

mitted will necessitate the constant use of a catheter for the rest of his life; but as he has gained some slight power of expulsion during the last few weeks, it is just possible that he may alleviate his unfortunate condition.

The foregoing cases, which I have selected from among a considerable number that have come under my notice, will sufficiently illustrate the errors in diagnosis and treatment which are but too common. The history of each was so distinct as to make it difficult to conceive how any error could have occurred. All the patients had been in good health, and free from any urethral or kidney complications; and though in one there was slight enlargement of the prostate, in all the retention was due to paralysis of the bladder consequent on over-distension. In fact, the surgeons under whose care the cases first came were of that opinion, and attempted the introduction of catheters unsuccessfully, and then, putting the cases down as examples of "suppression," were afterwards misled by the dribbling or overflow, which they took to be the re-secretion of the kidneys stimulated by the measures they had adopted.

The diagnosis between retention and suppression is so very easy as to render a mistake perfectly inexcusable. In retention there is the urgent desire to micturate, accompanied with violent spasms, not only of the urethra and perineum, but of the whole abdominal wall; and as time elapses the urgency increases, the patient rolling in agony, and straining violently to relieve himself. Besides, the surgeon's hand will at once detect the solid tumour above the pubes, formed by the distended bladder, which will yield a dull sound on percussion. In suppression of urine, on the contrary, there is no urgent desire to micturate, no spasm, and no agony consequent on a distended bladder; but the patient lies in a listless condition, soon passing into coma, whilst the breath and skin exhale a strong urinous smell. Moreover, the bladder will be found empty, and the fingers can be thrust into the pelvis, where the intestines yield a clear percussion sound. It must not be forgotten that a case of retention will at length pass into a typhoid condition, which might possibly be mistaken for the coma of uræmic poisoning; but the history of the case, and the presence of a distended bladder and dribbling of urine would at once point out its true nature.

In all the cases I have seen, the error arises from the catheters not having entered the bladder. Surgeons in general practice, who are not much in the habit of passing catheters, usually introduce a gum-elastic catheter without a stilette, which, if it meets with even slight resistance, is very likely to bend upon itself, and thus never reach the bladder, although its whole length may have been introduced into the urethra. As I remarked in the early part of this paper, the injection of warm water at once clears up any doubt, and the fact that water cannot be injected may be considered conclusive evidence that the catheter has not reached the bladder.

I have no hesitation in saying that in all cases such as I have described a catheter can be passed into the bladder, and I conceive it to be unjustifiable in any surgeon to be satisfied until he has withdrawn the urine; in which, if he will employ a metallic instrument of moderate size, he will in all probability succeed with ease. Time is of the greatest moment in these cases; and if, therefore, the surgeon in attendance do not succeed in his attempts, he is bound to call in assistance without delay, or his patient may possibly lose his life, or at least be condemned to the misery of the use of the catheter for the rest of his days.

In Case 3 the grossest errors were committed—linseed poultices being applied to the belly and drinks given to "force the water;" and when the second surgeon was consulted, the patient would hardly permit the catheter to be passed, because it had been so frequently attempted, and he had been assured that there was no urine in his bladder, a large quantity having dribbled away owing to the over-distension.

When the greater part of the urine has been withdrawn by the catheter, one of two courses must be pursued: either the instrument must be introduced every four or six hours, or a gum-elastic catheter must be tied in, directions being given to the patient to empty the bladder at those intervals, with the view of keeping it nearly empty, so that the bladder may be able to recover its muscular tone and contractile power.

The more I employ it, the more I feel satisfied with the use of turpentine, in ten- or fifteen-minim doses, in the cases complicated by hæmorrhage from the bladder. In Cases 3 and 4 it acted at once, although both gallic acid and the muriated tincture of iron had been employed without benefit; and I think the drug deserves a more general recognition by the profession.

Saville-row, February, 1863.

OBSERVATIONS

ON THE

EMPLOYMENT IN THE ARTS OF SCHEELE'S GREEN OR ARSENITE OF COPPER,

AND OTHER METALLIC PIGMENTS.

By ARTHUR HILL HASSALL, M.D.,

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THE beautiful green pigment, Arsenite of Copper, is extensively employed in the arts.

It is much used to colour *paper-hangings*, as well as various other descriptions of ornamental paper, as *writing* and *wrapping paper*, *envelopes*, and *cards*.

Various ornaments connected with ladies' bonnets and head-dresses, especially the *leaves*, have recently been extensively coloured with this substance; as also muslins, scarfs, and other fabrics.

A green paint is made with it.

It is employed to colour *candles*, and also many articles of *sugar confectionery*.

A few remarks upon each of these uses may be made.

Its employment in the coloration of *paper-hangings* is highly objectionable.

The colouring matter is usually readily detached from the surface of the paper, which is generally but little sized, since anything like varnish injures the delicacy of the appearance of this arsenical paper. This separation occurs to a great extent whenever the walls of the room are cleaned and rubbed, as they are in most houses at stated periods. The evidence of this detachment is often found in the dust accumulated on the tops of shelves, bookcases, and other articles of furniture, and which on analysis will frequently be ascertained to be composed in part of the poisonous pigment in question.

The particles of the poison thus detached are diffused through the atmosphere of the room, and become inhaled by its occupants. Inhaled, it acts as an irritant to the throat and lungs, and after a time is absorbed into the system.

There is the further danger, in the case of arsenical paper-hangings, of the paper becoming detached in places, and of being licked or chewed by children, as has frequently happened.

The same danger constitutes the chief objection to the use of this substance in the colouring of *writing* and *wrapping paper*, *envelopes*, and *cards*. When such paper is used to wrap up cocoa, bonbons, and other sugar confectionery, the danger is considerable.

The danger of the use of arsenite of copper in the coloration of *leaves*, *muslins*, and other articles of dress or personal ornament, is twofold: the one danger affects the workpeople by whom the articles are manufactured, the other the wearers.

The injury to health in the case of the makers of artificial flowers and leaves, who consist chiefly of girls and young women, is often very great. The green powder flies about the workroom in large quantities, and is inhaled; it also settles on the exposed parts of the person, as on the head, face, neck, and hands; the hands become stained of a green colour, which no washing will remove. At length, ugly-looking sores appear on various parts of the body, including all the exposed parts; there is a constant soreness of and running from the eyes and nose; the chest and throat are sore; there is cough; and at last diarrhoea sets in. Frequently the workpeople become so ill that they are obliged to desist from their work from time to time. In some instances fatal results have been known to ensue, as in that of Matilda Schewrer; while in others, this irritating poison has led to the development of other diseases, as phthisis, which have had a fatal termination.

It is estimated that in London alone several hundred persons are engaged in the manufacture of these arsenical leaves. Many cases of severe illness arising from this cause, both in men and women, have come before me at the Royal Free Hospital, the particulars of some of which will be found recorded in THE LANCET of December 1st, 1860. The condition of the majority of the sufferers was extremely wretched.

The second danger affects the wearers. The arsenic on the

artificial leaves worn on bonnets and head-dresses of course readily becomes detached, and is peculiarly favourably placed for falling upon the face and neck, as well as for inhalation.

When *muslin*, and especially *ball-room dresses*, are coloured with this pigment, it adheres but very slightly to the fabric itself, so that in the whirl and maze of the dance it becomes detached in considerable amount, and thus what should be a pleasant pastime and a healthy recreation, becomes converted into what has been recently not inaptly styled "the dance of death." I apprehend, however, that the danger of arsenical poisoning is not nearly so great to the wearers as to the makers of these arsenical ornaments and dresses.

I am as yet unacquainted with the effects of arsenical *paint* on health. In this case, also, the dangers, if any, would be to the workmen principally. It is well known that paper-stainers using Scheele's green suffer in the same way as the leaf-makers, being afflicted with sores and excoriations, running from the eyes and nose, and from other disagreeable and injurious consequences.

The practice of colouring *tapers* and *candles* with arsenite of copper is highly pernicious, for in this case, during combustion, the arsenic becomes set free, and is diffused through the atmosphere of the room in the form of arsenious acid.

There is one use of this pigment which is more objectionable and more injurious than that just alluded to, and that is in the coloration of *sugar confectionery*. Here the pigment is eaten; the poison is directly introduced into the system, and for the most part into the tender and susceptible stomachs of young children, there to work its poisonous effects. A few years since bushels of sugar confectionery, coloured with arsenite of copper, might have been purchased in London in the course of a single day; but owing to the revelations of THE LANCET, which have been continued through a series of years, this adulteration, though not entirely stopped, has been very considerably checked.

Arsenic is used in the arts in other forms besides arsenite of copper, as in those of *arsenite of potash*, and *arsenious acid* in *fly papers* and *cosmetics*, and for poisoning *wheat*. These uses are likewise by no means unattended with danger.

I now pass on to make a few observations on another green pigment much used in the arts—namely, *Brunswick green*, of which there are three varieties, and which consists of a mixture of chromate of lead and Prussian blue or ferrocyanide of iron. It is used for the same purposes as the arsenite.

Observations are yet wanting as to the effects of this colouring matter upon health. It is therefore very desirable that attention should in future be directed to this point.

Papers, and particularly *flock papers*, are very frequently dyed with this green. It was also at one time extensively employed to colour sugar confectionery, and is even now sometimes used for that purpose. Of the impropriety, and even danger, of this use of the pigment not a doubt can be entertained.

Another metallic pigment much used, and for all the purposes already enumerated, is *chromate of lead*, of which one variety is called orange and another lemon chrome. This substance is extensively employed to colour sugar confectionery, so much so that even now it would not be difficult to purchase in the course of a single day as many as fifty articles coloured with this lead pigment. It occurs also frequently in snuffs.

A second preparation of lead frequently met with is the *red oxide of lead*. This I have found repeatedly in *snuff*, *cayenne*, *currie powder*, and in *sugar confectionery*.

Various other colouring matters, in addition to the preceding, are used in the arts, and are even sometimes added to certain articles of consumption. Thus *blue stone*, or *sulphate of copper*, is constantly added, for the purpose of greening them, to bottled fruits and vegetables, and also to those preserved in tin cases. In the case of pickles the same object is attained by boiling the vinegar in copper vessels, whereby *verdigris*, or an *acetate of copper*, is formed.

Without multiplying illustrations, it is obvious from what has already been stated that much injury to health must necessarily in many cases result from the indiscriminate use of poisonous metallic colouring matters. I submit, therefore, that the case is one which demands, in the interests of the public health, a full and searching inquiry. The object of such an investigation should be threefold—first, to determine the nature and full extent of the evil; second, to suggest palliative and preventive measures; and third, to form a basis for moderate and well-considered legislation, which, while on the one hand it should guard the health of the people, on the other should not interfere unnecessarily with manufacturing processes.

Wimpole-street, Cavendish-square, 1863.

ON A CASE OF HYDATIDIFORM OVUM.

By J. MOORHEAD, M.A., M.D., Weymouth.

As the opinion of the profession at large with regard to the nature and pathology of so-called uterine hydatids is still unsettled, the following contribution may be deemed worthy of publication. It will serve to illustrate the symptomatology of this morbid development, as well as to corroborate novel views recently put forth on this interesting subject.

On the 24th September, 1862, I was requested to visit Mrs. G—, a respectable married female, aged fifty, who was suffering from great irritability of stomach. Though naturally of a stout habit, she was somewhat emaciated, and appeared anæmic. On inquiry, it was ascertained that about the beginning of August her appetite, which had been previously good, became impaired, and in a short time nausea and vomiting supervened, almost every article of food being rejected soon after being swallowed. These symptoms, accompanied by a great sense of oppression at the præcordia, were present almost throughout the entire day. The sickness persisting, she states that on the 12th September she took for its relief a wineglassful of the infusion of ground-ivy (*Glechoma hederacea*), which she had heard from some of her female friends was a valuable remedy in such cases. On the same day she consulted a physician, who prescribed a mixture containing chiefly chlorodyne. On the morning of the 13th she took another draught of ground-ivy, and in the course of the day two doses of the mixture, each of which, however, was almost instantly rejected. Towards evening she received a shock by a sudden knock at her door, and shortly after a sanguineous vaginal discharge took place, followed by a small clot. During the interval that elapsed until she consulted me on the 24th, she states that the bloody discharge occasionally recurred, accompanied by some watery fluid, which came away in gushes with sneezing, coughing, or retching. The gastric symptoms also persisted with much severity, and she began to suffer in her general health. She informed me that she had had four children at full term and three miscarriages, and that she had not been pregnant for the last twenty years, during which period, however, she had regularly menstruated every four weeks until the 25th July, after which date nothing appeared until the time of the hæmorrhage above referred to.

When I first saw the patient, her tongue was thinly coated with a moist white fur; there was pain of stomach, though not considerable, attended with a sense of oppression, also slight tenderness of epigastrium on deep pressure; vomiting occurred almost after every meal. As the gushes of water which occasionally took place were supposed by the patient to come from the bladder, and the irregularities of the catamenia might be attributed to her advanced age, I then regarded the case as one of dyspepsia, and accordingly prescribed alkalies with sedatives, consisting of dilute hydrocyanic acid, chloric ether, chlorodyne, oxalate of cerium, *et hoc genus omne*. Though each of these remedies afforded temporary relief, the sickness soon returned with its pristine severity, and consequently, on October 1st, a full examination of the abdomen was instituted. There was still slight pain on pressure over epigastrium; but the most notable feature was a hard globular tumour, about the size of a child's head, occupying the hypogastrium, and extending as high as the umbilicus. This tumour, from its situation and relations, was evidently uterine, and to my mind at once accounted for the constant sickness, which was clearly sympathetic. As there had been slight hæmorrhage during the few days previous, the idea of polypus or fibrous tumour of uterus suggested itself, pregnancy having been left out of consideration, as the patient had not borne any children for twenty years. An internal examination was proposed, but she would not then submit to it, and begged me to try the effect of medicine a little longer. Accordingly, sinapisms were applied to the epigastrium, and sedative drugs again resorted to for some days; but as the vomiting still continued, and debility increased, she at length consented to an examination per vaginam, which was made on the 8th October.

The cervix uteri was found to project into the vagina; the os was patulous, so as easily to admit the finger; and when this was pushed into the uterine cavity, the latter was found filled with a substance which was soft and placenta like to the feel. As the finger, on being withdrawn, was covered with blood, the patient was directed to use the tepid-water doucha and to keep in the recumbent posture. A few hours afterwards,