coming from the seacoast, low-lying marshy districts, or the more genial climate of the south. These derive almost immediate and marked benefit by a brief sojourn at Harrogate, without any kind of interference whatever.

The mineral springs of Harrogate have been so frequently written upon by local practitioners (myself among the number), that I feel no little difficulty in dealing with this part of my paper—a difficulty by no means lessened in my having to address such an audience as this. For full particulars regarding the analyses, mode of administration, and special uses of the different springs, I must refer you to the various treatises extant. My remarks must be brief and general. Dr. Macpherson, in his *Baths and Wells of Europe*, speaks of Harrogate as possessing the most important drinking-waters in England; and it is justly entitled to be thus mentioned—first, on account of the number, secondly, on account of the extraordinary variety, of its waters. There are three distinct classes—the sulphurous, saline chalybeate, and simple chalybeate; but each class furnishes springs of very different degrees of strength, in the actual and relative proportion of earthy salts, sulphur, and iron. Consequently, springs of the same order hold very different positions as hydrotherapeutic agents; and, by reason of this very diversity, we are able to treat a great variety of cases, and meet the wants of many individual peculiarities. For the same reason, no watering-place demands greater care on the part of the physician recommending a patient to visit it for hydrotherapeutic purposes; as, if told to drink the sulphur water or iron, he finds not one, but many wells, under the same head, all of which are used for drinking; the sulphur alone for bathing purposes. I cannot but regret that Dr. Macpherson has classed our sulphur waters among the salt springs. This can only lead to confusion, as Harrogate has always been famous for its stinking wells; and, were you to ask an inhabitant to direct you to a salt spring, he would tell you he never heard of such a thing. Not only so: the sulphurous class is by far the most important, as well as the most numerous and varied. It is most frequently prescribed on account of its aperient, alterative, or specific properties, in the great majority of cases sent to Harrogate for special treatment; and is very generally necessary as a preparatory for the chalybeate waters. The strong sulphur springs contain, in the imperial pint, 137 grains of the chlorides of sodium, potassium, calcium, and magnesium, with four cubic inches of carbonic acid, sulphide and carbide of hydrogen. The mild have one-fourth the same salts, one-half the same gases. The Kissingen has 100 grains of the same chlorides, with five grains of the carbonate of magnesium, and less than one grain of carbonate of iron. Dr. Muspratt's chalybeate—the most powerful, and, I believe, the most important, hitherto discovered—has fifty-four grains of the same chlorides, with between three and four grains of the chlorides and carbonates of iron. Both contain about four cubic inches of carbonic acid, which gives them a degree of sharpness when drank fresh. The simple chalybeates contain traces of earthy salts and carbonate of iron, with two inches of carbonic acid; and, weak as they are, they sometimes occasion many of the unpleasant irritating effects of the pharmaceutical preparations of steel, which are familiar to us all.

The physiological effects of Harrogate, like all mineral waters, depend upon their osmotic influence on the blood, and may be divided into immediate or eccritic, and remote or hæmatic action. In the former, we have the emetic, aperient, or diuretic sequents, to the rapid absorption of from twenty to forty ounces; in the latter, we have the alterative, resolvent, or tonic sequents, to the gradual absorption and retention of from one to ten. In the immediate, we have a visible stimulation of secreting organs, followed by an increase of excretion; in the remote, we have certain changes produced in the tissues of the body or qualities of the blood, evidenced by the disappearance of gouty-rheumatic and glandular swellings, in the absorption of redundant fat, and in the increased number and redness of the blood corpuscles. That a mineral water should succeed in effecting changes in certain cases where medicines of a similar nature have failed, must be explained on the principle that its active ingredients are very readily taken up and carried with the blood through the entire system, whilst ordinary chemical preparations, by reason of their very coarseness and insolubility, pass through the body, without, as it were, having taken part in it. To this fact we must look for the explanation that natural waters frequently exercise the power of removing local symptoms depending on diathetic conditions, when drugs have been given without benefit. The Harrogate waters may be used advantageously in the same class of cases which I have named as suitable to simple hydrotherapeutic and hygienic treatment. And here the question may very properly be put, What advantages are to be got by treatment at Harrogate? and how does it show more control over disease than ordinary measures? The answer to these questions you will find in recorded cases. A vast amount of scepticism, I am fully aware, exists among medical men as

to the virtues of all mineral waters; and they say, "What are these but solutions of salts which we have at our disposal?" Others, "Your wells are all humbug; patients recover in spite of them. It is the rest, change of air, that does good; and nothing else." In many cases, it is so. But how about those cases which have run the gauntlet of all physic; have first tried change to one place, then another, perhaps even resided at Harrogate for a time, and, by advice, *avoided all its special resources*, without finding any improvement in their condition, and who do begin to mend, and gradually regain health, as soon as they are brought under the influence of its waters? What is to be said then? Still humbug? imagination? Will that explain the fact that, without them, illnesses proved intractable; with them, under the same general conditions of life, they ceased? This is no exaggerated picture; nor is it to be met with at Harrogate alone, but is common to all spas. Moreover, I have frequently observed that the less patients are capable of being influenced by ordinary medicines, the more amenable are they to hydrotherapeutics; and I am convinced that, were all the cases which, having resisted the former, recovered under the proper use of the latter, made known, the profession would willingly recognise in it one of the most powerful aids which can be brought to bear on many most protracted and painful cases of disease.

My friend and *confère* Mr. Short, with twenty years' experience, during which time he has acted as surgeon to the Harrogate Bath Hospital, where between seven and eight hundred cases are received annually, bears me out in all I have said. The cases which he has to treat in that institution, in his own wards, are as varied as they are severe, all of them chronic, consisting of every form of skin-disease, rheumatism, dyspepsia, struma, etc.; many, if not all, having been under the care of skilful men at their own homes or in infirmaries. The success which Mr. Short has met with has been more than satisfactory; and he affirms "that he has seen so many desperate-looking cases relieved, such an amount of suffering removed, and such a vast number of thorough invalids restored to health, who had sought it in vain from ordinary means, by the exhibition of Harrogate waters, his only regret is, that medical men from a distance cannot for themselves witness and judge of the results; feeling assured that no stranger can sufficiently appreciate their value and range of application in the treatment of a wide variety of chronic cases."

I trust the object of this paper may be thoroughly understood. It is not to laud hydropathy, or even Harrogate, so much as to make it apparent that, ordinary medical resources having been fairly enforced without benefit—it may be, with aggravation of symptoms—I ask you then to give water, pure or mineral, a trial, under the supervision of one who has experience in its ways. Some doctors think they know as much as the resident practitioner about mineral waters and baths, simply because they have the analysis in their books; and they send patients to drink and bathe with the most minute and absurd instructions. This is a great mistake, and leads to much disappointment, often to serious mischief. If you will send patients to any spa, let one of its medical men take up the case where you lay it down; let him treat it according to his knowledge, and by the natural means at his command; give him a history of the case; look upon him as a specialist, if you like; but look upon him as one who will do his best to cooperate with you in accomplishing the cure of the patient.

A CASE OF SOFT CANCER AFFECTING THE LACRYMAL GLAND AND OTHER ORGANS.

By JAMES E. ADAMS, F.R.C.S.,
Assistant-Surgeon to the London Hospital.

SOPHIA MONTGOMERY, aged 7, a pale child, with blue eyes and light hair, fairly nourished, first came under observation January 29th, 1869. At this time there was a tumour at the upper and outer part of the right orbit, pushing the upper lid before it and displacing the globe downwards and inwards. The upper lid was freely moveable over it; the sight of the eye was perfect. In the course of a few days the swelling increased, and below the upper margin of the orbit could now be felt the lobulated edge of the lacrymal gland; the skin of the lid over it had assumed a blueish tint, and the whole tumour was soft and gave an impression of fluctuation to the finger.

On February 10th, a puncture was made into it, and small portions of gelatinous material protruded, but no fluid escaped. I then determined to try to remove the gland without injuring the globe; and, having made an incision parallel with the edge of the orbit, and raised the tissues of the lid from the tumour, I removed a piece about the size of a walnut, but found that the tumour extended deeply into the orbit. It was very soft and friable, and it was impossible to take it all

out without removing the globe; but I postponed this in order to determine, if possible, the nature of the disease.

In the portion removed, the normal stroma of the gland could be seen, having imbedded in it innumerable small round cells and free nuclei. I obtained several normal lacrymal glands from dead bodies, and compared the microscopic appearances of these with the diseased one; and it appeared that in the tumour the gland-tissue remained almost perfect whilst these cells were growing in it. In about ten days all the tissues in the orbit, external to the globe, had become involved, and the edges of the previous incision covered with exuberant granulations. On February 23rd, I removed the globe and scooped out all the contents of the orbit, and applied the actual cautery to the edges of the lids and at the optic foramen. At the time of the operation, numerous hard moveable lumps were felt in the abdomen. A few days before the operation, the child's health, which hitherto had been very good, began to fail, and no improvement took place after it. The abdominal tumours increased rapidly, fluid collected in the peritoneum and in the right pleural cavity, and the child died on March 19th, being sixty-three days from the first appearance of the disease, it having been observed fourteen days before I saw her. There was no evidence of any of her relations having had cancer.

Post Mortem Examination Twenty Hours after Death.—The body was emaciated; the abdomen was distended with fluid; the superficial veins were full. Reaching above the pubes for several inches on each side of the median line were two large lobulated masses, apparently immediately beneath the abdominal wall. These were the two ovaries, which were removed in connection with the uterus and the upper part of the vagina. The accompanying drawing shows the external surface of the right one, and the central portion of the left, exposed by a longitudinal incision. The greater part of it was of a yellowish-white colour, in which were imbedded patches of soft material, presenting somewhat the appearance of recent clot. The Fallopian tubes were normal up to their point of

Woodcut showing the vagina, uterus, and both ovaries. The vagina has been laid open. The ovaries are symmetrically enlarged by deposit of soft cancer. The left ovary (to the right) is represented in section, and shows numerous large extravasations in the brain-like structure of the new growth.

entry into the ovaries. The broad ligament was slightly thickened. The uterus, bladder, vagina, and rectum, were healthy. The lymphatics of the pelvis were enlarged, and resembled the paler portions of the ovary.—*Liver.* On the diaphragmatic surface of the liver, immediately beneath the capsule, was a deposit, of a pale waxy appearance, about the size of a walnut.—*Kidneys.* In the cortical substance, and near the surfaces, were several small deposits, in which vessels and tubercles could be traced.—*Pancreas and Duodenum.* The whole of the pancreas was infiltrated with the disease, the chief deposit being at the head, which was so much enlarged as to embrace the duodenum, to which it was adherent, and constricting it slightly. The intestine at this part was healthy; but, about two inches from the pylorus, there was a deposit in the submucous tissue of about the size of an almond. Many similar deposits were found throughout the jejunum and ileum. The head also presented similar patches on the external surface of its walls.—*Orbit.* Around the margin of the optic foramen the disease had returned, forming a granulating mass through which the optic nerve passed. The sheath of the nerve was unattached to the diseased tissues, and the nerve was healthy throughout its course. On the right third nerve was a small swelling about the size of a pea, involving all the fibres of the nerve. The microscopic appearances of all these growths were similar

to those found in the lacrymal gland, the cells being very small, and hardly passing the nuclear stage.

REMARKS.—From the clinical history of the above case, it appears that the disease was essentially one of the class of cancers, running a very acute course. One chief object of interest is that it attacked two organs, which in children are rarely affected with malignant disease; namely, the lacrymal glands and ovaries. I think it is impossible to form any idea as to the primary seat of the disease; for, although the deposit in the lacrymal gland first attracted notice, it is highly improbable that such extensive growths in other organs could have taken place subsequently to the glandular affection. The lacrymal gland is very rarely the seat of any primary disease, and, it has been said, never of primary cancer; and this case certainly does not supply any proved exception to the rule.

A very interesting case of double cancer of ovaries and of mammary glands, which, in some features, may be suitably compared with the above, will be found in the *London Hospital Reports*, vol. iii, p. 303.

SYMPTOMS OF CARBOLIC ACID POISONING BY ABSORPTION: DISCHARGE OF PIGMENTS IN THE URINE.

By JAMES WALLACE, M.D. Edin., Liverpool.

SOME weeks ago, a patient of mine called upon me, labouring under great excitement from an apprehension that he had poisoned himself with carbolic acid. His druggist had recommended him to give his dog a carbolic acid bath to destroy the fleas which infested it. He did so, and in ten minutes his favourite dog was dead; after which he hastened to me to know what could be done to arrest the danger which, he supposed, threatened himself. In the human subject I have used carbolic acid extensively, internally and externally; but until I met with the following case I had never observed any hurtful consequences following its use.

On January 25th, 1870, Mr. Bickersteth saw A. B., aged 5 years, in consultation with me. He was a strumous child, and was suffering from a third relapse of morbus coxarius in its suppurative stage; and the question to be determined was the opening of the abscess. Under chloroform this was done, and carbolic dressing applied—one part of acid to eight of olive oil. The case progressed not unfavourably until towards the second week in March, when it was remarked that after each dressing on every fourth or fifth day he was not so well, and subsequently vomiting and dysphagia invariably followed. I reduced the strength of the carbolic dressing, but the same symptoms persisted, though in a minor degree, and he became sallow and cachectic, with rapid pulse; and general debility speedily followed, from aversion to all nutrients. On examining the urine, I found it of a smoky dark tint, very similar to the appearance of the urine in bad cases of scarlatinal nephritis. This condition of the urine I had previously observed when making observations on the treatment of typhus by carbolic acid, as recorded in the *JOURNAL* (1869). The specific gravity of the urine, examined on several occasions, varied from 1010 to 1015; it was alkaline and effervesced on the addition of nitric acid. On standing, a deposit fell down, which the microscope showed to be composed of the granular urates of ammonia. On the application of heat, they became redissolved, and in several specimens a slight phosphatic haze was thrown down, soluble in nitric acid, but there was never a trace of albumen. On adding nitric acid to the boiling urine in considerable quantity, a heavy cloud of dark precipitate was invariably thrown down, which sometimes gave indication of the presence of bile-acids, but more frequently not. On collecting this precipitate and placing it under the microscope, it was found that the urine was loaded with yellow, brown, ruby-red, and black pigments; hence the pale, anæmic, and waxy hue of the patient. The carbolic acid was carrying off the colouring matter of the blood-corpuscles. That this remarkable property was possessed by carbolic acid was repeatedly demonstrated thus: that on the third, fourth, or fifth day after each dressing the urine had invariably resumed its normal character, but after another dressing it immediately became loaded again with pigments.

On March 22nd, I adopted Professor Lister's most recent method of carbolic dressing by oilskin coated with dextrin and shell-lac, and carbolic acid plaister. Formerly, there was a large discharge of pus on each dressing; now there is only a considerable serous oozing; vomiting has ceased; the appetite and general health are improving; pigmentation has ceased, and the urine is normal in character.

If carbolic acid can thus produce spanæmia, may it not have a therapeutic significance in plethoric conditions of the system?