EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

413. Etiology of Pernicious Anaemia.

A. ENGEL and G. OLIN (*Acta Med. Scand.*, February 28th, 1929, p. 150) remark that the theory of the intestinal origin of cryptogenic anaemia has been accepted generally for nearly thirty years. Dibothriocephalus anaemia closely resembles pernicious anaemia, and toxic substances capable of producing anaemia have been prepared from that parasite. In the great majority of cases of pernicious anaemia the nature and origin of the toxic substance are unknown, though in view of recent clinical and experimental investigations it may be presumed to be of intestinal origin. Several investigators have observed the simultaneous occurrence of pernicious anaemia and intestinal stricture, and that achylia gastrica, almost invariably associated with the disease, frequently precedes it by several years. Pernicious anaemia is always accompanied by pathological changes throughout the entire digestive tract. It has been proved that, though under normal conditions *B. coli* is not found in the stomach, duodenum, or jejunum, in cases of achlorhydria they appear occasionally in the stomach and duodenum, and in pernicious anaemia almost constantly in the stomach, duodenum, and jejunum. The present authors have investigated the production of agglutinins in the blood serum acting upon *B. coli* isolated from the same patient's faeces. They found that, as a general rule, agglutinins were not formed when these organisms were absent from the upper part of the alimentary tract. On the other hand, in gastric achylia and pernicious anaemia *B. coli* agglutinins were found in the blood serum in 17.2 and 55.2 per cent. respectively of the cases examined. Agglutination never occurred in patients who had no *B. coli* in the stomach contents. The authors believe that the occurrence of these agglutinins in the blood in cases of pernicious anaemia is due to the presence of that organism in the stomach and small intestine. They reject the theory of some American authorities that pernicious anaemia is caused by anaerobic bacteria, especially by *B. perfringens* or by certain haemolytic streptococci, and maintain that *B. coli* is the chief if not the only bacterial agent in the etiology of pernicious anaemia. They found no difference in the degree of agglutination between serious and slight cases of pernicious anaemia, nor between recent cases and those which had passed through several remissions.

414. Bell's Facial Paralysis.

C. ROSENHECK (*Med. Journ. and Record*, March 6th, 1929, p. 266) states that, anatomically, a facial palsy may supervene at any point between the cortical origin of the facial fibres to the point of exit at the stylo-mastoid foramen, where the facial nerve divides into several branches to supply the facial muscles. The differences between the central or cortical types of palsies and the peripheral forms (Bell's palsy) are discussed. One diagnostic difference is that in central facial palsies the upper half of the face escapes, while in the peripheral forms the entire face is involved. The former condition is due to the fact that bilaterally acting muscles have representation on both sides of the cortex, so that if disease affects one side the other continues to function. No age is exempt from Bell's palsy, and exposure to wind and cold is usually insisted on by patients as the direct cause. Subjective symptoms are generally inconsequential, the paralysis being the first manifestation, and constitutional symptoms are rare. The degree of involvement is variable, ranging from a mild palsy to a very severe paralysis. The most marked objective symptom is total paralysis of all the muscles on one side of the face, including the forehead and those that close the eye. The electrical response of the paralysed muscles gives valuable information, and there is generally a gradual or total reduction of faradic response with the same phenomena observed with the galvanic current. Very satisfactory results have followed rational treatment; electricity is an important measure, and the type of current that produces contraction in the affected muscles should be employed. The sinusoidal current with its gradual ascent and descent is probably the best. Systematic massage or manipulation of the paralysed muscles and voluntary exercise in reproducing normal movements are of great value. Persistence and patience in treatment are necessary and bring about good results. Rosenheck adds that the haphazard application of electricity should be avoided.

415. B.C.G. Vaccination.

J. A. A. MUÑOYERRO (*Arch. de med., cir. y esp.*, March 23rd, 1929, p. 369) records his observations on 757 infants at the foundling hospital at Madrid who had been inoculated with the Calmette-Guérin bacillus vaccine against tuberculosis. The general mortality was 28.5 per cent., as compared with 35 per cent. among 1,174 infants who did not receive the vaccine, and the mortality from tuberculosis 2.24 per cent., as compared with 4.25 per cent. among the controls. Muñoyerro concludes that, in view of the smaller number of cases of tuberculosis found among the vaccinated, the B.C.G. vaccine is not dangerous. It does not invariably protect against tuberculosis, though possibly in the vaccinated cases in which tuberculosis was found the infection was of intrauterine origin, or so massive in amount that vaccination had no power to control it. The author thinks that before the employment of B.C.G. is generalized or its use made compulsory it should be restricted to maternity hospitals and orphanages, or to patients living in an infected environment, from which the vaccinated subject should be immediately removed.

416. Toxic Jaundice.

K. MOTZFELDT (*Norsk Mag. f. Laegevid.*, March, 1929, p. 283), who records an illustrative case, remarks that different preparations of chinolin, such as atophan and cinchophen, are widely used by the public in the treatment of rheumatic and arthritic pain, and are recommended without restriction in textbooks of pharmacology as being less toxic than the salicylates. During the last two years there have been recorded 25 cases of severe toxic jaundice, including those of Willcox (*Journal*, 1926, ii, 273) and Wells (ibid., 759), 10 of which were fatal from acute yellow atrophy of the liver. Motzfeldt's patient was a woman, aged 27, in whom severe toxic jaundice developed after she had taken a total of 117 grams in two periods during a course of two months for rheumatic pains. Recovery gradually followed.

417. Paroxysmal Sneezing in Pertussis.

H. S. REICHLE (*Journ. Amer. Med. Assoc.*, February 9th, 1929, p. 443), who records two illustrative cases in infants aged 20 and 2 months respectively, states that paroxysmal sneezing may be of great value in the early diagnosis of pertussis, since in young children it may entirely or partially supplant the cough. The attacks are generally convulsive, cause congestion of the head, cyanosis, and exhaustion, and may end in the expulsion of the usual tenacious mucus through the mouth and nose. They may be accompanied by coryza, an inspiratory crow, and vomiting. The few cases seen by Reichle or described in the literature have been moderately severe but not fatal.

Surgery.

418. Arterial Embolectomy.

H. KOSTER (*Amer. Journ. Surg.*, March, 1929, p. 306) believes that the only hope of successful embolectomy lies in early diagnosis and operation, since the mortality rate increases sharply with every hour of delay. As soon as the obstruction occurs secondary thrombosis may begin and so lessen the chances of re-establishing the circulation. Emboli may arise from the heart, the pulmonary veins, the systemic veins, or the arterial tree trunk; no form of heart disease is free from the danger of embolism, the tendency being increased in valvular disease, especially in mitral stenosis. Mural auricular thrombosis occurs often in myocarditis with auricular fibrillation. Thrombus formation depends on platelet accumulation, which develops with circulatory stasis. Thrombosis may be found in both sides of the heart and give rise to simultaneous pulmonary and systemic circulatory embolism with infarction of the lung and gangrene of an extremity. The symptoms are sudden severe pain in the affected extremity, diminishing as the nutrition to the part is lessened; cold and numbness are complained of, and there is disturbance of sensation. The skin changes colour and becomes marble-white, blotchy, and later lividly mottled. The temperature of the limb falls, the skin and tendon reflexes are lost, and pulsation ceases. When the embolus is in a small vessel, without danger of gangrene, heat and vigorous massage should be the treatment, but when in a large vessel embolectomy should be immediately performed. Spinal block anaesthesia should be employed, since

it lowers the blood pressure and gives maximal relaxation. The incision should be made below the embolus, and the latter be extracted by gentle massage, the wound being closed by continuous suture. Reports show that of 75 operations within ten hours of occlusion 34 were successful; of 14 between ten and fifteen hours 3 patients recovered; of 13 cases between twenty and thirty hours only 2 patients were cured; and of 9 cases operated on between thirty and forty-eight hours after occlusion only one was successful. No case was successful when forty-eight hours elapsed before the operation. The best ultimate results were in embolism following an operation or parturition without cardiac lesions.

419. Treatment of Intestinal Obstruction.

T. G. ORR and R. L. HADEN (*Annals of Surgery*, March, 1929, p. 354) classify the treatment of acute intestinal obstruction under five headings: removal of the mechanical obstruction; relief of dehydration; treatment of hypochloraemia; relief of starvation; and drainage of the small bowel by an enterostomy. They emphasize the importance of early diagnosis and surgical treatment before change has taken place in the chemistry of the tissues and fluids; but before any operation is undertaken the patient should receive large quantities of water, salt, and glucose, and the total quantity of liquid given during twenty-four hours while the acute stage lasts should not be less than 4 to 6 litres. Water should always be given in the form of salt solution; in the hypochloraemia of intestinal obstruction sodium chloride is an essential part of the treatment, and tends to restore the blood chlorides to normal. By using hypodermoclysis and intravenous injection, 3 to 4 litres of water and 50 to 75 grams of sodium chloride can be given in the 24 hours before operation. After the operation the administration of salt solution should be continued until the patient is out of danger, and glucose should be given intravenously in 10 to 25 per cent. solution at the rate of 0.8 to 0.9 gram of glucose per kilo of body weight per hour. A patient weighing about 11 st. can assimilate 56 to 63 grams of glucose per hour, which furnishes 200 to 250 calories of energy. It is considered that dehydration and hypochloraemia are largely responsible for death in intestinal obstruction. Enterostomy as a preliminary operative treatment is of value in selected cases.

420. Dupuytren's Contraction.

A. C. ABBOTT (*Canadian Med. Assoc. Journ.*, March, 1929, p. 250) reviews the literature and describes a fascial transplantation procedure used in the surgical treatment of Dupuytren's contraction; he believes that this offers in the majority of cases the greatest chance of a satisfactory result. Notes are given of a case in which the contracture followed a forcible dorsiflexion of the right middle and ring fingers, and was unsuccessfully treated by local excision. A second operation with wide excision of all diseased fascia and an immediate transplantation of a piece of fascia lata resulted in complete functional recovery. At this second operation the old scar was excised and the surrounding skin dissected up; all diseased fascia was freely removed, care being taken not to injure the underlying vessels and nerves. A piece of fascia lata fashioned to the shape of the space left by the removal of the abnormal palmar fascia, and overlapping it by about a quarter of an inch, was loosely tacked with plain catgut to the remaining palmar fascia, and the skin was carefully united with interrupted silkworm-gut sutures. The patient was discharged in ten days with an excellent result; two years later all thickening on the palm had completely disappeared, and all movements were perfect, the patient being at work as usual and using a heavy pair of wire cutters. Abbott insists that in transplantation it is important to obtain as fine a piece of fascia as possible, larger than the palmar defect to allow for shrinkage, and that this should be merely tacked in place without tension in order to prevent any portion of it being strangulated by tight sutures; complete haemostasis is essential. The hand should be kept on a splint for a fortnight, and work be avoided for three months in order to prevent all source of irritation; light work is advisable for a further three months. In the more severe types of contractures, with considerable skin involvement and the possibility of sloughing, skin grafting might be necessary.

421. Appendicitis in Measles.

J. AMBÜHL (*Zentralbl. f. Chir.*, March 23rd, 1929, p. 721) refers to Rost's patient (*Epitome*, September 22nd, 1928, para. 192) and records a case in a previously healthy man, aged 23, who during the eruptive period of measles developed symptoms of appendicitis. Appendicectomy, which was performed at once, revealed a greenish-yellow appendix coated with fibrin and containing a coprolith at its base. Histological examination showed destruction of the epithelium; diffuse polymorphonuclear infiltration of the mucous, submucous, muscular, and subserous coats; and a fine network of fibrin on the serous coat. Uncomplicated recovery ensued.

422. Clinical Aspects of Cystitis.

A. E. SOHMER (*Minnesota Med.*, March, 1929, p. 160) insists that successful treatment of cystitis is impossible without a comprehensive diagnosis, a thorough clinical examination being essential. Cystitis may be the first sign of an associated pathological condition in the urinary organs, treatment of which will cure the bladder infection. While the normal bladder wall possesses a high degree of immunity to bacteria, interference with its emptying will predispose to infection, which may result from chemical irritation, bacterial infection, animal parasites, yeasts, or fungi. Every possible focus of infection, including the teeth, tonsils, appendix, gall-bladder, and prostate, must be eliminated.

Therapeutics.

423. Phenylhydrazine in Polycythaemia Vera.

SINCE very little is known about the pathogenesis of polycythaemia vera, except that the erythroblastic bone marrow usually shows hyperplasia, treatment has been solely symptomatic and directed either to reducing the number of red cells or to inhibiting their formation. S. H. HURWITZ and J. LEVITIN (*Amer. Journ. Med. Sci.*, March, 1929, p. 309) report a case treated with phenylhydrazine; they emphasize the value and dangers of this drug, and suggest certain criteria for the control of its dosage. Phenylhydrazine is a powerful protoplasmic poison, causing extensive fatty degeneration of the liver and marked destruction of erythrocytes, and resulting in a reducing effect on haemoglobin. It is given orally in capsules, and the following plan of treatment is recommended as being safe. Guided by frequent blood examinations, 0.2 gram may be given for three or four days. The dose is then reduced to 0.1 gram daily until the leucocytes increase in number or the haemoglobin falls below 100 per cent. When this occurs 0.1 gram may be given every second or third day, or the drug be discontinued, the latter course being probably the safer. It has been stated that about 0.1 gram once a week in the average case will keep the red count within normal limits. The authors found that phenylhydrazine produces definite clinical improvement in polycythaemia vera, and that, guided by frequent counts of the red and white blood corpuscles and by estimations of the serum bilirubin, it may be given without danger. Its administration should be stopped before the red blood count reaches a normal level, as the action continues after its withdrawal. The haemolytic crisis observed by the authors and others may be avoided if additional safeguards be used. Because of the great difference in the response of patients to varying amounts of the drug, quantitative estimations of the serum bilirubin and leucocyte counts should be frequently made. A marked rise in the amount of the former means excessive blood destruction, whereas a rising leucocyte count probably indicates great destruction of liver cells. The use of phenylhydrazine is no exception to the general observation that the various measures used in polycythaemia vera are transitory, and the effect produced purely palliative. Whatever therapeutic measures are adopted, there is a tendency for the erythrocyte count to rise and for subjective symptoms to return.

424. Treatment of Tetany in Infants.

H. BAKWIN, RUTH BAKWIN, and GERTRUDE GOTTSCHALL (*Amer. Journ. Dis. Child.*, February, 1929, p. 311) divide therapeutic agents useful in tetany into two groups: (1) substances such as calcium chloride and parathyroid extract, which effect an immediate but transient rise in the serum calcium, and (2) those with a slower but more lasting effect—namely, ultra-violet radiant energy, irradiated cholesterol, and irradiated ergosterol, this last being the most rapid in its action. In a series of twenty cases the administration of 4 mg. daily caused the serum calcium to rise to normal in an average of seven days. Ultra-violet radiant energy was as constant in its action, but took twice as long. Irradiated cholesterol was still slower and less constant. Cod-liver oil was found to be inadequate, its action being too slow and inconstant. The treatment of choice appears to be a combination of calcium chloride, which has a marked immediate effect on the serum calcium, and irradiated ergosterol; the calcium salt is given in large doses (15 grains) at intervals of one or two hours during the first few hours. The daily dosage of ergosterol was 3/50 grain, and it was not ascertained whether larger doses would have acted more rapidly.

425. A Calcium-Stovarsol-Phosphate Preparation.

A. A. LEVY (*Med. Journ. and Record*, March 6th, 1929, p. 279) draws attention to the therapeutic possibilities of a recently elaborated combination representing the calcium salts of stovarsol (calcium acetylamino-oxyphenylarsenate) and of phosphoric ether of glucose (calcium glucophosphate), discovered in 1926 by Sabatay of the Pasteur Institute. From the interlocking, synergistic, and "balance" action of the three constituents, it was considered that this new preparation, named "realphene," might prove to be of considerable value in those disturbances of metabolism or deficiency conditions in which these constituents were formerly prescribed. Favourable results were also expected in debilities of syphilitic origin, and in parasitic infections amenable to stovarsol treatment. Levy reports marked benefits from its administration in the following groups of cases: stomatitis with anorexia and loss of weight; convalescence; secondary anaemia; syphilitic cases; under-nourished children; asthenic adults; and cases of tuberculous diathesis. The preparation is granular and of a not unpleasant chocolate flavour; it contains 5 cg. of the stovarsol salt and 2 cg. of calcium glucophosphate in each drachm. The doses are one level tablespoonful for children and one heaped tablespoonful for adults; they are taken three times a day in a glass of milk. Levy considers that this preparation is of definite value as a metabolic synergist in improving assimilation and nutrition in convalescence and deficiency conditions.

426. Quinine Injections in Lobar Pneumonia.

L. H. VAN DER VELDE (*Nederl. Tijdschr. v. Geneesk.*, February 16th, 1929, p. 821) records his observations on cases of lobar pneumonia treated by intragluteal injections of quinine hydrochloride. The dosage is as follows: for infants aged 1 to 12 months, 60 to 80 mg.; between the ages of 1 and 2 years, 100 to 140 mg.; from 2 to 5 years, 140 to 200 mg.; from 10 to 15 years, 300 to 400 mg.; 15 years and over, 500 mg. The favourable action of the injection is described as very striking. Rapid fall of temperature ensues, accompanied by improvement of the general conditon and a recovery of appetite. The great advantage of the treatment is said to be the remarkable fall in the death rate, the case mortality, which is otherwise about 25 per cent., falling from this to 5 or 6 per cent. To avoid the pain caused by the injection the quinine may be combined with urethane in doses of 250 mg.

Dermatology.

427. Sclerodermia Treated by Insulin.

O. MICHAELIS (*Brux.-Méd.*, March 17th, p. 560) describes fully a case of generalized sclerodermia. When the patient was first seen the disease had lasted six months. The lower half of the body was less affected than the upper, but the hardening had proceeded so far that side-to-side movements of the head had become almost impossible, and the patient could not ring a door bell without tilting the whole trunk backwards. In taking the blood for a Wassermann test great difficulty was experienced in penetrating the pachydermatous skin. In spite of the Wassermann reaction being negative antisyphilitic treatment was tried, but without result, and thyroid extract was similarly ineffective. The patient presented one constant symptom of Raynaud's disease—namely, blueness of the fingers on cold damp days. Since the possibility of there being some association between Raynaud's disease and sclerodermia had been suggested, and as insulin had been effective in a case of Raynaud's disease, it was determined to try a course of insulin in this case, combined with ultra-violet radiations for the asphyxia of the hands. At the end of six months there was a relaxation and a softening of all the tissues. Progress was very gradual, and is expressed by the authors as "three steps forward, two steps backward." At the end of a year's treatment the condition of the patient was so much better than at the beginning of the treatment that the author was hopeful of a complete cure if the patient would persevere with the somewhat onerous treatment.

428. Erythrodermia of the Limbs.

L. HARTSTON (*Brit. Journ. Derm. and Syph.*, March, 1929, p. 105) asserts that the "stocking erythrodermia" is a definite clinical entity, it being a common and persistent "eczema" of constant distribution, and of a purely neurotic origin. It appears as a characteristic red, scaling, often moist and abraded condition of the forearms or legs, or both, of sharply defined limits unlike any other skin disease, and strikingly analogous to the hysterical "glove and stocking" anaesthesias. The eruption never extends lower than the dorsum of the foot nor higher than a line just below the patella; in the forearm it is limited by the elbow-joint above and the wrist below, only occasionally spreading to the back of the hand as far as the webs of the fingers. In long-standing cases this distribution is maintained, though usually only on the legs, where the skin has a leathery, shiny, lichenized appearance. In one of the author's cases both legs were affected for twenty years, and yet even such long-standing cases present nothing bacteriologically beyond the normal cutaneous flora without any subsequent scarring, while the general health is unimpaired. The patients are of the type of constitutional neurotics with a typical melancholic facies resembling that of anxiety neurosis, a lined face, wrinkled forehead, tremulous lips, and staring eyes. Treatment should be directed mainly at preventing the habit of rubbing and scratching, which induces and maintains the condition. Sedatives and hypnotics, such as luminal or bromides are given to induce sleep and allay the irritation. Bland lotions or small doses of *x* rays are applied locally for their antipruritic action; malachite green paint may be used for its effect on the imagination; well-applied occlusive dressings can be relied on. After protecting the affected part with a layer of sterile gauze, plaster bandages incorporating Unna's zinc and gelatin paste may be applied. Notes of sixteen cases with descriptive photographs are given.

429. Liquid Oxygen in Dermatology.

H. G. IRVINE and D. D. TURNACLIFF (*Arch. Derm. and Syph.*, February, 1929, p. 270) advocate the use of liquid oxygen in the treatment of warts, naevi, seborrhoeic keratosis, lupus vulgaris, skin tuberculosis, and small epitheliomata. The authors state that liquid oxygen can be obtained commercially and will keep for several days stored in Dewar flasks; it can be applied with a saturated swab of cotton-wool on an ordinary wooden applicator. This is maintained on the lesion without pressure until it freezes, and by taking care to avoid the surrounding skin little pain results, since it is only when the liquid spreads beyond the lesion and freezes the normal skin that considerable pain is caused. The authors record successful results in the treatment of warts (22 cases), herpes zoster (5 cases), seborrhoeic keratosis (7 cases), small pigmented and papillomatous moles (3 cases), and small raised vascular naevi (4 cases). They conclude that the treatment is more rapid and less painful than with the electric needle, and that for this reason it is specially useful in children, while the cosmetic results are excellent.

Obstetrics and Gynaecology.

430. Treatment of Uterine Fibroids.

REEB (*Bull. Soc. d'Obstét. et de Gynécol.*, February, 1929, p. 153) utters a warning to those enthusiasts who consider that treatment by radium or *x* rays is invariably effective for uterine fibromata. The fact that treatment by radiation avoids both the immediate and remote risks of operation has caused this method of treatment to be popular. The author considers that radiation treatment fails not infrequently, and that it may even be dangerous, as when the fibromata are complicated by affections of the adnexa. There is also the danger that all genital functions may be suppressed in a young woman. The duty of deciding which cases should be submitted to radiation treatment devolves upon gynaecological surgeons. Reeb maintains that radiation should never be employed where the diagnosis is uncertain. The three principal contraindications to radiation, he considers, are the following: (1) Fibromata complicated by purulent tumours of the adnexa; peritonitis may be precipitated by the treatment. (2) Adenomyomata; it is known that radium has but little effect on cylindrical-celled neoplasms of the cervix and body, and it may be deduced that glandular new growths with the cylindrical epithelium of an adenomyoma may be equally refractory to radiations. (3) Submucous fibromata; patients with such growths, after treatment by radiations, not infrequently appear on the operation table. Radiologists claim that submucous fibromata can be cured by radiations. Probably the difference of opinion lay in the difficulty of arriving at a correct diagnosis. To obtain the best results collaboration between gynaecologist and radiologist is essential.

431. Spontaneous Rupture of Pyosalpinx.

S. DI PALMA and M. M. STARK (*Surg., Gynecol. and Obstet.*, March, 1929, p. 419), who have collected thirty-four cases, including one which came under their own observation, state that spontaneous rupture of a pyosalpinx into the urinary bladder is very rare. The symptoms are very characteristic, consisting of sharp pelvic or suprapubic pains, the appearance of large quantities of pus, often foul-smelling, in the urine, a relief of urinary and vesical symptoms, and a decided improvement in the patient's general condition. The diagnosis

is confirmed by cystography and cystoscopy. The site of the rupture is usually on the lateral wall just beyond and to the side of the ureteral opening. A rupture may heal spontaneously, as may also the original abscess, and later recur several times, especially as the patient's general condition is poor. Laparotomy is the proper treatment, and is best undertaken when the temperature is down and the leucocyte count less than 10,000. The fistula between the pyosalpinx and the bladder cannot always be found at the operation. Drainage by indwelling catheters and gauze through the vaginal wall is advisable. The authors' patient was a woman, aged 35, in whom, after gonorrhoeal urethritis and endocervicitis of three weeks' duration, symptoms of bilateral salpingitis developed. Cystoscopy showed a congested mucosa, and on the left wall of the bladder beyond the ureteral openings a much darker area. A week later the patient had sudden severe pain in the lower abdomen, followed by passage of urine containing foul-smelling pus. Laparotomy was performed and recovery ensued.

432. Carcinoma of the Ovary.

ACCORDING to A. STRAUSS (*Amer. Journ. Obstet. and Gynecol.*, February 29th, 1929, p. 248) carcinoma of the ovary is very rare before the age of 20, more usual after the menopause than before the age of 40, and most common between the ages of 45 and 60. Sterility is relatively frequent in cases of primary ovarian carcinoma arising after the menopause, and uncommon in cases of metastatic malignant tumour. In the early symptoms of carcinoma of the ovary there is nothing that is typical or suggestive; the onset is insidious, with pain in the lower part of the abdomen or back, or both, digestive disturbance, and gradual production of ascites. Before the menopause amenorrhoea has been noted, but irregularity is most common, and metrorrhagia is more common than menorrhagia. After the menopause a recurrence of uterine bleeding is not uncommon. Bleeding after the menopause should never be regarded lightly: patients having this symptom without demonstrable cause should be suspected of ovarian carcinoma, and an exploratory operation should be undertaken even when only slight enlargement of the adnexa of one side is made out bimanually. Schiffman has recorded three cases of ovarian carcinoma associated with post-menopausal bleeding in which bimanual examination under ether anaesthesia gave negative findings. In contrast with the bleeding of uterine carcinoma, that of malignant disease of the ovary is as a rule slight, of short duration, and unaccompanied by foul discharge. It is impossible to determine from an early clinical picture whether an ovarian tumour is benign or malignant, or whether a benign tumour will become malignant; every ovarian tumour should therefore be removed when it is diagnosed, and if it is malignant the opposite ovary should be taken away at the same time, usually with the uterus as well.

Pathology.

433. Colon Bacilli in Genito-urinary Infections.

J. H. HILL, L. R. SEIDMAN, A. M. S. STADNICHENKO, and M. G. ELLIS (*Journ. of Bact.*, March, 1929, p. 205) have studied 200 cultures of the colon group, or of closely related organisms, recovered from 200 cases of genito-urinary infection. They could be classified into four groups. Group 1 contained 100 strains, which were of the *B. coli* group; they produced acid and gas in lactose, were methyl-red positive, Voges-Proskauer negative, failed to liquefy gelatin, generally formed indol, and used citrate scantily, tardily, or not at all. Of these strains 29 were motile, 6 showed thick capsules, and 60 were haemolytic when tested on blood agar plates. Group 2 contained 79 strains, which were of the *B. aerogenes* or *B. cloacae* type; they produced acid and gas in lactose, were methyl-red negative, Voges-Proskauer positive, rarely formed indol, and utilized citrate promptly. Of these strains 21 were motile, 13 showed thick capsules, 59 were haemolytic, and 21 liquefied gelatin. Group 3 contained 5 strains of the *Proteus* group. Group 4 contained 16 strains, which were allied to *B. typhosus*, *B. shigae*, *B. alcaligenes*, or the Salmonella group. The authors draw attention to the striking proportion of Group 2 strains in urinary infections; organisms of the *B. aerogenes* and *B. cloacae* types are apparently rather uncommon in the faeces, yet they proved in this investigation to be very common in the urine. Thus in an examination of 6,979 cultures of colon bacilli in the faeces by different workers, *B. aerogenes* and *B. cloacae* were detected in only 3.96 per cent., whereas in this investigation of 200 urinary strains these organisms were found in 39.5 per cent. It was also remarkable that these organisms were recovered from the blood more frequently than were organisms of the *coli* type. The authors consider that the infection of the urine and the blood occurs from the intestinal tract, and that the reason why *B. aerogenes* is so much commoner in proportion is because it is more resistant to a change in environment.

434. Pathological Action of Thallium Acetate.

G. TRUFFI (*Derm. Woch.*, March 16th, 1929, p. 409) made a histological study of rats, rabbits, and guinea-pigs which had undergone chronic intoxication by thallium acetate. Examination of the completely hairless skin and of skin in which the hair was falling out showed degeneration of the epithelial element, matrix, bulb, and follicle, which was quite sufficient to explain the loss of hair. Histological examination of the endocrine glands of animals which had lost their hair as a result of administration of thallium acetate showed no special changes—a proof that thallium acetate produces epilation independently of any morbid changes in the endocrine system. The changes in the suprarenals, thyroid, testes, and other organs, regarded by Buschke and his collaborators as pathognomonic of thallium acetate intoxication, may also occur in other forms of intoxication, such as phosphorus, arsenic, and bromide, which have no elective action on the neuro-endocrine system. Truffi's animals did not exhibit any changes in the other internal organs which are most susceptible to toxic action, such as the kidneys, so that thallium alopecia takes place without any anatomical changes in the various organs. No functional disturbance, such as cataract, bone changes, tetany, or other manifestations indicating changes in the neuro-vegetative system, were observed in the animals. There is therefore, in Truffi's opinion, no justification for the view that thallium alopecia is due to involvement of the nervous system.

435. Acidosis Due to Functional Ischaemia.

P. ROUS and D. R. DRURY (*Journ. Exper. Med.*, March 1st, 1929, p. 435) refer to a previous paper in the *Journal of the American Association* (1925, vol. lxxxv) reporting the occurrence of states in which a frank acidosis of the tissues develops without any change in the reaction of the blood. The results of a further series of experiments are now given, which describe more fully this outlying acidosis and its cause. In various functional conditions involving peripheral vaso-constriction a more or less widespread change toward acidity takes place within certain tissues. The change is frequently independent of any in the blood. Indeed, the blood can become more alkaline while the tissue acidosis is developing. When the blood volume is diminished abruptly, but not too greatly, by haemorrhage or by anhydraemia, the acidosis which develops in the superficial connective tissue and in the skeletal muscles is patchy in distribution, being limited to areas of local ischaemia, themselves the result of a compensatory vaso-constriction which affects certain regions only. There is a second type of patchy ischaemia (and of acidosis) which occurs under circumstances of moderate depletion, and is referable to local pressure differences that are so slight as to be ineffective under normal circumstances. A generalized acidosis throughout the superficial tissue develops when depletion is extreme. All these are outlying acidoses, since they lie without the influence of the blood. In the viscera no such acidoses have been found.

436. The Relation between Pasteurella pestis and P. pseudotuberculosis.

ACCORDING to A. BOQUET and E. DUJARDIN-BEAUMETZ (*C. R. Soc. de Biologie*, March 8th, 1929, p. 625), the serum of a sheep which has been injected with increasing doses of *P. pseudotuberculosis* contains agglutinins and complement-fixing bodies acting on the homologous organism but not on *P. pestis*, and precipitins acting equally well on both organisms. The serum of a fowl immunized against *P. pseudotuberculosis* agglutinates *P. pestis* to a quarter of the titre registered against the homologous organism, and contains precipitins acting on both organisms. The serum of a fowl immunized against *P. pestis* contains precipitins acting to a higher titre on *P. pseudotuberculosis* than on *P. pestis*. Guinea-pigs injected with formolized cultures of *P. pseudotuberculosis* possess a certain amount of immunity against both organisms, but guinea-pigs injected with *P. pestis*, while immune to this organism, are yet susceptible to injections of *P. pseudotuberculosis*. The authors conclude from these experiments that, though the two organisms are closely allied antigenically, *P. pseudotuberculosis* is more active in stimulating the formation of antibodies. They propose, therefore, to use vaccines made from this organism in protecting against plague in areas where this disease is epidemic.