just one or two solitary needles of tyrosine could be detected in the specimen examined. No obstruction whatever could be found on careful inspection of the bile-ducts. The fæces in the colon were quite clayey in appearance. The *spleen* was small. The *stomach* contained a quantity of almost black (hæmorrhagic?) fluid. The *kidneys* were of usual size, very congested. In the *lungs* were a few grey miliary tubercles with two or three soft cheesy ones at the right apex; none at the left. The *heart* presented a fringe of minute soft red vegetations on the mitral valve, and some opaque markings of the lining membrane of the left auricle. The sigmoid valves were healthy, but there were some specks of atheroma at the commencement of the aorta. In the *brain*, besides increased vascularity, there was considerable opacity of the arachnoid at the superior surface of the hemispheres, with some appearance of recent lymph in the sulci bordering the longitudinal fissure.

Besides the general interest of the foregoing case as an illustration of a rare and obscure form of disease, there are two points in it which claim attention, as bearing upon current doctrine.

1. *The Complication*.—Dr. Murchison, at page 232 of his *Lectures on Diseases of the Liver*, in reference to acute yellow atrophy, says: "Constitutional syphilis appears to be a predisposing cause in some cases. Most writers on syphilis have noted the frequent occurrence of jaundice about the commencement of what is known as the secondary stage; and in some (probably a small proportion) of these cases the jaundice is due to acute atrophy." At the same time, it is observable, syphilis has no place assigned to it by Dr. Murchison in his classification of the causes of jaundice. M. Lancereaux, on the other hand, while devoting some pages of his elaborate treatise to "secondary syphilitic icterus," or, "the icterus contemporary with syphilitic exanthema"—which affection, upon the evidence of twenty-one collected cases, he regards as a manifestation of the diathetic condition, of mild character, and favourable termination, and attributable to congestion of the liver or the compression of the biliary ducts by tumefied lymphatic glands—dismisses acute yellow atrophy with the single remark: "It appears to be without any direct ætiological connection with syphilis." (Lancereaux on *Syphilis*, New Sydenham Society's Translation, vol. i, p. 358.)

2. *The Head-symptoms*.—The first quoted writer (*op. cit.*, p. 228) teaches . . . "These symptoms are independent of any lesion of the brain or of its membranes." So also Frerichs and others.

INFLUENCE OF MENTAL SHOCK IN INSANITY.

By ALEXANDER ROBERTSON, M.D.,

Medical Superintendent of the Town's Hospital and City Parochial Asylum, Glasgow.

MRS. H., aged 27, was confined of her first child on the 7th of last November. Ten days afterwards symptoms of mental disorder appeared. She became restless, was occasionally excited, and imagined that she heard people whispering and suggesting divers things to her. After about a fortnight's treatment at home she was sent into this asylum under my care.

On admission, besides the mental aberration, her general health was reduced, but not so much as is usual in this form of puerperal insanity; and she took her food well. The ordinary treatment in such cases, namely, sedatives of various kinds, warm bathing, generous diets, and, as the disease became chronic, counter-irritation to the scalp, was carefully carried out, but all without avail. Her general condition was fully restored; but the delusions became more prominent, and were systematised. She imagined that she was a man: nothing would irritate her more than to address her as Mrs. H. She answered to the name of Peter; and declared it was a shame to keep her dressed as a woman. She even talked of marrying the nurse. Through this absurd notion she was a source of amusement to her fellow-patients. In joke they would cry "Peter", and she immediately came and asked what they wanted. The imaginary voices also continued to torment her.

Upwards of four months having elapsed and no improvement being apparent, I had begun to form an unfavourable opinion of her case. But three weeks since, at my usual visit, the matron who accompanied me said, "I think, sir, you will find a favourable change in Mrs. H. to-day. Yesterday she saw her sister-in-law down stairs" (the latter had been admitted a few days previously with insanity from intemperance, but on most points was very intelligent), "and was much affected. Mrs. H. said to her, 'Oh, Margaret! why are you here?' To this her relative replied, 'Well, I was sent here because it was said that I was out of my mind'. The attendant told me", the matron continued, "that Mrs. H.'s face just got like scarlet, and that she had never seen anything like how the veins stood in her forehead; they were like small fingers." On inquiring of the attendant, this statement was fully cor-

roborated. I was delighted to find that the change in Mrs. H.'s mental state was in no way exaggerated. On alluding to her particular delusion she blushed; and, smiling, said that she had got quit of that notion now. She admitted, however, that she still heard the whisperings, but added that they were not nearly so troublesome this morning; and she evidently realised that they were imaginary. Two days afterwards she assured me, with evident sincerity, that they, too, were all gone.

Her recovery continued. Affection for her husband and child, which had been in abeyance during her illness, was now fully restored. She was cheerful and contented, and engaged willingly along with other patients in the domestic work of the department. To-day (May 13th) she was dismissed cured.

This case is a suggestive one. It shows the powerful influence of mental shock even on the insane—sufficient to uproot at once a fixed morbid idea. May we not, then, with propriety, endeavour to apply the principle in the treatment of certain cases of monomania more than is done at present? In the dark days of lunacy practice it was carried out, though in a very objectionable form. Alienist physicians occasionally plunged their patients suddenly into the "surprise-bath", and believed that it had a beneficial influence. Possibly it had sometimes; but it is to be feared that the result was often injurious. But might we not now and again accomplish the end aimed at by this coarse procedure, in a way harmonising with the more enlightened and humane treatment of the present time? What that way should be, would require to be considered for each case. In illustration, I will narrate the result of an endeavour to carry the principle into practice, even though it was the reverse of satisfactory.

I have a patient at present under my care whom I require to feed with the stomach-pump twice daily. She has made a vow not to take food. Bearing Mrs. H.'s case in mind, I tried the following plan. At 12 o'clock, a few nights since, when all was still and quiet, along with the matron, I proceeded to the gallery in which the patient sleeps in a single bedroom. With noiseless step I advanced alone and knocked thrice at the bedroom door, pausing between the knocks. Then I said slowly, in a deep, sepulchral tone, "I command you to take food." There was a movement inside; but

"The best laid schemes of mice and men gang aft a-glee."

To my chagrin she muttered something about the devil, evidently supposing that this "voice of the night" emanated from a quarter which is not credited with imparting salutary counsel. Accordingly, she still adheres tenaciously to her vow.

This failure should not discourage similar attempts. In other cases they may be crowned with success.

ON OAKUM AS A DRESSING FOR BURNS.

By HERBERT L. SNOW, M.B. Lond., Shrewsbury.

I WISH to bring under the notice of readers of the JOURNAL the value of common picked oakum as a dressing in the suppurating sores resulting from burns. Among the good effects which I claim for it are these: First, it ordinarily induces the cicatrization of extensive sores with remarkable rapidity; secondly, it induces healing action in such of these as, occurring in debilitated subjects, or under defective hygienic conditions, have almost assumed the character of indolent ulcers, and remain stationary under the application of the ordinary lotions; thirdly, I may allude to the almost entire absence of any offensive smell under the use of oakum, to its cheapness, and to the saving of time and trouble effected by its employment; lastly (and this I hold to be by far the most important point of all), the *resulting cicatrices do not contract*. I have not yet used oakum in a sufficient number of burn-cases to advance the last statement as absolute; but in the limited number in which I have been able to employ this dressing thoroughly (in several of these there were very severe and extensive sores), I have always found the cicatrix of a peculiar dark-reddish colour and soft consistence; none of the usual tense fibrillated appearance has been visible, and no subsequent contraction has ensued.

I now always use the common oakum, which appears to me to answer much better than the recently introduced "tenax", and probably contains more of the tarry principles. This is wetted with cold water, then placed on the surface of the sore, and a bandage loosely applied over it. No pain follows the application; but the oakum has to be wetted (without being removed) with cold water several times a day, or the patient will complain of its feeling dry and sticky: the latter may generally be left to do this *ad libitum*. The dressing need not be changed oftener than on alternate days—sometimes not until every fourth

or fifth day, according to the condition of the wound and the amount of suppuration present.

Under this application some very large and deep sores heal with marvellous rapidity—many which would not be well for months under the ordinary modes of treatment, cicatrising in the course of as many weeks. All make very favourable progress towards healing, but in some the process is much more rapid than in others. The granulations seem to have a much diminished tendency to become exuberant, and seldom require either pressure or the application of escharotics. The oakum should not be applied until suppuration is well established; previously, it does not seem so beneficial as many of the applications in ordinary use. It may also be used with benefit for suppurating ulcers resulting from other causes than burns; but I have not found the former heal with nearly so much rapidity as the latter.

The last of the considerations which I have adduced above must be my main apology for sending this paper, which I have done in the hope of inducing further trials of the material. Admitting that my own experience has not yet been sufficiently extensive to decide the point absolutely, if indeed we acquire a means of preventing the frightful sequelæ of burns, unfortunately so common, we shall have made a material contribution to the alleviation of human suffering.

I may mention, in conclusion, that I have lately adopted Mr. Skey's plan of applying a solution of nitrate of silver (twenty grains to the ounce) to all recent burns, with the best effect; the pain being soon much alleviated, and the subsequent ulceration considerably diminished.

PROFESSOR FLOWER'S HUNTERIAN LECTURES ON THE TEETH AND ALLIED ORGANS IN THE MAMMALIA.

Delivered at the Royal College of Surgeons of England.

LECTURE XVI.—Friday, March 24th.

In a small Indian Deer, with long elongated peduncles to the horns (the Muntjac or Cervulus), the canines in the male project beyond the lip like tusks, curving outwards and backwards. The pulps are not persistent; but the crown of the tooth grows out like that of the molar of the Horse.

In the Musk-Deer (*Moschus*), an inhabitant of the high lands of Central Asia, there are no horns in either sex; they are apparently replaced by the large upper canines, which are much compressed, and have the posterior edge and the apex very sharp. These large canines are confined to the male, and are probably used in fighting. They hang downwards, and are entirely coated with enamel. They are generally considered to be of persistent growth; the root is deeply placed, and is large at the base, but in old animals there is a tendency to closure of the pulp-cavity.

The Tragulina, represented by the Tragulus or Chevrotain (Pigmy Musk-Deer), differ in many respects from the true Deer. They have no horns; the canines in the male are large, and project, passing outside the lip, and have persistent pulps; in the female, these teeth are small, having conical crowns, and are rooted. The præmolars are larger from before backwards than in the Cervidæ.

The Camelina, represented by the Camel and Llama, present rather a return to more typical dentition. The upper jaw has a long conical incisor, much resembling a canine, at the hinder part of the præmaxillary bone. There is a long conical sharp canine; and behind this lies a smaller tooth, similar to it in form, but corresponding to the second præmolar of the typical dentition. In the lower jaw, there are four teeth in front; one, placed a little apart, is compressed and conical, and is very like a canine. After an interval comes another similar tooth—the second præmolar. Besides these, there are five teeth of the molar series in the upper jaw, and four in the lower; their structure resembles that met with in Ruminants generally, but is more simple. The dental formula is $i \frac{1}{1}, c \frac{1}{1}, p \frac{3}{3}, m \frac{3}{3}$. In the milk-dentition, there is an additional incisor in the anterior part of the præmaxilla. The milk-molars are larger than the teeth which succeed them. Of the four teeth in front of the lower jaw, the outer one resembles an incisor.

The dentition in the Llama resembles that of the Camel, except that one of the lower præmolars is wanting.

Hyracoidæ.—The Hyrax, an animal found in many parts of Africa and the adjoining portion of Asia, has some points of affinity with the Ungulata, yet differs in several particulars. Of the species, some re-

semble the rabbit in their habits; and some live on large trees. It is this animal which is the "coney" of the Bible. The Hyrax was placed by Pallas among the Rodentia. Cuvier, however, decided that it was allied to the Rhinoceros. Subsequent zoologists, however, especially Milne-Edwards and Huxley, have not been satisfied as to its affinities, and have formed it into an order by itself—the Hyracoidea. Brandt is inclined to restore it to the Ungulata; and there is much to be said in favour of this view, though it must be regarded as an altogether aberrant form. One of the principal characters allying it to the Rhinoceros is the structure of its teeth. There are two incisors in the upper jaw on each side; the outer one is shed very early; the inner has a persistent pulp. The lower jaw has on each side two incisors, which remain, projecting forwards, and divided in front into three distinct lobes. The middle lower incisors are small; the outer ones are well developed. As in the Rhinoceros, there are no canines. The molars resemble in miniature those of the Rhinoceros; they increase in size from before backwards, and have a similar pattern on the crown. The dental formula of the Hyrax is $i \frac{2}{2}, c \frac{0}{0}, p \frac{2}{2}, m \frac{3}{3}$.

In the great plains of South America, near Buenos Ayres, are found remains of many animals which have been collectively placed in the genus *Toxodon*. The teeth all have persistent roots, and are curved, but in an opposite direction to the teeth of Rodents. The teeth are all simple in character. The dental formula is $i \frac{2}{2}, c \frac{0}{0}, p \frac{2}{2}, m \frac{7}{7}$.

The Typotherium, an extinct animal found in the same locality, and evidently allied to the *Toxodon*, at first sight would seem to be a Rodent. It had in the front of the upper jaw two large teeth, between which, and the five teeth of the molar series, was a large space. In the lower jaw, however, there were two additional teeth in front. The upper incisors were apparently covered with enamel all round; and the condyle of the lower jaw had a transverse direction, as in the Ungulates. On the other hand, the animal had five toes; and there was a perforation above the inner condyle of the humerus, not found in any modern Ungulate.

Proboscidea.—This order was once represented by numerous species, presenting transitions in structure between the modified and highly specialised Elephant, its sole modern representative, and the Ungulate Mammals.

The Dinotherium, judging from the size of the jaws, must have been as large as the Elephant. The front of the upper jaw was apparently without teeth; the lower jaw hung down, and had two large tusks directed downwards. The molar series was very like that of the Tapir. The first præmolar was rather obscurely divided by a ridge; the second had two lobes; the first true molar had three; and each of the others two. The dental formula was $i \frac{0}{0}, c \frac{0}{0}, p \frac{2}{2}, m \frac{3}{3}$.

In the Mastodon, the formula was $i \frac{1}{1}, c \frac{0}{0}, p \frac{3}{3}, m \frac{3}{3}$. There were tusks in both upper and lower jaws; in many species they projected straight out, and in some the lower ones were rudimentary. The molars had large elongated crowns and many roots; the crowns had great transverse ridges with deep clefts between; each ridge being, when unworn, further subdivided into several nipple-like processes, from which the name of the genus is derived.

In the molar teeth of Elephants, these ridges are still further developed, being more numerous, and the spaces between them deeper, and filled up with a large quantity of cementum, which is but sparingly developed in the Mastodon. The dental formula of the Elephant is $i \frac{1}{1}, c \frac{0}{0}, m \frac{6}{6}$. The upper incisors are immensely developed, constituting the well known "tusks". These consist mainly of solid ivory, with a persistent pulp-cavity at the base, a thin layer of cement externally, and a small cap of enamel at the apex, which wears off as soon as the tusk begins to be used. They are preceded by milk-incisors about two inches long, with closed pointed roots, which are shed before the animal is two years old. The molars are altogether six in number in each side of the jaw, and succeed each other from behind forwards; the hinder ones not being developed until the front ones are worn out and shed, so that never more than one or portions of two are in place at the same time in each side of the jaw. The size and complexity of these teeth increase from the first to the last, the average number of ridges in the different teeth of the Indian Elephant being 4-8-12-12-16-24; the last lower molar may have as many as 27. In the African Elephant, the teeth are of a coarser make, the ridges being broader and less numerous, though they follow a similar numerical law, being in the respective teeth 3-6-7-7-8-10. Each of these ridges is formed by a lamelliform prolongation of the pulp, converted into dentine, and enclosed by enamel; the whole being united by cementum. These three constituent substances are of unequal hardness; hence, as the tooth wears away, its free surface presents transverse ridges of hard enamel, standing out between the more quickly triturated and therefore depressed lines of cement and dentine, constituting a most effective grinding apparatus.