advocate large doses of the salicylate, but advise that double doses of sodium bicarbonate be given simultaneously. Examinations for acetonuria should be made systematically. The salicylate should be immediately suppressed, and large intravenous and rectal doses of sodium bicarbonate administered at the onset of the intoxication; insulin may be added if hyperglycaemia appears with the acetonuria, and rechlorination instituted if a blood chloropenia be present.

295

Generalized Xanthomatosis

According to K. HERMAN (*Münch. med. Woch.*, July 20th, 1934, p. 1100) the Hand-Schüller-Christian disease, of which Christian was the first to describe the characteristic symptom-complex (skull defects, exophthalmos, and diabetes insipidus), was first recognized by Rowland in 1928 to be a manifestation of generalized xanthomatosis with hypercholesterinaemia. This rare metabolic disease,

of which some seventy cases have been recorded, and which was practically unknown in Europe until six years ago, is characterized by infiltration of certain organs by a special type of granulation tissue, containing cells filled with cholesterol. The gastro-intestinal tract is least commonly affected. The Hand-Schüller-Christian syndrome is simply one specially common group distribution of xanthomatosis. The affection of the skull in "cartographical" areas is characteristic, but is frequently absent, so that diagnosis is difficult. The hypercholesterinaemia may diminish considerably in old-standing cases. The prognosis is worse in juvenile cases, and the average mortality is 30 per cent. No racial or hereditary factor is known with certainty. Herman's case was recognized from (1) ulcerative tumour-like bluish-red cutaneous infiltrations of the thighs, (2) diabetes insipidus, (3) areas of xanthoma on the eyelids, and (4) blood cholesterol increased to 320 mg. Successful treatment consisted in α -radiation of the thighs, injections of hypophysin, and reduction of fat intake.

Surgery

296 Apparent Recurrences after Renal Calculus Operations

F. MORL (*Zentralbl. f. Chir.*, July 14th, 1934, p. 1648) remarks that with improving radiographical diagnosis and less frequent splitting of the kidney at operation mortality in renal calculus has been diminished, but subsequent recurrences have increased. These apparent recurrences—reported by some to reach 50 per cent.—are nearly always due not to new stone formation but to an existent stone being overlooked at operation. Their increased frequency is attributable to (1) the present tendency to place too much reliance on radiology, which in 10 per cent. of cases fails to show a stone or one of several stones which are present; (2) the employment of simple pyelolithotomy in cases not suited to its relatively narrow true scope; and (3) digital investigation being done without rubber gloves having been previously discarded. The surest preventive of "recurrence" is α -radiation before the operation is concluded. Next in importance, Morl believes, is the search with the ungloved hand: he relates the histories of four cases in which stones impalpable through rubber gloves were detected by the bare fingers.

297

Causes of Death after Appendicitis

S. MÜLLER (*Hospitalstidende*, July 24th, 1934, p. 34) has analysed the causes of the sixty-one deaths occurring during eleven years among 1,087 patients on whom appendicectomy was performed for acute appendicitis. Among the forty patients whose death was due to peritonitis were twenty-four whose admission to hospital was tardy. In all of the latter there was an interval of forty-eight hours or more between the onset of the symptoms and admission to hospital. In most instances medical aid had been sought too late, but in an indeterminate number the medical practitioner was responsible for the delay. In this connexion the author mentions the tendency of appendicitis to begin acutely and then to run a more or less "subterranean" course for the next two or three days, after which it flares up again. Among the forty peritonitis fatalities there were, however, eleven patients who had been admitted to hospital within the first twenty-four hours. In the remaining five cases of fatal peritonitis the operation had been deferred for some time for various reasons. There were nine deaths from sepsis which in six cases developed after an attack of peritonitis had subsided. There was only one death from subphrenic abscess. Embolism of the pulmonary artery and septic infarct each accounted for two deaths, and pyelophlebitis and emollitio cerebri each for one death. There remained five deaths from intestinal obstruction, and in connexion with these cases the author is inclined

to wonder if such fatalities may not be reduced by the avoidance of extensive drainage. He himself has not extended drainage beyond the right iliac fossa, and he is inclined to ask if even such limited drainage may not be excessive and provocative of ileus.

298 Ricard's Amputation

In certain injuries of the foot TONDEUR (*Le Scalpel*, July 21st, 1934, p. 1013) prefers Ricard's to other better-known amputations. This operation, in which the os calcis is conserved, consists essentially of inter-tibio-calcaneum disarticulation, astragalectomy, and the placing of the os calcis in the tibio-fibular mortise, thus forming a new joint; finally the extensor tendons and the plantar muscles are sutured together, and the plantar and dorsal flaps. Astragalectomy lessens the bony mass to be covered and increases the size of the dorsal flap and the relative length of the Achilles tendon. Conservation of the os calcis provides a normal heel and gives absolute steadiness to the stump. Both measures prevent ultimate equinism. The primary incision varies with the extent of the injury; if made at the calcaneo-cuboid articulation, excision of successive layers of the os calcis is necessary; if only 3 cm. in height of this bone is conserved, very good results are still obtained. The advantages of a Ricard amputation are: only slight shortening of the limb and the formation of a painless, mobile, well-covered stump. It is indicated in trauma, in tuberculosis of the medio-tarsal articulations, and in correction of useless stumps. Details of a case with a full description of the operation are given.

299 Cystin Stones

W. POLLAK (*Zeit. f. Urol.*, July, 1934, p. 480) draws attention to recent reports of cystinuric subjects who, although excreting cystin in solution, have no cystin sediment in the urine and no stone formation in the urinary tract. Scepticism therefore seems justified concerning cases in which a familial cystinuria is denied because a family history of stone is not obtainable. He describes two cases in which cystin stones cast excellent shadows on the x-ray screen (equally as dense, in one case, as contralateral phosphatic oxalate stones of the same size). These and numerous similar cases from the literature appear to shatter the older statements that cystin stones cast faint shadows or none at all. In one of Pollak's patients cystin stones had existed in both renal pelvises since childhood; their removal in the third decade, after the establishment of chronic urinary infection, was followed by repeated production of stones consisting of calcium oxalate, calcium phosphate, and triple phosphates.

Therapeutics

300 Treatment of Hiccup

E. C. NOBLE (*Canadian Med. Assoc. Journ.*, July, 1934, p. 38), discussing the aetiology and treatment of hiccup, draws attention to the great variety of causative factors, and states that various remedies may be effective in different cases. In cases when the hiccup is associated with infection of the upper respiratory passages, the throat may be sprayed with a 2 per cent. solution of cocaine, and a 20 per cent. solution may be applied to the larynx, warm alcohol being slowly dropped into the trachea. The local application to the nasopharynx of menthol or cocaine may also be effectual. If it is due to the constant, direct, or reflex stimulation of the phrenic nerve in such cases as mediastinal new growth or diaphragmatic pleurisy, the only therapeutic measures of any avail will be those which depress the sensitivity of the nerve endings or central nervous system to such a point that conduction is interrupted, or which involve the actual crushing or severing of the nerve. Drugs worthy of trial, but usually in maximum doses, are atropine, luminal, nembital, the bromides, chloral, hyoscine, morphine and its compounds, heroin, nitroglycerin, and quinine. Noble has had good results with sodium amytal in prolonged hiccup. A dose of 7 to 10 grains is given intravenously, or until the

patient becomes unconscious during its administration. The effect is immediate, and lasts usually from two to six hours, when it may be repeated. On account of its tendency to produce pharyngeal paralysis, the patient must be kept constantly under observation. When hiccup arises from the gastro-intestinal tract, removal of the cause is indicated; the induction of vomiting will often suffice, but, if not, gastric lavage with alkalis should be a routine procedure. This is particularly the case in post-operative hiccup arising early. After lavage, various stomachics or anodynes may be used, such as the tinctures of capsicum or belladonna, chloroform, benzyl benzoate, ginger, peppermint, and chloroform. In the infectious type of hiccup described by Mayo and Rosenow an antibody globulin solution was effective in cases in which a specific organism was isolated. After an initial desensitizing dose, 2 to 5 c.cm. was injected intramuscularly two or three times daily, one dose being found effective sometimes in stopping the symptoms. Caution is advised in the application of surgery involving the phrenic nerve on account of the potential risk of hypostatic congestion following paralysis of the diaphragm.

301 Acetylcholine in Hemiplegic Seizures

By statistics and personal cases F. SCICLONOFF (*Presse Méd.*, July 14th, 1934, p. 1140) shows that acetylcholine therapy greatly improves the chances of cure or marked amelioration in cases of hemiplegic attacks due to recent cerebral softening, and even in those of some days' duration and definitely established. Four illustrative cases are recorded. He injects daily for at least twenty days, or until results are obtained, 10 to 20 cg. of the hydrochlorate. For ten days during each of the three following months preventive doses of 10 cg. are given, and subsequently similar doses every two or three months. Treatment, which is more efficacious in younger subjects, should commence as soon as possible after the seizure. The injections are painless, and no signs of idiosyncrasy or intolerance have been noted. Numerous authorities practise this method also in seizures following cerebral haemorrhage and thrombosis. The favourable results obtained are thought to be due to the vaso-dilatory action of the drug on the cerebral arteries, and to its peripheral vaso-motor action.

302 Cibalgin Suppositories after Operations

J. BETZNER (*Deut. med. Woch.*, July 13th, 1934, p. 1053) reports from a hospital in Düsseldorf his experiences with cibalgin, which has hitherto been given only by the mouth or by injection. The suppositories he has used have each contained two tablets of cibalgin or the equivalent of 0.44 gram dimethylaminophenazone and 0.06 gram dial. A suppository was inserted on the evening of the second day after an operation or accident instead of an injection of morphine. In 90 per cent. of all the cases the patients were rid of pain and other symptoms, but about 40 per cent. missed the hypnotic effect of the injection of morphine they had received on the first night. To remedy this defect the author inserted a second suppository three hours after the first. The patients then fell asleep about half an hour later, and next morning they did not complain of any symptoms referable to the heart or intestines. There was no excitation phase, nor that intestinal paralysis which is apt to follow the administration of morphine or one of its derivatives, particularly after an abdominal operation. The suppositories also eliminated the risk of morphine addiction. They were successful in all the cases of dysmenorrhoea and other gynaecological ailments given conservative treatment, both headache and pain disappearing in about half an hour. The pain of pleurisy was also relieved, but the results were less satisfactory in cases of biliary colic, for which the intravenous and intramuscular injection of this drug may be more suitable. In chronic diseases such as osteomyelitis and purulent arthritis requiring prolonged treatment, cibalgin in a suppository was found an effective and harmless substitute for morphine. The author publishes a tabular analysis of the 119 cases treated with cibalgin suppositories, whose use was never followed by addiction or other harmful consequences.

Neurology and Psychology

303 Statistics of Disseminated Sclerosis

H. C. GRAM (*Ugeskrift for Læger*, July 26th, 1934, p. 823) has studied the distribution of disseminated sclerosis in Denmark, his material consisting of the 689 patients who applied for insurance benefit on account of this disease under the national insurance scheme. Most of these patients had been subjected to an expert medical examination, neurological and otherwise, and there could therefore be little doubt as to the accuracy of the diagnosis. There were only a few cases presenting the Charcot triad, alone or in conjunction with other signs, and the features common to most were spastic paraparesis and ataxia. There were 312 male to 377 female cases, and the age at which the symptoms began was between 20 and 40 in as many as 494 cases. In view of the growing tendency to regard disseminated sclerosis as an infection, and encouraged by the geographical studies of J. Wilson in England, the author has charted all his cases geographically, and has thus succeeded in showing that the disease tends to be comparatively common in some areas and non-existent in others. This irregularity of distribution was even more marked than in the case of the three other diseases hitherto geographically studied by the author—asthma, leukaemia, and polyarthritis. In the towns of Copenhagen and Frederiksberg there were only twenty-four cases per 100,000 insured persons, whereas the corresponding figure for rural areas was fifty-one. The author offers no explanation for the comparatively low incidence of this disease in large towns, nor for its tendency to bunch in certain areas while giving a wide berth to others.

304 Sclerotic Atrophy of the Cerebellum

G. B. HASSIN (*Arch. Neurol. and Psychiatry*, June, 1934, p. 1205) records two cases of sclerotic atrophy, the patients being women, and aged respectively 27 and 32. In both the pathological process was limited to a few lamellae of the cerebellum, all the nerve elements being degenerate and replaced by glial tissue. As in amyotrophic lateral sclerosis the pathological change is nuclear, but in that disease the system of ganglion cells of the nuclei of the motor cranial and spinal nerves is involved, while in this form of cerebellar atrophy the degeneration involves the system of Purkinje and other ganglion cells which make up the strata of this organ. The cause of the degeneration is unknown; in one of the author's cases the disease was associated with leukaemia, and in the other with dementia praecox. Hassin believes that cerebellar atrophy may be an acquired morbid condition, and in long-standing cases may result in sclerosis of parts of the cerebellum (sclerotic atrophy). The lateral lobes, especially the upper semilunar and the quadilateral, may alone be involved, or they may be affected together with the vermis. The cerebellar atrophy resulting from sclerosis has its homologue in the cerebral atrophy and sclerosis known as Pick's disease, and is characterized by no special histological features. The striking pathological manifestation is calcification of the Purkinje cells in the areas that are undergoing atrophy. The clinical signs cannot be considered specific, and, since they may be absent, a pathological condition of this kind cannot be diagnosed during life. In the author's two cases, the upper and lower vermis escaped, and the changes were limited to the upper or anterior lobes of the cerebellum. In some cases in the literature the pons, olivary bodies, and red nuclei were also involved.

305 Ocular Paroxysms and Palilalia

L. VAN BOGAERT (*Journ. Nerv. and Ment. Dis.*, July, 1934, p. 48) considers it proved that oculogyric spasms, one of the most significant symptoms of the inhibitory states observed in encephalitis, indicate a condition which extends far beyond the ocular localization, and presents a whole extrapyramidal, psychic, and sympathetic symptomatology. He records a study of the relation of these crises to phenomena of iteration and speech inhibition,

considered in their widest psychomotor interpretation as well as in their expression. He gives details of three cases, having in common the fact that speech difficulties occurred in Parkinsonian patients in connexion with ocular paroxysms. In one instance true palilalia began and ended simultaneously with the ocular movements; in the second the tendency to reiteration appeared when reading, and extended to the beginning of true palillexia, differing from echopalilalia in its expression only in words unspoken but read silently; in the third the palilalia was not always present during the attack, the Parkinsonian patient with mutism having the verbomotor mechanism set free by the oculogyric crisis, thus producing palilalia. Repetition of words, whether written or spoken, did, in some instances, arrest the eye symptoms. The author mentions the strong erotic content observed at the onset or recurrence of these crises, and suggests that a greater wealth of affective material is hidden behind these psychomotor phenomena than is generally suspected, but he does not believe that they are always and necessarily the equivalent of erotic expression. He recalls the fact that anxiety is the state most conducive to such crises. He regards the oculogyric attack as an inhibitory crisis, revealing an innate antagonism between a general and a localized inhibition, which is deserving of greater attention than it has yet received.

Obstetrics and Gynaecology

306 Gynaecological Tumours and Sterility

M. PELLEGRINI (*Ann. di Ostet. e Ginecol.*, June 30th, 1934, p. 825) reviews the literature on the relation between tumours of the genital organs in women and sterility, and records his observations on 134 cases of genital tumours admitted to the obstetrical department of the Ospedale Maggiore at Bergamo during the period April 1st, 1931, to March 31st, 1933. His conclusions are as follows. Tumours of the uterus and ovary occur with equal frequency among fertile and sterile women. Carcinoma of the uterus shows a predilection for fertile women, while primary malignant tumours of the ovary are most frequent in sterile women with congenital utero-ovarian hypoplasia. On the other hand, benign tumours of the ovary and uterine fibroids are much more frequently met with in fertile than in sterile women. Finally, there is no evidence that the development of gynaecological tumours is caused or favoured by endocrine disturbance of the sexual glands, apart from primary malignant ovarian neoplasms.

307 Treatment of Sexual Frigidity in the Female

E. B. RIES and A. S. PEREIRA (*Semana Médica*, June 14th, 1934, p. 1882), having investigated over 300 cases of alleged sexual frigidity in women, found that 60 per cent. suffered from sexual indifference, 10 per cent. from dyspareunia, 20 per cent. were in all ways normal, and 10 per cent. arrived at sexual relations by previous excitation of the automatic centre through masturbation, or by refusal of licentious literature, and were "erotics" with a pathological exaggeration of the orgasm. The writers found that Narjani was wrong when he stated that if the clitoris is more than 2 cm. from the urinary meatus, coitus fails to gratify the female. Many of their cases disproved his theory. They place the frigid in three categories: (a) cases in which there is both anaesthesia and absolute repugnance to sexual contact, (b) those with anaesthesia, but with only relative repugnance, and (c) the merely indifferent. The latter are the most numerous. The authors believe that the great majority of females are frigid because of the behaviour of the male partner, who reserves to himself all indulgence of sex feeling and compels the woman to restrain her normal impulses and to adopt a regimen of physical impotence which completely blunts them. In not a few of the cases quoted, the authors found it useful to instruct the husbands. They state that the anterior lobe of the pituitary gland has an outstanding effect on the orgasm, which it accentuates in the normal

and begets in the frigid, always provided that this frigidity is not due to an organic lesion. The contents of one capsule, or more rarely of two, were administered by the subcutaneous route daily. As a rule some improvement was noticed in a week or two, but in some cases it was found necessary to administer as many as sixty capsules before a conclusive result was obtained.

308 Cancer following Subtotal Hysterectomy

E. VON GRAFF (*Amer. Journ. Obstet. and Gynecol.*, July, 1934, p. 18) commends total hysterectomy for general use, reserving the subtotal form for selected cases, because he believes that a patient with an amputated uterus is menaced for the rest of her life by the possibility of cancer of the cervix. He cites statistical evidence showing that cancer of the stump was the lesion in 8.3 per cent. of 263 cervical carcinoma cases, and 6.3 per cent. of 344 cases of carcinoma of the uterus, demonstrating therefrom that removal of the stump together with the body of the uterus would have resulted in a considerable decrease in the incidence of cervical cancer. The author believes that undue importance is attached to lacerations of the cervix and cervicitis following childbirth as aetiological factors. He cites evidence that Jewesses are protected by racial immunity against cancer of the cervix—a fact, he thinks, which may explain somewhat the prevailing conflict of opinion as regards the danger and frequency of stump cancer following subtotal hysterectomy. A common concomitant of cervical cancer is the presence of fibroids in the uterus. Failure has attended attempts to prevent stump cancer by destroying the cervical mucosa, because more than 80 per cent. of these cases originate from the squamous-cell epithelium of the vaginal portion of the cervix. Even the most elaborate excision of the mucosa, including the muscular wall, will not prevent it. Nulliparous as well as parous women may be affected, and the age of the patients has no particular significance. Von Graff argues that, since considerably more than half of the patients with stump cancers die, these losses should be taken into consideration when comparing the mortality rates of the total and subtotal operations.

Pathology

309 Experimental Chronic Peptic Ulcer from Caffeine Administration

H. HANKE (*Klin. Woch.*, July 7th, 1934, p. 978), experimenting on cats, was able to produce chronic gastric ulcer similar in all respects to that in man. Caffeine sodium salicylate 2 to 3 grams was injected subcutaneously daily. The cats were given a large meal at night, the remains of which were removed in the morning. The injection was given at noon, so that they fasted four hours prior to, and six hours after, each injection. Eight of the ten experimental cats died spontaneously, but in two characteristic ulcers were found at the end of two months: two control cats, fed in the same manner but not receiving injections, showed no signs of ulcer. Hanke believes that the ulcers were undoubtedly produced by the caffeine acting on an empty stomach and eroding the mucous membrane. The continual ingestion of large doses of caffeine has, he thinks, the same effect on human gastric membrane, producing a peptic gastritis, due to excessive production of gastric juice on the mucous membrane of the empty stomach, and leading to chronic peptic ulcer.

310 Spirochaetes of the Mouth

R. VINZENT and M. DAUFRESNE (*C. R. Soc. de Biol.*, 1934, cxvi, 490) record briefly the results they have obtained in classifying the buccal spirochaetes. Working on the belief that a proper classification would be possible only when these organisms had been studied in pure culture, they proceeded to isolate spirochaetes from the mouths of patients with pyorrhoea and stomatitis. Using a medium made up with serum, agar, and a fragment of tissue under

a seal of vaseline, they isolated eleven strains of spirochaetes. These strains have been provisionally classified into six groups, labelled A to G. Group A is not yet identified. It differs from B in the greater motility and suppleness of the organisms morphologically, and in the absence of a fetid odour in culture. Group B corresponds to *Sp. microdentium*, and is the easiest of all to cultivate. Group C corresponds morphologically to *Sp. skoliadonta* (Hoffmann) and probably to *Sp. acuta* (Seguin). Group D is certainly identical with *Sp. trimerodonta* (Hoffmann) and *Lepto. buccalis* (Fontana), though it is not a true leptospira. Group F is a large group, and corresponds to *Sp. macrodentium* (Noguchi). Group G is also an important group, but so far only one member has been isolated, which apparently belongs to the species *Sp. buccalis* (Cohn). This organism, which under dark-ground illumination appears as a large spirochaete with a double contour, and which is abundant in Vincent's angina, has not yet been obtained in pure culture, though it has been cultivated for many months in association with other organisms. The detailed description of these various organisms will be given in a subsequent paper.

311 Apparatus for Detecting Free Gastric Acid

A method of testing for free acid successive samples of gastric contents withdrawn by controlled suction is described by H. NECHELES and L. SCHEMAN (*Journ. Amer. Med. Assoc.*, July 14th, 1934, p. 107), who point out that by ordinary methods of examination a small quantity of free hydrochloric acid escapes detection, having been neutralized by mucus after withdrawal. The apparatus consists of a glass T-tube, the vertical limb of which is wide enough to hold a stopper with a bore, through which is passed the lower end of a burette filled with Töpfer's reagent. One end of the T-piece is connected to a suction device, with a mercury manometer and needle valve, while the other is joined to the stomach tube. Small sealed glass tubes with various concentrations of hydrochloric acid and reagent may be attached along the horizontal part of the tube for comparison. As the suction begins to work and the stomach contents appear in the T-tube, drops of Töpfer's reagent are allowed to fall on them from time to time, and the colour reactions are noted. Mucus, bile, and pure stomach juice can thus be tested separately before admixture and consequent neutralization. In this way the authors have been able to demonstrate free acidity in eighteen out of twenty patients with subtotal gastrectomies, and to elucidate the problem presented by an apparently complete anacidity and a lack of response of the acid secretion of the stomach even to histamine in patients complaining of heartburn and the vomiting of sour material.

312 The Abortive Action of *Br. abortus*

I. L. KRITSCHESKI and E. P. HALPERIN (*Zeit. f. Immunitäts.*, July, 1934, p. 421) have attempted to find out why *Br. abortus* gives rise to abortion. Preliminary experiments in rabbits showed that this organism was incapable of giving rise to the Schwarzmann phenomenon, and it therefore appeared as if this phenomenon was unlikely to be concerned in undue contractions of the sensitized uterus. The direct action of the endotoxin of the organism was then investigated on the virgin uterus of the guinea-pig. A so-called endotoxin was prepared by heating a thick saline suspension of *Br. abortus* to 60° C. for two to two and a half hours. The effect of this extract on contraction of the uterine muscle was tested by the Dale technique. A marked contraction was observed to follow the addition of 0.5 c.cm. of a 1 in 50,000 solution of histamine. Control experiments made with the typhoid bacillus, Friedländer's bacillus, and *Staphylococcus aureus* showed that these organisms had little or no effect on uterine contraction. Further work, shortly to be published, by Kritschewski and Galonowa disclosed the interesting fact that the uterus of guinea-pigs that had been immunized against *Br. abortus* did not respond to the endotoxin. If this should be confirmed it would explain, as the authors point out, why living or dead vaccines of *abortus* should protect against actual abortion while being unable to destroy the organisms in the body.