

feeble, somewhat bronchial. Behind, in under third of right side, bronchial, with large crepitation, and some friction-sound. In the left lung, much muco-crepitant rhonchus; tongue very dry and brownish. Wine as before, and increased to twelve ounces. Ten P.M.—The wine increased to sixteen ounces in the twenty-four hours. An enema was returned without any fæces. There is a large hæmorrhoidal tumour outside of the anus which did not exist two days ago; aspect more prostrated; breathing more laborious; mouth open; skin perspiring; pulse 120, soft, and weak, but not more so than yesterday; tongue dry, with a black fur; sordes on teeth; urine passed in the bed; breath less fœtid. There are a few spots like the rose spots of fever on the chest. Wine ordered freely; quantity not limited. He gradually sank, and died at half-past four in the afternoon.

*Post-mortem examination forty-six hours after death; fine weather.*—There is still some swelling of the left leg, the cuticle raised by effusion; moderate emaciation; green lines in the course of the superficial veins. About two drachms of serum in each lateral ventricle of brain; cerebral substance soft. The right pleura contained above fifteen ounces of turbid serum; old adhesions opposite third, fourth, and fifth ribs, on the lateral surface near the nipple; other old adhesions near the spine; pleura costalis more vascular than usual; a little pus, on pleura pulmonalis, and a little very soft lymph on the lower and middle lobes of lungs, which weighed twenty-four ounces and a half, and contained much less air than usual. Neither upper or lower lobe is very brittle, both are fleshy, the lower very dark; mucous membrane of bronchi not remarkably red. In the left pleura, five ounces of fluid, deeply tinged with blood. The left lung, weighing twenty-nine-and-a-half ounces, was larger than the right, and contained more air; the upper lobe is considerably puckered, and has in it several distinct portions of putty-like matter; the lower lobe contained bloody serum, very little frothy; it is brittle, and has an odour of putrefaction; mucous membrane redder than in right lung, uniformly so, and apparently from imbibition. The pericardium contained nothing to be noticed except a patch over the right ventricle. Heart exceedingly soft and flabby, uncontracted, in other respects healthy; blood in right ventricle nearly all fluid, with some small air-bubbles; weight, nine and a half ounces; lining membrane of heart and of aorta deeply coloured by imbibition. Mucous membrane of stomach softened at the cul de sac, softened and mamelonated near the pylorus. At the lower part of the ileum, one of Peyer's patches rather distinct; large intestines much distended with gas; intestines and mesenteric glands otherwise healthy. Spleen about six inches in length; its consistence for the most part not greater than that of cream; weight, seven and a half ounces. Liver full-sized; above of a deep blue; on a section for the most part pale and very soft; the blood in it contains some air. The gall-bladder contains very thin yellow bile, and a number of calculi which sink in water and are very brittle. The right kidney is much enlarged, weighing seven ounces; much of its outer surface distinctly red, in red punctiform spots; substance flabby and very soft; the redness greater in the cortical than the tubular portion. The left kidney is smaller, but presents the same characters in a less degree. The urinary bladder a little distended. The veins of the left leg and the left knee-joint did not contain pus. Extensive caries of the superior maxillary bone.

#### SUMMARY OF REMARKS BY DR. TAYLOR.

On admission, his countenance was expressive of suffering and anxiety rather than of pain, and the general symptoms at first suggested a fever of a typhoid type. The next thing which arrested attention was the state of the left leg; this evidently depended on some local cause, which might have been phlebitis, but of this there was not distinct evidence. The dyspnœa which had existed for a fortnight, and the signs discovered on examining the chest, made it probable that there was a pneumonia, with some pleurisy, rather than a mere pleuritic effusion; and when it was found that the urine contained albumen, it was inferred that the patient laboured under secondary diseases dependent upon Bright's disease, the question still remaining undecided as to the existence of phlebitis. However, it was obvious from the general symptoms, that the patient required support, and wine, beef-tea, and milk, were given, at first cautiously and conditionally. After this, chiefly in deference to received opinion, tartar emetic was ordered, but only conditionally, and its effects being too depressing, it was discontinued in the evening. The rose spots during the last days again suggested that the case might be really typhus; but this idea was again set aside by the other symptoms; and, indeed, these spots are not absolutely pathognomonic of

typhus, but occur in other diseases of low type. The signs of putrefaction at the inspection were disproportioned to the period after death at which it was made. No evidence of phlebitis being then found, as is frequent in the veins and joints, we may ascribe the appearances in the left leg to some inflammation of an erysipelatous kind, itself dependent on a more general disease. The right pleura contained distinctly the products of inflammation, so that the effusion was not merely dropsical.

But all the signs were in accordance with what we find in pneumonia more frequently than in pleurisy, and even when you are most upon your guard, the diagnosis of effusion is not so simple as authors represent it to be. The kidneys increased in size, their texture softened, and reddened from evidently-increased vascularity, I believed were acutely inflamed, and the microscope afterwards greatly confirmed this. During life this was only indicated by the albuminous urine, (and we had the character of Bright's disease in the urine without that disease being present;) there was no pain to indicate, this inflammation which thus agreed with the others. Most of the symptoms and the post-mortem appearances belong to that class of general diseases which Rayer has shown to depend upon the absorption of a morbid poison; in which there exists a disposition to acute inflammations, with little or no pain, a typhoid condition, a tendency to early putrescency, &c. He has traced them as induced by gangrene, charbon malign, and purulent absorption, &c., and he designated the disease from the general affection of the kidney, nephritis from morbid poison. Considering this and the other inflammations secondary to the presence of the poison in the blood, the erysipelatous inflammation in the leg would result from the same cause; but we approach a more speculative region when we come to consider what the morbid poison was in this case. There is not sufficient to indicate that it was that of ordinary typhus, or of phlebitis, and if not one of these, the only cause I can suggest, and the one to which I confess I lean, is the absorption of putrid matter from the diseased bone;—we know that such absorption of gangrenous matter is adequate to produce such effects. With this view of the pathology, what I said before of the treatment is fully corroborated, and not regarding the secondary inflammation as ordinary acute disease, experience has proved that our only resource as to general treatment is, the free administration of wine and other support.

#### PRACTICAL REMARKS ON SOME POINTS OF TRICHO- CHOPATHY AND THE CHEMICAL PATHOLOGY OF THE HUMAN HAIR.

By THOMAS CATTELL, Esq., M.D., M.R.C.S.E., &c., Braunston.

No reply having yet been furnished to the wish of a subscriber expressed in *THE LANCET* of March 28th last, "on the ingredients used, and the practices adopted, in dyeing the hair," I am induced to enter upon some consideration of the subject.

In this are necessarily involved, tricho-dyschroia, decoloration; tricho-crology, coloration; and the general pathology of the hair. The only other trichopathical affections to which I shall here refer are, alopecia, canities, and calvities, or baldness, hoariness, and fall of the hair.

Tricho-dyschroia is a pathological condition of the hair, which may arise from constitutional changes induced by inadequate diet or disease, the influence of emotions and passions, hereditary influence, &c. There is, however, no cause so manifest as that of chemical reactivity in decolorizing the hair; for example, if the hair of a person be for some time exposed to gaseous chlorine, its natural colour disappears, and there is perceived the presence of a bitter adhesive compound. That systemic changes, ushered in by the constant use of a diet, deficient in the elements of the hair, may alone, or associated with physical affection, stand as the proximate cause of tricho-dyschroia, is a point, to say the least, which theory justifies us in supposing. In corroboration of the supposition, that tricho-dyschroia is often induced by the direct and powerful influence of emotions and passions, there are not wanting the record of many striking coincidences.

It is, I believe, generally admitted, that old age is an essentially proximate cause of tricho-dyschroia and canities. But to establish the hypothesis, it is necessary to prove that such is uniformly the case. To suppose otherwise, is to suppose this essentiality no essentiality, which is a contradiction. We cannot speak of the cause of a physical change as essentially proximate, unless we admit the uniformity of this cause. To affirm, therefore, that old age is the proximate cause of either

tricho-dyschroia or canities, is to affirm what is directly contravened by the evidence of numerous facts; still, it is perplexing to offer a solution of the absolute cause of that change which so often occurs in the extremes of apparent juvenility and real decrepitude. We are, however, confident that the effect is the same, whether it occur in the ascension, meridian, or declination of life, as the chemical pathology of each will give us no room to doubt. It is scarcely necessary to observe, that hereditary influence greatly modifies the colour of the hair.

With this slight reference to the causes which operate in producing changes, varieties of colour, and conditions of the hair, it is here incumbent that we should inquire what, in a chemical view of the case, constitutes the nature of such changes, varieties, and conditions.

Vauquelin asserts, that the varieties in the colour of the hair depend on the presence of a coloured fatty matter; but such notion appears to be controverted by the fact, that black hair chiefly recognises for its colour the existence of iron in a state of sulphuret. If this coloured fatty matter be the proximate cause of all the varieties in the colour of the hair, then it is evident, that of what colour soever this fatty matter is, so must be the colour of the hair. Besides, the supposition is opposed to much factorial evidence. For example: if we take hair, exhibiting the different varieties of black, auburn, red, or brown, and by chemical reagents deprive it of its sulphur or iron, we deprive it of these colours or varieties. How could this be, if the colour in all its varieties depended entirely on the presence of a fatty matter. Again, if we apply to the hair stains of lead or silver, or silver with iron, we immediately recognise a change of colour. What is the cause of this change? If it be dependent on the fatty matter, then must this fatty matter assimilate the new colour, and produce such change. But such cannot be the case, though we suppose the sulphur which combined with the metallic oxide existed in the fatty matter.

It is, then, I think, the existence of sulphur in the hair, and not the presence of any supposed coloured fatty matter, that may be considered the cause of all the varieties of its colour. And this probably not on the mere fact of the existence of sulphur in the hair, but from a variation of its quantity in different hair.

Besides, this opinion may receive additional corroboration from evidence negative as well as positive—that is, suppose we deprive the hair by any means of its sulphur, or suppose the sulphur non-existent in the hair, of what colour would it be, or of what utility would it be, to apply in any case stains of silver, lead, or silver with iron?

The supposition, that the relative quantity of the sulphur of the hair to the metallic oxide constitutes the proximate cause of all its natural varieties of colour, is, moreover, warranted by the fundamental principles of chemistry; for if all substances combine in definite proportions, and if the colour of the hair be dependent on the presence of a metallic sulphuret, may we not rightly pronounce, that in proportion to its relative quantity and diffusion will be variety or degree of colour?

Tricho-crology is a compound Greek term, which I have devised appositely to express the chemical processes employed in reducing some of the unseemly varieties of colour to which the hair is subject, to a supposed standard or standards of natural or ideal beauty. These embrace the formation of paste, pomade, and liquid.

#### I.—Phumiform hair dye.

1. Oxide of lead, three ounces; carbonate of lime, two ounces: mix into a proper consistence with hot water, and apply it to the hair, enveloped in oil-skin.

2. Carbonate of lead in the place of the oxide of lead, and proceed as in the other case. The efficacy of this stain depends on the formation of a plumbite of lime.

#### II.—Steariform hair dye.

Nitrate of silver, a drachm; nitric acid, two drachms; iron filings, two drachms: mix. After the lapse of a few hours, pour the supernatant liquor on two drachms of oatmeal. Lastly, well mix with three ounces of lard.

#### III.—Chulosiform hair dyes.

1. Silver, two drachms; iron filings, half an ounce; nitric acid, one ounce; water, eight ounces: mix. When the metallic substances are dissolved, pour off the supernatant liquor which constitutes the dye.

2. Nitrate of silver, eleven drachms; nitric acid, a drachm; distilled water, twenty ounces; soap, (*sap. viridis*), three drachms; gum-arabic, a drachm: well mix.

3. Nitric acid, a drachm; nitrate of silver, ten drachms

soap, (*sap. viridis*), nine drachms; mucilage, five drachms; water, thirty-seven ounces and a half: mix. This differs from the foregoing only in proportions.

4. Lead filings, two ounces; hartshorn shavings, an ounce; oxide of lead, two drachms; camphor, a drachm; water, a pint. Boil for half-an-hour, and when fine, pour off the supernatant liquor on di-acetate of lead and rosemary leaves, of each one drachm. Again boil, and when sufficiently fine, pour off the supernatant liquor, which constitutes the dye.

Of these preparations, as stains for the hair, none claims so decided a preference as the last. It can produce injury to neither the hair, skin, or brain, and possesses the advantage of communicating a beautiful colour and curling property to the hair. Whatever objection there may be to the use of dyes containing the nitrate of silver, from their liability to darken the skin, still I regard them preferable to the employment of caustic earths, owing to the depilatory action of the latter.

Before the application of any liquid stain, it is necessary that the hair be freed from all greasy matter. A close brush and a comb are all the requisites in staining the hair.

Connected with the general pathology of the hair, the only two points to which I shall now refer are alopecia and calvities—baldness and fall of the hair.

Alopecia may arise from any cause destroying the vitality of the bulb of the hair—as, various fevers, the wearing silk hats, the existence of what, in common parlance, is called a worm at the root, neglect in cleansing the head, &c.

Calvities follows precisely analogous causes, and merely differs from alopecia in degree.

To remedy these affections, it would appear, by our daily advertisements, that every advertiser had discovered some secret process—had, in fact, ransacked the whole arcana of science. But leaving these, and the victims that use them, I will mention a general remedy or two which will be found uniformly efficacious, and infinitely more satisfactory in their results than bears'-grease, Macassar oil, or any other advertised preventive or curative:—

1. Rosemary, maiden-hair, southern-wood, myrtle-berries, hazel bark—of each two ounces. Incinerate, and with the incinerated substance make a strong ley, with which to wash the hair at the roots every day. Keep the hair cut short.

2. Carbonate of potash, (pearlash,) two drachms; water, a pint: use as the preceding. The efficacy of both these remedial applications depend upon their alkaliescent character.

But where a greasy substance is required for the hair, I would suggest the substitution of the elaine of olive oil; though expensive, it will, in many cases, well repay the use, as it never thickens, engenders scurf, or in any way produces detriment to the hair, like common oil or pomade.

The only other greasy matters which I would suggest as substitutes for the elaine are ox-marrow, well agitated in a mortar, and castor-oil, freed of its adhesive matter.

I trust that, for the future, professional men, and not nostrum-mongers, will take charge of the diseases and affections of the hair.

Braunston, Northamptonshire, May, 1846.

## A NEW TRUSS FOR INGUINAL HERNIA.

By DAVID TOD, Esq., Surgeon, London.

ABOUT twelve years ago, my attention was directed to the various kinds of trusses then recommended and used in the treatment of hernia. After a minute investigation, I found that every one of these instruments was constructed without any reference to the anatomical structures of the parts affected—that the pad of the truss was made to press upon the external abdominal ring only—and hence, that the intestine was allowed to pass through the internal ring, and lodge in the canal, to the great annoyance and danger of the wearer. I likewise found that when much pressure of the pad was required to prevent the gut from escaping through the external abdominal ring, the circulation of the spermatic cord would be interrupted, and hence cause much additional distress to the patient. To prevent such effects from occurring, I, after many fruitless attempts, succeeded in constructing a truss upon a principle very different from all then in use; and I can now state, that nearly one hundred persons, males and females, are wearing my invention without suffering the least annoyance, or running the least risk of having strangulated hernia.

It is a difficult matter to give a correct description of the truss which I now strongly recommend to the notice of the