synonymously purpura haemorrhagica. The pathology of this thrombocytopenia is rapidly becoming established, but as to the primary cause of the diminution in the platelets we are still ignorant. Despite the great strides made in haematology by Piney⁸ and others, we are still left on the horns of the thrombocytopenia dilemma by having to decide between the very opposite views of (1) Kaznelson,⁹ who thinks that it is a hyperdestruction of platelets, and (2) Frank,¹⁰ who considers that it is a fundamental defect in their production. This diminution occurs certainly as the only demonstrable change in many cases of purpura haemorrhagica, but it cannot as yet be universally accepted. In addition, many other cases of secondary purpura show a lack of platelets, as in two of our recent cases, one of aleukia haemorrhagica with a platelet count of 34,000 per c.mm., and the other a lymphosarcoma with a count of 72,000 platelets per c.mm. From the two cases of purpura outlined above we may have to take more consideration of the calcium metabolism.

Purpura is a symptom in a multitude of diseases, as outlined by most authors to-day. The second group which I have mentioned above must be a small one, but none the less important, among the infective or toxæmic groups of all the secondary purpuras. The occurrence of purpura in severe cases of rheumatic fever cannot be denied, but this form is sufficiently far removed from the picture of Schönlein's arthritic purpura to avoid confusion. The purpura of rheumatism usually occurs as a generalized rash in a patient who is extremely ill, severely toxic, with very marked rheumatic symptoms and signs, such as severe heart lesions, nodules, and pyrexia; it does not appear in mild cases. In Schönlein's disease, however, there is a repetition of mild attacks, the eruption occurring solely on the arms and legs, with mild joint pains, and only occasional swellings. The general picture of Schönlein's purpura is thus only that of a mild, though repeated, transient infection, with usually a moderate follicular tonsillitis as the most aggravating symptom. The German

authorities gave up the association between true rheumatism and Schönlein's purpura some years before the English did, and we must be equally emphatic in dissociating them, especially in view of our modern conception of the various toxicoses in relation to arthritis.

The final point to be considered is how soon it will be possible to abandon the terms "primary and idiopathic" and "secondary," by considering all purpura to be a symptom of a special infection, the specificity of the infection being perhaps combined with an unknown deficiency of a vitamin nature, affecting calcium metabolism, which would lead us to consider the parathyroid.

In the groups appended below we satisfy ourselves, and do not offend the memory of any of the old order.

Group I.—"Thrombocytopenic Group."

1. Purpura simplex.
2. Purpura haemorrhagica, or morbus maculosus of Werlhof.

Group II.—"Toxaemic Group."

1. Purpura with abdominal symptoms.
2. Purpura with arthritic symptoms, or Schönlein's purpura.
3. Purpura with abdominal and arthritic symptoms, or von Henoch's purpura.

I wish to thank Professor Langmead for his permission to publish these cases, and for assisting in correlating the evidence; Dr. Leonard Colebrook and Dr. F. Griffith for their bacteriological work; and also Dr. Hurst Brown, of the Medical Unit, for the chemical pathology.

REFERENCES

- ¹ Osler and McCrae: *System of Medicine*, 1908, iv, 703.
- ² Glanzmann: *Jahrb. f. Kinderheilk.*, 1918, cxxviii.
- ³ Werlhof: *Opera Medica*. Collected by J. E. Wickmann, Hanover, 1713.
- ⁴ Von Henoch: *Berl. klin. Woch.*, 1874, 641.
- ⁵ Von Dusch and Hoche: *Pädiatrische Arbeiten. Henoch's Festschrift*, 1890, 379.
- ⁶ De Krauss: *Über Purpura*. Inaugural Dissertation, Heidelberg, 1883.
- ⁷ Biedert-Vogel: *Lehrbuch der Kinderkrankheiten*, 557.
- ⁸ Piney: *Recent Advances in Haematology*, 1931.
- ⁹ Kaznelson: *Zeit. f. klin. Med.*, 1919, cxxvii.
- ¹⁰ Frank: *Schittenhelm's Krankheiten des Blutes*, 1925, ii.

MYCOSIS FUNGOIDES FOLLOWING LAPAROTOMY

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(With Special Plate)

The rarity of the following complication of a laparotomy for perforated duodenal ulcer merits publication.

A builder's labourer, aged 44, was admitted to St. Luke's Hospital, Chelsea, with a history of having been seized with acute epigastric pain and nausea whilst at work five hours before. He drank some brandy and a pint of ale, with the object, presumably, of relieving the pain. The history of epigastric pain over a long period, and his condition on admission, led to the diagnosis of an acute perforation.

A mid-line supra-umbilical laparotomy was performed under chloroform-ether anaesthesia as soon as was possible. On opening the peritoneum the usual escape of free gas and opalescent flaky fluid occurred. No specific odour was detected. A small perforated ulcer was discovered on the anterior surface of the duodenal side of the pyloric vein. This was dealt with by a single purse-string suture and by an omental graft. The peritoneal cavity was drained supra-pubically and through a low stab wound far back in the right loin.

With the exception of some hypostatic lung congestion, the patient progressed satisfactorily for a week, when there

appeared to be an area of commencing cellulitis around the loin stab wound. This gradually spread forward towards the ventral surface of the abdominal wall. The wound was still discharging some serous fluid and the indurated inflammatory area was treated as a parietal inflammatory complication. After a few days the superficial skin layer became a sloughing covering to a plane of pus in and on the deeper layer and subcutaneous tissues. Nerve endings were exposed, analgesics had to be given often, and Carrel-Dakin irrigation was instituted. In spite of this the infected area spread forward towards the mid-ventral line, up to the costal margin, and down as far as the right iliac crest. Anti-streptococcal serum and anti-*Bacillus welchii* serum were exhibited without improvement; 1 in 1,000 flavine was substituted for the hyperchlorite, and hot fomentations were continued. The Wassermann test was negative. Examination of a swab of the discharge under the advancing edge showed streptococci, *Staphylococcus aureus*, and diphtheroid bacilli. An auto-genous vaccine was given in increasing doses.

The patient's general condition became steadily worse, morphine in various forms, and other analgesics being necessary. He had no recurrence of the gastric symptoms, the drainage wound closed, and the laparotomy incision healed normally. The infection of his parietes, however, spread apace. It had the appearance of an extensive superficial carbuncle; the advancing edge showed a marked serpiginous outline, the result of multiple crescentic inroads into indurated skin, which had a definite ragged overhanging edge. This appearance led us to make another Wassermann test, which again proved to be negative. At the costal margin and iliac crest the infection advanced no further, and from

the loin wound forward it healed over gradually and was weakly epithelialized, whereas towards the mid-line it progressed steadily. Within two inches of the incisional scar it converged to a point and then tunnelled the tissues below the scar, leaving it untouched, to a position about three inches from its left border and then diverged again, to produce a similar extensive lesion from the costal margin to iliac crest on the left side of the abdominal wall. Various solutions and dressings—hydrogen peroxide, oxycyanide of mercury 1 in 10,000, sanitas, and salines, with glycerin ichthyol to the edges—were applied in vain. Another swab examination showed pyogenic organisms only. A urinary examination showed *B. coli* and *Streptococcus faecalis* in culture. Intravenous mercurochrome and oral iodides were ineffective. On reaching the mid-axillary line on the left side, the lesion again converged to a tunnel 3/4 inch wide and about 4 inches long to fan outwards again on the dorsal surface, whilst healing slowly took place on the abdominal wall. The continued use of sedatives, the pain, and the toxic absorption reduced the patient's condition to one of danger. The affected area at this stage (six months after the operation) formed a striking picture, of which the following were outstanding: the greenish-black extensive sloughs with foul pus exuding beneath their edges; the pink newly epithelialized healed area, with branching new arterioles spreading weblike across it; the immune island of healthy skin around the mid-line incisional scar; the narrow communication channels across the mid-line and in the left loin; the multiple crescentic edges; and the inflamed heaped-up attacked tissue around. The odour in the vicinity of the man's bed was almost unbearable, and large quantities of deodorants had to be used. The advancing edge eventually reached to two inches from the other side of the vertebral column, to the level of the fourth dorsal vertebra above, and to the iliac crest below.

Microscopical examination of a wedge section of the edge, removed under gas, showed numerous organisms superimposed on a growth of mycosis fungoides.

The report of Dr. L. M. Hawksley of the pathological staff of the Cancer Hospital was as follows:

"The microscopical appearances are those of a granulomatous condition with superficial and deep destruction of tissue. The dermis is extensively infiltrated with a growth of polymorphic connective tissue cells with ill-defined margins, many showing mitoses, some being multinucleated, and others resembling plasma cells. The masses of cells show a tendency to arrangement in strands, and in more superficial parts of the corium, islets of down-growing epithelium have been snared off by them. The whole of the tissue is very oedematous; fibrous tissue appears as small fragments; sebaceous glands, hair follicles, and sweat glands are not seen. Some of the epithelial cells show vacuolation; where not destroyed by ulceration the epithelium is considerably thinned. In the area of more normal skin, granular particles of irregular shape can be detected in the connective tissue cells. Gram-stained films show massive invasion of the greater part of the tissue with long-chained streptococci (in the ulcerated part numerous other organisms also). The microscopical features of the tissue correspond with those of 'granuloma fungoides.'"

The patient died ten months after admission.

The photographs (Special Plate, Figs. 1 and 2) show the abdominal part of the lesion; the patient was so ill that none could be taken of the affected area on the back. Apart from the rarity of the infection, the interesting features of the case are the mode of infection possibly from the perforation of the duodenum through the drainage wound to the abdominal parietes, and the complete immunity of the laparotomy scar to the infection. We are forced to consider whether the infection occurred from the ale which the unfortunate man took to relieve the pain of the perforation, or from a premycotic nidus in the abdominal wall.

I desire to thank Dr. Hawksley for the great help she gave in the case, and to the medical superintendent of St. Luke's Hospital for permission to publish the case.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

CUTANEOUS INFECTION WITH A DIPHTHEROID BACILLUS*

Diphtheroid bacilli are commonly found vegetating upon the surface of the human skin, and upon the lining membranes of the various body cavities. The group as a whole is singularly devoid of pathogenic properties (Hewlett†). The following case is of interest for two reasons: first, because it appears to be a true case of cutaneous infection with a diphtheroid bacillus; and, secondly, because the organism implicated was identical with the Klebs-Loeffler bacillus in every respect save toxin production.

A married Jewish lady, aged 55, with a family of four children, had never had diphtheria, nor had any of the members of her family; so far as she was aware, none of them had been in contact with any case of diphtheria prior to the appearance of her lesion. Towards the end of August, 1927 (the patient was rather vague as to the exact date), she noticed a small papule on the upper and outer aspect of her right thigh. This papule was quite painful to the touch, but it did not "throb," and there was no visible inflammatory zone. It rapidly enlarged to approximately the size of a lentil. The patient was very definite in her description of the sharp pain occasioned by merely pressing lightly upon the papule. After a few days the papule developed into a pustule, which ruptured spontaneously and exuded a thin, watery, deep-yellow fluid.

The patient paid little attention to the lesion at first, ascribing its formation to the friction of a badly fitting pair of stays; she was very stout, of short stature, and in the sitting position the bones of her corset pressed deeply into the flesh of her thighs. The lesion slowly developed into an irregular, shallow ulcer, and eventually, towards the end of September, the patient came to Queen's Hospital for treatment, mainly because she was "afraid that it was a cancer."

She was found to have an irregular linear ulcer on the upper and outer aspect of the right thigh. It measured 1½ inches in length by 1/2 inch in breadth, and its long diameter was inclined almost at right angles to the long axis of the thigh when she assumed the prone position. The ulcer was shallow, with rolled edges and a smooth, purplish-red floor, from which a thin, deep-yellow, sero-purulent fluid was exuded profusely. The lesion was quite sharply demarcated from the surrounding skin, and there was no encircling zone of erythema or any appreciable induration. The ulcer was not painful on palpation. At each end of the ulcer there was a pocket in the skin; at the lower end the pocket was very small, admitting only a small probe; but at the upper end the pocket was much larger, extending for about 1/2 inch into the skin. From this pocket a deep-yellow, sero-purulent fluid could be easily expressed in relatively large amounts by gentle pressure.

Film preparations of this discharge, stained by Gram's method, showed large numbers of slender, Gram-positive bacilli, together with a moderate number of polymorphonuclear leucocytes. Preparations stained by Neisser's method showed bacilli with the typical morphological appearance of the Klebs-Loeffler bacillus. No other organisms were seen in these first film preparations, though later on, after the lesion had been dressed for some days, numbers of the ordinary skin staphylococci made their appearance. Cultures on hormone blood agar and on Loeffler's serum medium yielded luxuriant, pure cultures of this bacillus. The microscopical appearance of the organism from the cultures was identical with that of the Klebs-Loeffler bacillus, the granules being particularly large and abundant.

Agglutination of the organism against the patient's serum failed to show the presence of any agglutinins. The organism was non-virulent for guinea-pigs, three separate tests being

* From the Bacteriological Department of the Queen's Hospital, Birmingham.

† Hewlett, R. T.: *A System of Bacteriology*, Medical Research Council, 1930, vol. v, p. 135.

R. OWEN-JONES: MYCOSIS FUNGOIDES

FIG. 1.

FIG. 2.

HARRY COKE: PURPURA

FIG. 1.

FIG. 2.