the sphincter being torn and ultimately controlled by zinc oxide and nepenthe).

After much difficulty and delay, antistreptococcic serum was got, and 5 c.cm. injected on the evening of the eleventh day, the temperature being 104°. Further details of temperature and injections will be most readily understood from the accompanying chart (see p. 1825).

The condition of the patient during the third week looked hopeless. There was violent delirium, great emaciation, picking at bedclothes, glittering eyes, sleeplessness, constant fouling of the wound by slight discharge from bowel, baked tongue, pulse often over 120, and rhonchus in the chest, and the urine and faeces were sometimes passed involuntarily. The decline of temperature looked more like that of approaching death than that of recovery. Still, the pulse was of fair strength, and a good quantity of milk was taken. There was no peritonitis or sign of localised inflammation. For about forty-eight hours at the beginning of the fourth week the temperature remained below 100°, though it never fell to normal. Then it began to rise in such a characteristic fashion that one was made suspicious of enteric fever. This diagnosis was confirmed by the appearance of the characteristic rose spots on the twenty-eighth and succeeding days, that is, six or seven days after the enteric fever began, and by the appearance of "pea-soup" stools later on.

The patient's prospects of recovery seemed small, especially as the temperature was often 105°; but though reduced almost to a skeleton, she never looked so ill as during the "puerperal" fever, never had true diarrhoea, and ultimately recovered, thanks to the abundance of milk she took. The only other treatment was salol gr. xv, bis die, and bismuth and nepenthe one day when diarrhoea threatened. The temperature became normal first on September 21st, the sixteenth day of the enteric fever, or five weeks and three days after the confinement.

Diagnosis.—It is to be regretted that no bacteriological examination was made, for though the large tear into the bowel rendered a pyogenic infection highly probable, the appearance of enteric fever later on made one wonder whether the original fever might not have been enteric. If so, the interval between the primary fever and the relapse (two days) was unusually short, and the character of the temperature, 104° to 105° continuously till the injections were begun, seems to prove that a pyogenic infection was present as well. But the hypothesis of enteric fever was not needed to explain the patient's condition. There was no symptom of enteric fever except diarrhoea, which was largely explained by the tear of the sphincter, and which disappeared as the sphincter recovered. There was abundant cause for "puerperal" fever.

Injections.—Altogether 107 c.cm. were given; the smallest dose was 4 c.cm., the largest 17 c.cm. A larger dose was purposed, but some was lost. The first three or four injections were given between the scapulae, the rest in the flanks. Except slight tenderness after those between the scapulae there was no inconvenience or untoward result. The serum was that from the Pasteur Institute, Paris, except in the case of the four injections marked 1 in the chart, which were from the Bacteriological Institute, Lyons. The temperature never reached 104° after the injections were begun, but as even 17 c.cm. of the Paris serum failed to cause any improvement, the more expensive Lyons brand was tried, and it will be noticed that after each time it was used the temperature fell markedly, except when, the diagnosis of the new illness being uncertain, it was injected just after the onset of the enteric fever.

Antistreptococcic serum seems a safe remedy, but no certain inference as to its value can be drawn from this case. The impression given was that it kept the patient from losing ground; that the Lyons brand had a very decided effect on the temperature; and that in a future case it would be well to begin with 10 c.cm., and, if it were well borne, to give 20 c.cm. once or twice daily if the patient's condition seemed to demand it.

FRENCH HOSPITAL IN CONSTANTINOPLE.—The new French Hospital in Constantinople was formally inaugurated on December 12th. The ceremony was presided over by M. Cambon, the French Ambassador, and was very numerously attended.

PICRIC, OR CARBAZOTIC, ACID AS A THERAPEUTIC AGENT, ESPECIALLY IN THE TREATMENT OF CERTAIN INFLAMMATORY SKIN AFFECTIONS.

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PICRIC, or carbazotic, acid, in watery and spirituous solutions, has for long been recognised, especially in France, as a useful application for superficial burns. Mr. D'Arcy Power¹ has recently recalled this fact, and has urged its more extensive employment in the treatment of burns and scalds. The admirable results which I have seen follow the free application of picric acid in solution to painful and extensive burns, led me to try its effect in the treatment of certain skin affections.

So far as I am aware, carbazotic acid has been little used, at least in this country, in the treatment of inflammatory skin diseases. In 1877 M. L. L. Grangé drew attention to the healing power of this remedy in some varieties of eczematous eruption. This therapeutic use of carbazotic acid seems to have been almost entirely overlooked, and is not mentioned in any of the larger works on dermatology that I have consulted. In a large number of cases in which I have employed picric acid locally I have found it more successful, by far, than any of the other remedial agents more commonly in use, and I think it well worth a more extensive trial.

I.—AS A LOCAL APPLICATION.

Acute eczema, associated as it usually is with burning, severe itching and profuse discharge, is rapidly relieved and cured under the influence of picric acid. Owing to the powerful astringent properties which this chemical possesses, it forms, when applied over a discharging or denuded surface, a protective layer of coagulated albumen and epithelial debris, under which healing rapidly proceeds; and as a potent antiseptic, by inhibiting the action of, or destroying the microbes on which the formation of pus depends, it completely prevents suppuration.

Applied as a pigment with a brush or piece of absorbent wool, even to an extensive surface, it is quite free from danger, and causes not the slightest pain, however vascular the surface may be. Almost immediately itching and smarting abate, and in a few days, when the protective crust is removed or separates, the underlying skin is found to be comparatively dry, free from redness, and covered with a young epidermis.

In that very troublesome form of acute eczema occurring in children (eczema capitis et faciale) which is usually so intractable to the ordinary methods of treatment, I have had most encouraging results from the use of picric acid. If the hair on the child's head happens to be long it should be cropped short, and all adherent crusts removed by means of poulticing. The raw surface should then be freely painted over, morning and evening, for three or four days in succession with a saturated watery solution. During this treatment the scalp and the face, when it is involved, should be protected by means of a calico mask. After the lapse of a few days, the pellicle which has been formed by the action of the picric acid can be removed by some emollient if it has not previously separated, and if any undue redness or moisture remain a fresh application may be made. The cessation of irritation permits the child to sleep, and its general health soon improves. When the disease becomes quiescent, the local treatment can be combined with, or followed by, the internal administration of alteratives like arsenic or grey powder.

Although picric acid is so specially valuable in acute discharging eczemas, it will be found an efficient remedy in almost any superficial inflammatory affection. Thus in 3 cases of erysipelas I have found a saturated solution of picric acid superior to any local remedy I have hitherto tried. It arrested the inflammation and prevented the disease from

¹ BRITISH MEDICAL JOURNAL, September 12th, 1896.

spreading, and much more rapidly diminished local discomfort than carbolic acid, dusting powder, or ichthyol.

II.—AS AN INTERNAL REMEDY.

As an internal remedy I believe carbazotic acid has unduly fallen into disuse. Formerly its antiperiodic properties were appreciated, and it was commonly used with marked success as a substitute for quinine. In 1854 Professor Grace Calvert read a paper On the Physiological Action of Carbazotic Acid to the British Association at Liverpool. After his report it was employed in the treatment of several diseases with more or less success. It was found that, given in 1-gr. doses to adults suffering from ague, it had, in a large percentage of the cases, the same effect in reducing the fever and aborting the attacks as quinine.

The drug very rapidly causes yellow discoloration of the skin and conjunctivæ, which cannot be distinguished from that of jaundice. It is not due to any interference with the hepatic function, but to staining of the blood serum by the picric acid, which is a powerful dye. The stools and the urine are free from bile, and no unpleasant symptoms are experienced. The icteric coloration is first noticed after from 15 to 20 grains have been given, and it disappears shortly after the drug is discontinued.

Aspland² narrates the case of a soldier suffering from diabetes mellitus, who contracted ague. He was treated by picric acid. Under its influence the polyuria rapidly disappeared, and the specific gravity fell from 1032 to 1018, and in a few weeks sugar was entirely absent from the urine.

Lastly, in all those very troublesome cases of chronic simple diarrhœa, and so-called "putrid diarrhœa," with very offensive stools, I have largely employed picric acid. Often, when opiates and other astringents have failed, picric acid in grain doses has given rapid relief. The powerful astringent and antiseptic properties of picric acid diminish secretion and disinfect the intestinal canal. In this respect carbazotic acid resembles the action of carbolic acid, to which it is constitutionally related.

Thus carbazotic acid is a harmless topical agent. Although so nearly akin to carbolic acid, no apprehension need be entertained as to its absorption, even when applied to extensive surfaces. Like nitric acid, it limits its own action by coagulating the albumen of the tissues to which it is applied. As heat readily decomposes the acid, accidental stains may be removed from the underclothing by boiling. If the acid is employed internally, the patient should be warned of the discoloration which commonly follows, and it should be given to children in very small and tentative doses, as large doses are not well borne.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

RAPIDLY FATAL PURPURA HÆMORRHAGICA.

A JOINER, 42 years of age, first came under my care in March, 1895, complaining of weakness in the left arm and nocturnal headaches following a "stroke." Potassium iodide was prescribed with considerable advantage, so that he was able to return to his work. He had not taken this medicine for the last year.

On December 6th, 1896, he first noticed bleeding from his mouth, and on the following day I saw him. He presented the signs of a well-marked purpuric eruption over the whole body. On the legs the spots were small, thickly clustered and of the usual type. On the neck, they were in many cases situated around the hair follicles, while on the face, about the sides of the nose they occupied the sites of an old acne rash and were raised above the surface. There were no joint effusions or deep muscular extravasation. There was profuse oozing of dark blood from the mouth which came from several tooth sockets and from one or two fissures in the angle between the lips and gums. A bulla the size of a pea filled with black blood was seen on the dorsum of the tongue. The gums were not pulpy and very slightly swollen and the breath was not

offensive. The complexion was ruddy, the pulse was rather weak, the appetite fairly good, but there was some complaint of faintness. The urine was clear, sp. gr. 1025, and did not contain albumen, the temperature was not raised.

For the next day or two the condition remained the same and another bulla appeared on the tongue. On December 11th, the urine was deeply stained with bright red blood, sp. gr. 1010; later on the colour was almost black—about a pint of blood was oozing from the mouth in 24 hours. The temperature was 100°. There were one or two slightly enlarged lymphatic glands above the occipital region. Microscopic examination of blood showed nothing abnormal and there was no enlargement of spleen. Distinct aortic pulsation was felt in the epigastrium where a slight systolic *bruit* was heard. The motions were black. During the rest of the day he passed urine which was almost black with blood. About 6 P.M. he had an attack of vomiting and brought up a little blood. This was accompanied with violent occipital headache, which spread to the front. He became delirious with left hemiplegia, sank into a state of coma and died about midnight asphyxiated by hæmorrhage from the mouth.

REMARKS—Treatment with ferri perchlor. arsenic, hæmamelis, ergot and sulphuric acid in addition to lemon juice and vegetables with ice had no effect whatever in arresting the bleeding from the mouth. The case appears worth recording on account of its resemblance in some respects to scorbutus and its rapidly fatal termination, due no doubt to the occurrence of hæmorrhage at the seat of the old lesion and the brain.

Colwyn Bay.

WM. BARKER RUSSELL, M.B. Cantab.

THE DIAGNOSIS OF SCARLET FEVER.

THE difficulty of diagnosis of certain cases of scarlet fever, more especially its discrimination from some forms of German measles, is generally admitted; and any unequivocal sign which would assist in arriving at an early and definite opinion would be much appreciated.

In the most recent work on infectious diseases by Drs. Goodall and Washbourn (1896), great reliance is placed on the fact that the rash of scarlet fever does not appear on the face, while that of German measles invariably does. If this be true and reliable, we have an invaluable guide on which we may depend. But is it? I have made an investigation on this point in the works of the various authors to which I have access with the following result. (The figures refer to the date of the edition from which I have quoted):

Watson (1845). They (that is the minute points) begin on the face, neck and breast.

Willis (1841). Plates. Shows the rash fully developed on the face as well as on the trunk and arms.

Tanner (1861). The eruption shows first on the face and neck.

Trousseau (1869). The eruption comes out everywhere pretty nearly at the same time, but it is generally visible on the neck, chest, and arms before it shows itself on the face. The character which it presents on the face and trunk is similar; it is streaky, with a bright red in some places alongside of white streaks. On the face, which is swollen, the skin seems as if it bore the marks of a smart slap with the fingers of the open hand.

Von Ziemssen (1875). The eruption rarely affects the face in the same degree as measles. Undoubtedly there are exceptional cases in which the face is as much affected as the head and trunk.

Aitken (1880). The efflorescence is first perceptible on the face. (He makes this a principal point on which to depend for diagnosis.)

Hooper (1882). A bright scarlet efflorescence shows itself on the face and neck.

Bristowe (1884). It is rarely distinct on the face.

Strümpell (1887). The rash begins on the neck, and on the chest and face.

McCall Anderson (1887). The face is usually spared.

Finlayson (1891). Appears first on the chest, abdomen, etc.

Moore (1892). The rash spreads to part of the face.

Thomas of Leipzig (quoted by Moore) insists that only the forehead and temples are invaded by the rash, the cheeks showing only the ordinary flush of fever.

Quain's Dictionary (1894), article by Squire. The sides of the neck, the face, and the chest first show the rash.

Fagge (1891). The face often remains free; and when present the rash is in most cases limited to the forehead and temples.

Such a divergence of opinion is somewhat bewildering. My own observations have led me to the opinion that the remarks of Thomas of Leipzig are strictly accurate.

As the hectic flush disappears on the termination of the fever the upper margin of the true exanthem may be seen on the neck just below the ramus of the jaw, and occasionally on the temples of the forehead at the roots of the hair, the lobes of the ears being almost always affected. This, however, does not affect the value of Goodall and Washbourn's opinion as to

² Association Med. Jour. Lond 1855, ii, 742