ments of stone falling, and they are occasionally maimed from the wearing apparel becoming entangled in the machinery or rollers, which are used to crush the stones into small fragments, the lead ore being intimately blended with the limestone found in the mines. The accidents to which the miners are most obnoxious, are from blasting the rocks with gunpowder, termed "shots", producing (from excessive carelessness on the part of the miners) loss of vision, blueness, and disfiguration of the countenance. These unfortunate miners are thus branded for life.

They also suffer frequently from particles of stone and metal embedding themselves in the cornea, which, unless removed quickly by excision, produce inflammation of the eye and its appendages.

I cannot conclude without expressing my acknowledgments to Mr. McCollah, the surgeon resident on the spot, for the statistics embodied in this report.

Illustrations OF HOSPITAL PRACTICE: METROPOLITAN AND PROVINCIAL.

NORTHAMPTON INFIRMARY.

RESOLUTION OF ADIPOSE TUMOURS.

By J. H. WEBSTER, M.D., Physician to the Infirmary.

[Read before the South Midland Branch, May 21st, 1857.]

ADIPOSE tumours most frequently come under the province of the surgeon, the knife being the *ultimatum* whenever the number, size, disfigurement, or discomfort justifies operative interference; but in some few instances, as the subject of this paper, the rapidity of growth, the number of the parts affected, and a diffusedness of increase, admit of no strictly surgical treatment whatever, and any relief to the patient can be expected only from the most problematical and uncertain influence of internal, constitutional, alterative remedies.

The earliest stages of these growths are seldom noticed by the individual or his professional adviser, there being no pain or discomfort attending their first development, it often being a mere accident that draws attention to them; and when, from their increasing size, they force themselves into notice, the absence of local pain and constitutional disturbance, the uncertainty of their probable extent of growth, as sometimes also of their true character, and, when that is satisfactorily diagnosed, the knowledge that they seldom or never ulcerate, or assume the characters of malignant growths, all tend to dissuade from early and active operative interference.

During that period of expectancy as to the result, and irresolution on the part of both patient and practitioner as to the use of the knife, any simple and innocuous medical treatment, which may have been found by experience to have been beneficial in similar instances, may fairly be tried.

I adduce this case with the more confidence in the interest you will take in it from the fact that, whilst under treatment, the tumours rapidly decreased in size. Persistence in the remedy was attended with persistent reduction of their masses, until some of them entirely disappeared, as our worthy Chairman, who saw the case, as also the patient himself, now present, will testify; but becoming (as it might be expected) heartily sick of constantly taking medicine, the patient unwisely abandoned the remedy, and, shortly afterwards, the tumours began to increase, and have now attained nearly the same size as they were originally. This, to me, is a matter of regret, but it will corroborate in our minds the influence the drug must have had in their dispersion. The case is as follows:

CASE. Richard Wright, aged between 38 and 40, formerly a post boy and farm labourer, but during the past eleven years a brewer's man, about five feet five inches in height, stout, and strongly built, of quasi-temperate habits, and always in the enjoyment of good health, was admitted to the Infirmary October 11th, 1856. A year and three quarters back a small pimple formed at the back of his right ear, which itching, he wounded the surface by scratching, when it rapidly increased

to the size of a bantam's egg, becoming angry, hot, and painful, and accompanied with much constitutional disturbance. There being some obscure fluctuation in the tumour, it was opened by his medical attendant; some fluid escaped, and there was relief to the pain. The wound healed kindly, but the swelling became very hard and stony to the feel, and slowly increased in size, until it extended from the back of the right ear obliquely across towards the median line, and down as far as the fifth cervical vertebra, occupying, as it were, the exact site of the splenius capitis muscle.

About eighteen months afterwards a second tumour formed in the same region at the back of the left ear, increasing in a similar manner, but unattended with the stony hardness of the first and opposite one. Shortly afterwards, upon shaving, he discovered a swelling of the parts beneath the chin; this rapidly enlarged, giving the appearance of a substantial double chin.

Six weeks prior to admission, when trying on a pair of trousers, he discovered that the walls of the belly had become much larger and distended by four different swellings, two above and two below the umbilicus. Two other symmetrical formations were also observed in the pubic region, one on each side of the penis. These six last mentioned increased so rapidly as to reach their greatest size in the space of nine days.

The abdominal swellings were symmetrical in the supra and infraumbilical regions, and apparently developed in the cellular investments of the two recti muscles. The upper ones measured twelve inches laterally and horizontally, and ten inches vertically, occupying the whole space between the ensiform cartilage, false ribs, and the umbilicus. The two lower ones occupied the space from the umbilicus to within about two inches of the symphysis pubis.

There had been no treatment previous to his admission on October 11th, at which time all the tumours, though less indurated than formerly, were at their greatest size; the circumferential measurement of the abdomen then being thirty-nine inches.

My colleague, Mr. Terry, under whom the case first came, tried alterative mercurial treatment, with iodine inunction, and moderate purgation, which was continued for a fortnight, when I was asked to see the case. Recollecting a very graphic description by Sir Benjamin Brodie, in his work on Pathology and Surgery, of a case nearly identical with this one, and the favourable issue of that case, I suggested the trial of the same simple remedy; namely, the liquor potassæ, largely diluted, in as full doses as could be taken without deranging the digestive function.

October 23rd. The patient was put upon half-drachm doses of the liquor potassæ in the compound infusion of linseed, thrice daily.

November 2nd. He thought himself improved, the tumours having a more doughy, spongy, semi-elastic feel. He had been passing, since taking the medicine, between seven and eight pints of urine in the twenty-four hours. He was ordered to take the medicine four times in the day.

November 6th. The liquor potassæ was increased to forty drops for a dose, four times daily.

November 8th. He reported, that since taking the liquor potassæ all the tumours had become much softer, and the abdominal ones had much diminished in size, he being able now to button his trousers, which two days before he could not do by three to four inches. The urine amounted to from eight to ten pints. He was then made an out-patient, with instructions to continue the medicine in as full doses as he could take, without interfering with his health; but to reduce or intermit it whenever he found his urine becoming alkaline, having been furnished with litmus paper for ascertaining that point.

February 14, 1857. He had taken a cold, and was suffering from hoarseness of voice: he said he was quite well, saving the cold, but he looked pale, thin, and in impaired health, all the tumours were very much shrunk; that beneath the chin nearly gone. The posterior cervical ones had lost their prominence; and his aspect from behind was that of a man having merely a thick bull-set neck; the abdominal walls had so subsided that, in the erect posture, the line from the ensiform cartilage to the pubes was vertical, and the pubic swellings were quite gone. He had been taking thirty-five drops of liquor potassæ, thrice daily. The urine was much in excess. He was ordered to take, in addition, a drachm of compound tincture of cinchona three times daily. I understand that he persisted in the medicine for a fortnight, with continued improvement, and then abandoned it. Shortly afterwards the

swellings reappeared, and increased slowly; and they are now nearly as large as at first.

REMARKS. It may be remarked that these depositions commenced, increased, and obtained their maximum development in the space of twenty-one months; that, under treatment, they resolved themselves to the above-mentioned condition in the space of four and a half months; and that the discontinuance of the medicine was followed by their regrowths. Their dispersion was certainly *post* the special treatment, and, under the circumstances, I think we may be justified in assuming that it was also *propter*; and if so, what is the *rationale* of the action of the liquor potassæ? Does it act simply through its diuretic influences? Does it arrest the deposition of fat, and so far favour interstitial absorption, or is it a resolvent of the adeps of the system?

It is believed that these tumours occur only in regions where adipose structure is naturally found, and that they do not form in parts where merely loose cellular tissue exists; so that we look upon them rather as hypertrophy, or excess of deposition in the tissue, than as morbid growths or developments. But whence arises in the constitution that increased tendency to the formation of fat? and why is it deposited in patches and not uniformly distributed over the whole body? I fear that we must conceal our ignorance upon this latter point under the convenient and oft-adopted explanation of a "freak of nature"; but as regards the former, I would submit to your consideration some speculative reasons.

The most satisfactorily recognised function of the liver is the resolution of the saline constituents of the blood into their acids and alkaline bases: the first, to play their part in the digestive function; the latter, in the function of absorption. Also, it is an adopted modern opinion, that the soluble proteine compounds of fibrine, albumen, and caseine, are chiefly absorbed into the circulatory system at once from the stomach; and that the oleaginous and fatty elements, or hydrocarbons, maintained in solution by the alkaline bases from the liver, are absorbed by the lacteals spread over the whole intestinal canal, into the thoracic duct, thence into the venous system, and through the pulmonary structures, to be oxygenised and burnt out of the system under the form of carbonic acid. If, therefore, any change in the circumstances or condition of life occurs whereby this oxygenation is retarded or reduced, or if more material be thrown into the system than those functions can dispose of, there will, *ceteris paribus*, be a cumulative tendency to adipose depositions.

The change in this man's occupation, from that of post-boy and field or agricultural labourer, breathing the fresh pure, cool air, with perhaps a diet chiefly farinaceous, to that of a brewer's servant inhaling a hot atmosphere surcharged with steam-vapour, and consequently retarding the excretion of carbon from the system, may be suggested as one amongst other causes of an excess over expenditure of carbonaceous elements in the circulation. An amusing feature in the history of this patient is, that owing to the proximity of a tanner's yard, he has had the opportunity of obtaining, at small cost, an unlimited supply of ox-tails, making thereof a highly nutritious "aldermanic" soup, which he formerly partook of freely several times in the day: and, as he was a very energetic, hard-working man,—always employed fourteen, and sometimes sixteen, hours out of the twenty-four in his laborious and exhausting occupation,—you may imagine that the consumption was anything but small. Coupling this with the not scanty supply of strong beer or porter which brewers' men are allowed, it will be seen that, whatever the waste of the system, the recreative supply has been most ample, so that it is not improbable to infer that carbonaceous elements, far beyond the requirements, were gradually accumulated in the system.

I have mentioned that the fatty portions of our alimentary substances have to be saponified by the alkaline products of the liver previous to their assimilation; when, therefore, the hepatic function may have been enfeebled by peculiar occupation, by indolence or age, or overtaken by indulgence, the normal alkalinity of the blood may be insufficient to retain in solution those carbonaceous elements. Hence abnormal depositions must take place, so that the circulation may be relieved of that excess, which the pulmonary and other excretory organs are unable to oxydise or discharge.

Lastly, it has been noticed that the medicine acted powerfully as a diuretic, the water having increased to an almost diabetic amount; the urea, consequently, thrown off must necessarily have been much beyond the average. I think it, therefore, not unreasonable to presume, that long continued exposure to an atmosphere of high temperature, saturated with

vapour, with the consequent retardation of the pulmonary excretion of carbon, high diet, and full amount of fermented beverages, with sluggish action of the liver and kidneys, were the causes of those fatty or steatomatous formations; and that by the exhibition at particular stages of the digestive and assimilative functions of a free and uncombined alkali, the solubility of such constituents may be maintained, their tendencies to assume concrete forms retarded, and, by their longer retention in the circulation, a more facile decomposition and elimination in the form of carbonic acid from the lungs, and of urea from the kidneys, promoted.

ST. GEORGE'S HOSPITAL.

CASES OF FEMORAL HERNIA.

Under the care of H. C. JOHNSON, Esq.

[From Notes by F. WINTLE, Esq., Surgical Registrar.]

WE are enabled to lay before our readers some interesting cases of femoral hernia which have lately occurred at this Hospital in the practice of Mr. H. C. Johnson, which have all terminated happily; and each of which presents some special features calling for remark.

The first case shows how great mischief may be produced in a very short time by the pressure of the sharp edge which usually forms the stricture in femoral hernia. In this instance, although there was every reason to suppose that the patient had not had a rupture before the day of admission, the vessels of the omentum were much injured, and rapid change of structure would doubtless have soon occurred. This is one of the numberless cases which show the importance of operating early in hernia, especially in the femoral variety.

The second case is remarkable for the peculiar appearance of the contents of the sac. It was impossible to be quite certain about the true nature of the bodies found within it, as the adhesions which existed between them and the sac prevented the operator from drawing them down and so seeing their connexions.

The third case deserves record as one of the few instances of recovery from an artificial anus formed in the operation for strangulated hernia. This is a proceeding which must indeed be adopted in appropriate cases (though these are happily fewer, now that surgeons are fully impressed with the necessity of operating early), but which is usually adopted more as a scientific necessity than from any hope of success in saving the patient's life. It is satisfactory, therefore, to put on record an instance in which the patient has fairly recovered from the operation, and in which she will, in all probability, recover from the artificial anus also. It will be noticed that there was no hiccough in this case, nor any evident sign of gangrene; so that the operation without opening the sac might have been performed, and would of course have occasioned effusion of fæces into the peritoneum.

The fourth case is of interest from the rare circumstance of a large piece of the great intestine being contained in the sac of a femoral hernia. This is a fact which, if our researches do not betray us, is very rarely noticed. The large size of the ring in this instance seems to have acted as rather an obstacle to the reduction of the gut, which was so difficult, that it was at one time a question whether it were possible.

CASE I. *Epiplocele: Short period of Strangulation: Sac full of Blood.* Sarah R., aged 53, was admitted on April 12th, under the care of Mr. Johnson. She is a married woman, and accustomed to hard work. On the day of admission, while sitting at dinner after a hard morning's work, she suddenly felt pain in the left groin, and then discovered a tumour there. The taxis was employed unsuccessfully, and she then came to the Hospital. There was then a small tumour in the left femoral region, without impulse, hard, and irreducible. The operation was performed as soon as possible. The sac was opened, and found filled with blood. The stricture was very tight. In the sac was contained only a small piece of congested omentum, which was easily returned. The operation was followed by symptoms of peritonitis; viz., hot skin, pain and tympanitis of the abdomen, rapid pulse (120), flushed face, and great anxiety of countenance, but no vomiting. Calomel and effervescing ammoniated saline mixture were given. In the evening of the next day she was so weak, that it was found necessary give a little wine. The bowels had acted after an injection.