shovell and tongues of brasse, for the ornament of the meeting-room".* This example has not been left without imitators in the present Fellows of the College, who, in their self-denial and generosity, have of late years repeatedly shown themselves to be not unworthy recipients of Harvey's gifts. It affords me particular pleasure to announce publicly, for the first time, the special act of liberality of a recent distinguished Harveian orator, Dr. Arthur Farre, who, in his oration so eloquently and appropriately analysed Harvey's merits in connection with the subject of generation. Dr. Farre has within a few days presented to the College, with his portrait, a most valuable library of ancient and modern works, which you may observe, conspicuous by their elegant binding, in the shelves above. It is the most important donation of the kind that our Corporation has received since that of the Marquis of Dorchester, a former Fellow, in 1680; and one that doubtless affords peculiar gratification to our distinguished Harveian librarian, Dr. Monk, in whose name, as in that of the well-wishers of this ancient body, I am sure I may challenge all associates to give or bequeath to it similar "pignora amoris", that each donor may deserve, in the vernacular, the record bestowed upon Harvey in the minutes of the extraordinary comitia of July 28th, 1666: "Fastis nostris honorificè semper commemorandus." The grateful thanks of the College are certainly due to Dr. Farre for his gift; and it affords me particular pleasure to take the opportunity of tendering him from this place our acknowledgments, and our heartfelt wishes for his health and happiness.

In bringing my address to a conclusion, I beg to offer to you, Mr. President, and the Assembly, many apologies for the very imperfect manner in which I have dealt with the topics which I have ventured to touch upon. No one can be more sensible of my inadequacy to fulfil the task which you, sir, with too indulgent trust, have imposed upon me. But though I crave your merciful consideration for my effort, I cannot but admit that I owe you, sir, a debt of gratitude for having imposed upon me what has indeed been a labour of love, that again of poring over Harvey's works and studying those of his contemporaries. Every page that I have read has only served to convince me, more and more, of the magnitude of the obligations that this College and all generations of medical men who have lived, or will live, after Harvey, are under to him. Would that I could hope to have added the smallest tribute worthy of so great and good a man to the many offerings that his grateful successors have paid to his memory. But, while conscious of my own unworthiness to dilate on so great a theme, I have no fear that, for want of better advocacy, the power of the Harveian spirit will cease to prevail in English medicine, while so many illustrious workers as grace the present roll of the Royal College of Physicians are evidences of its continued influence.

Though I may not have proved what none but future physicians may fitly endorse, I cling to the belief that in no period of the past has this College been so fully imbued with a consciousness of its high calling, and a desire adequately to fulfil its important duties, as in the present; and that the many labourers in the fields that Harvey cultivated justify a humble admirer of the many distinguished contemporaries, with which it is my honour to be acquainted, in designating the present age as especially deserving of the title of the Harveian era of medicine.

It is for the younger generation of the present, and for those who are to follow, to see that the Harveian spirit suffers no abatement. Let them walk in Harvey's footsteps, and they will certainly receive their reward, in the acquisition of profounder knowledge; in the freer recognition of the value and aims of medical science by their fellow-men; and, above all, by the assurance of greater power and control over the dark influences that still chequer life and hamper man's onward march to a more elevated and spiritual existence.

* Quoted from Harvey's Will; see Dr. Monk's *Roll of the Royal College of Physicians*, vol. i, p. 132.

NOTTINGHAM.—There were 3,481 births and 2,193 deaths registered in 1876, giving a birth-rate of 37 and a death-rate of 23.4 per 1,000 living, which is 0.2 below the average of twenty-one large towns. There were 353 deaths from zymotic diseases, of which 140 were due to diarrhoea, chiefly amongst infants; and only 40 from fever, against an average of 74. The population is estimated at 93,627, with an average of only 4.8 persons to a house. The death-rate of children under one year to registered births was as high as 19, so that there is plenty of room for improvement in the care and management of infants and of the domestic arrangements, as the conversion of offensive middens into water-closets has by no means been fully carried out; but the pail-closet system seems to be in extensive use, as five thousand are said to exist in the town. The summary of nuisances abated, showing only one hundred and four houses whitewashed, cleansed, and repaired, does not indicate anything like a systematic inspection of the poorer dwellings.

ON INFLAMMATION OF THE EPIGLOTTIS.

By W. MARCET, M.D., F.R.S.,

Late Assistant-Physician to the Westminster Hospital and the Hospital for Consumption and Diseases of the Chest, Brompton, etc.

THE physiological importance of that small organ known as the epiglottis, and the serious nature of its affections, are sufficiently great to warrant our giving it especial consideration. Both anatomically and physiologically, the epiglottis appears in a great measure to constitute a separate organ. It is placed between the tongue and the larynx, although having connections with both of them; its anterior surface is continued from the tongue, and the mucous membrane of its posterior side becomes, a little lower down, the mucous membrane of the larynx. Moreover, the cartilage of the epiglottis (with the exception, perhaps, of the cartilage of Wrisberg) is of a different nature from that of the laryngeal cartilages, being known as yellow or spongy, and belonging to the same class as that of the ear; this cartilage is more flexible than ordinary cartilage, and has little tendency to ossify (Quain's *Elements of Anatomy*). It is made up of cells and a matrix, but the latter is everywhere pervaded with fibres intersecting each other in all directions, like the filaments of a piece of felt. On removing the mucous membrane of the laryngeal surface of the epiglottis, the yellow cartilaginous lamella of which the organ consists is seen to be pierced by numerous little pits and perforations, in which are lodged small glands which open on the surface of its mucous membrane. The function of the epiglottis is also of a very special character, being concerned exclusively with the phenomena of deglutition. The laryngoscope places us in possession of a means of investigating diseases of the epiglottis and treating them by local applications and other methods; and I now propose to consider this organ when affected by inflammation.

A congested state of the epiglottis is not an unfrequent occurrence; it becomes streaked with enlarged capillary vessels, its lingual surface exhibiting much the same appearance as the back of the tongue, near its root, often does in sore-throat. The only change of form in the organ I have occasionally noticed in these cases is a slight alteration in its free edge, which appears straighter and sharper than it should be. In such cases there may be no outward sign of any affection of the epiglottis; no pain is felt by the patient on deglutition; and there is no sensation recalling the presence of a foreign body in the throat. The patient will complain of sore-throat, and, on examination, the root of the tongue will probably be found streaked with enlarged capillaries, exhibiting patches of raised follicles, while the surface of the epiglottis is also seen to be in a congested state. This condition of the epiglottis may, of course, be quite independent of such causes as syphilis, tubercle, or malignant disease; still it does not show a healthy state of the nutrition of the part, and I am always inclined to consider these cases as more serious than those of common sore-throat.

Tubercular inflammation of the epiglottis is not unlikely to commence in this way, but in such cases we may expect to find the lungs primarily affected. I shall attempt to show, however, in the present communication, that the epiglottis, and also the larynx, may become the seat of tubercular disease, although the physical examination of the chest should exhibit no signs of the lungs being thus affected.

Disease of the epiglottis is often attended with thickening of the organ, alteration of its normal shape, ulceration or a waste of substance leading to pitting; and I have seen cases of advanced laryngeal phthisis in which the epiglottis had nearly entirely wasted away.

Thickening and an altered shape of the epiglottis, in other respects, seldom results from simple inflammation, and may be considered, I think, as a rule, as due to tubercular, syphilitic, or malignant disease. I have observed, however, a few cases in which there appeared to be no constitutional affection of any kind, and yet the epiglottis had become inflamed and enlarged. One of those instances I reported in a paper published in the *Médecino-Chirurgicale Transactions* for 1875 (Contribution to the History of Laryngeal Phthisis). It was that of a young man aged 17, whose case I followed up for years after I had first detected the epiglottidean affection. He complained to me on April 6th, 1871, of a sensation of thickening in his throat as if a ball were lodged there, and he felt some pain on swallowing; he had coughed up a little blood on the 3rd of that month. On looking into his throat with the laryngoscope, I distinctly saw that his epiglottis was swollen. The physical signs of his chest were suspicious: there was a shade of dulness at the right apex, and the respiration was very harsh at the right supra-spinous fossa; a systolic *bruit* was heard at the heart's apex. He had never suffered from inflammation of the lungs, or cold or catarrh of any kind; there was no hereditary predisposition to phthisis. I treated the lad with cod-liver oil, syrup of iodide of iron, and his

throat was rubbed externally with iodised oil. The discomfort and pain in the throat soon disappeared, and also the cardiac *bruit*, but the epiglottis remained slightly thickened. On March 13th, 1874, or about three years later, I could only find some fine crepitation at the back of the chest on the right side, and harsh breathing on the left. The epiglottis was still slightly thickened near the rim or edge, but free from congestion or irritation. Since regaining his health three years before, he had always been quite well; indeed, he had increased in weight by ten pounds and a half between December 1872 and March 1874. In this case, there were signs of pulmonary disease, and the thickening of the epiglottis certainly appeared as if it had a tubercular origin; after a short time, however, the lungs had apparently recovered, but the epiglottis had not entirely resumed its original shape three years after it had first been affected.

Here is another case not unlike the last. A lady, aged about 30, consulted me at Cannes on account of her throat on November 15th, 1876. She had had an attack of whooping-cough in the previous month of July, not severe, though attended with slightly streaked expectoration. I observed the epiglottis to be in a highly vascular state, and enlarged or thickened, with a tendency to fall backwards; she complained of the sensation usual in such cases, as if due to the presence of a foreign body in the throat, and of a peculiar discomfort in the throat often felt just after going to bed. There was no loss of voice, but her voice was weak, and unequal to singing. There was some crepitation on the right side and harsh breathing at places; distant bronchial breathing, but no cavernous sound. On November 22nd, the epiglottis appeared less stiff, red, and angry, though still vascular; enlarged capillaries being visible on its surface. On December 3rd, the epiglottis was still red-streaked, and slightly swollen along its free edge. On December 8th, the epiglottis continued red, but had resumed its natural upright position; its rim could not be distinctly seen: she expressed herself much better in every respect. On March 23rd, 1877, or about fifteen months later, I examined this lady's larynx and found the epiglottis perfectly sound, free from any swelling or inflammation. She has resumed her singing long ago, and has felt nothing the matter with her throat for a considerable time. She is now, she says, in perfect health.

I regret my notes of the following case should be incomplete; it is clearly to be classed together with the two others.

A young lady, aged 20, residing at the Asile Évangélique of Cannes, complained to me on December 22nd, 1875, of a peculiar discomfort during the act of swallowing she had been troubled with for several years. With the aid of the laryngoscope, I found her epiglottis to be somewhat thickened, red, congested, and appearing more rigid than it should be; there were rather large isolated granulations far back on the tongue. Her general health was fair, but she was not strong. There was an absence of physical signs of any affection of the lungs. The dysphagia varied at different times in its degree, and I could not ascertain satisfactorily whether it was due to the state of the epiglottis or some peculiar condition of the nervous system. She complained much of her throat throughout the winter; and, although her epiglottis appeared to improve under treatment, it had not entirely recovered by the end of the season. This patient has again wintered this last season in the South, though not at Cannes; and I regret I had no opportunity of seeing her.

In the two following cases, the affection of the epiglottis had assumed a very much more serious aspect, and the change was certainly of a tubercular nature, although no positive tubercular disease could be found in any other part of the body except the larynx. In neither of them could I trace any syphilitic history.

On January 5th, 1877, a patient of the Asile Évangélique of Cannes, aged 35, formerly a secretary in an hotel, came under my care, having lost his voice six months before; he could, however, with much straining, emit a very slight sound for a word or two. His general health was fair, and he could take long walks without fatigue. He assured me that he had never suffered from any syphilitic affection. I failed to detect anything amiss on a careful physical examination of the chest, although he had a bad cough. With the laryngoscope, a good view of the epiglottis was obtained; it was broad, very much enlarged, and exhibited on its lingual surface a waste of substance at two places, viz, one about the middle of the free edge, and another a little lower or a little nearer the base, on the same vertical line. There was a pitting at both these places, which was, however, more like the result of softening than of positive ulceration. The lateral portions of the base of the epiglottis were not affected. The colour of the epiglottis was redder than usual, and its surface was smooth except where the pitting had occurred. It had a tendency to fall backwards towards the larynx, which it effectually concealed; and no manipulation with the laryngoscope enabled me to view that organ. He felt a pain in the

throat on deglutition, as if a foreign body were lodged there. His appetite was deficient, and he was frequently disturbed at night by cough. The patient showed no sign of pulmonary phthisis, although the laryngeal mischief had been going on for six months, giving ample time for tubercular disease to develop in the lungs. There was no cause to consider the affection of the epiglottis as malignant, as the absence of pain, or of a tumour, or of contraction, was opposed to any such theory.

When I first saw this patient, the disease was clearly progressing, and he soon lost the power of producing even slight sounds of voice with straining; but by March 17th, after being under treatment for two months and a half, a slight power of phonation reappeared, though for a time only. He no longer felt any discomfort in the throat, either on swallowing or at any other time, and had nearly lost his cough. His epiglottis was certainly reduced in size, his general state of health had much improved, his appetite was better, and he now slept soundly. When he coughed at my bidding, I could observe clearly a very great want of vibration in the larynx. On March 24th, I examined carefully his chest, and could find no positive physical signs of phthisis at any stage. (There was some harsh breathing at places, but no distinct crepitation, except perhaps at the right apex in front.) Now, what is the nature of this case? It certainly has every appearance of being tubercular, and the probability is that tubercular disease will at some future period, perhaps not very distant, break out in the pulmonary organs.

My next case is similar to the last one; it is that of a gentleman in the legal profession (age about forty) who has used his vocal organ to a considerable extent. His throat had been affected for about three years, and he had also been coughing during that period, but he continued with his work till about a month before he came out to Cannes.

On March 5th, 1877, the back of his pharynx was red, exhibiting a few raised oval masses of papillæ; his voice was rather weak; and he remarked that it met with an occasional catch, while at other times he dropped part of a word; but I failed to observe anything unusual in his voice beyond some degree of weakness. His epiglottis was thickened, and its lingual surface had assumed a rugged aspect, exhibiting a small quantity of semi-fluid white substance, which adhered to it. The epiglottis did not look red, and had rather an anæmic appearance. He felt no pain in the throat, and no discomfort on swallowing, but experienced a frequent—I may say nearly constant—sensation of irritation or tickling, which made him cough. I understand that the real state of his throat was only found out lately in London by Dr. Morell Mackenzie.

The first examination of the lungs in this case revealed nothing but a slight dry crepitation at the apices. On the second occasion (March 12th), below both clavicles, and also posteriorly in the upper half on both sides, some mucous *râles* were heard. The symptoms were not, however, sufficiently obvious to warrant a diagnosis of tubercular disease of the lungs. At first the case did not progress satisfactorily, but after some days the patient began to improve, and, by March 26th, his cough had greatly diminished, he experienced much less discomfort in his throat, and slept well at night. Shortly afterwards, he left Cannes.

Here is a gentleman who for two years and a half has suffered from an affection of his throat, the nature of which has only been determined lately; he has therefore, it may be concluded, had his epiglottis affected probably for two years, although the lungs were apparently free from disease. There is a complete absence of any specific cause of laryngeal disease; and therefore we must conclude that his epiglottis is tubercular, although the affection had apparently, when he was last examined by me, extended to no other part of the body. The case is interesting, but not quite so satisfactory as the last, as the result obtained from the examination of the chest cannot be considered as certain.

Out of the seventy cases of laryngeal phthisis which I recorded in my paper to the Royal Medical and Chirurgical Society, in thirty-one the epiglottis was affected; but in every one of these thirty-one cases there were obvious signs of pulmonary phthisis. I think the two cases just related go far to show that laryngeal phthisis may exist, at all events for a considerable time, independently of pulmonary consumption.

I cannot insist too much on the importance of a correct diagnosis of disease of the epiglottis. This I have been taught at my own expense, as I shall never forget a case of most painful inflammation of the epiglottis I treated with much perseverance for tubercular disease, and which, when out of my reach, turned out to be, I understood, of another nature. While mercurial preparations will be clearly indicated in syphilitic cases, they should be carefully avoided when the larynx is affected by tubercular disease. I can bear out this statement from personal experience; but it is now generally admitted that mercury should be invariably withheld in cases of phthisis.

With respect to the treatment of diseases of the epiglottis, I merely wish to remark, that in common inflammation I frequently use appli-

cations of iodised oil to the part, the solution consisting of fifteen or twenty grains of iodine in one ounce of the expressed oil of almonds; I find oil of almonds preferable to olive oil, as less disagreeable to the taste. Should there be any thickening of the part, either syrup of iodide of iron or iodide of potassium is given internally, and iodised oil is also rubbed externally on the throat two or three times a day. The treatment of tubercular disease of the epiglottis and of the larynx is unsatisfactory, although the acute symptoms may be much relieved and the patient made comfortable. Iodised oil, or the application of anodynes, often proves of benefit. I have in one case applied solid nitrate of silver to the epiglottis affected with tubercular disease, in accordance with Dr. Krishaber's suggestion, and using his laryngeal caustic-holder: the patient felt no pain whatever, and the result was encouraging. Inhalations of iodine I have never found of any use in the treatment of tubercular or syphilitic disease of the epiglottis or larynx; during the state of active inflammation they may produce much distress and increase of pain from local irritation without doing any good ultimately.

I beg finally to relate an interesting case of laryngitis I met with last season at Cannes. An English lady (aged about 32) had suffered in Paris about two months before I saw her from an attack resembling *ozæna*. It appeared from her statements that the mucous membrane of her nose, down to the soft palate, had been inflamed. After this, the pharynx also became the seat of inflammation, and the affection spread to the larynx. Before leaving Paris, however, she had partly recovered; the inflammation of the larynx alone remained. Finding that her health was not making any further progress, she came to Cannes, where I first saw her on March 3rd. She then suffered very much from laryngeal distress. The inside of her larynx was very painful, and she often felt as if a foreign body were lodged in that part. She frequently suffered at night from a sensation of impending suffocation attended with much distress in the throat, which made her anxious. She could now swallow without any difficulty or pain, although she had experienced pain on deglutition; there was a slight degree of hoarseness, but no loss of voice.

A careful examination of the chest revealed nothing but slight harshness at one apex. At first, I experienced some trouble with the laryngoscopic investigation from the contractions of the pharynx, but this was overcome by applying a bag of ice and salt externally to her throat. I was much surprised to find the epiglottis neither inflamed, swollen, nor pendulous; indeed, it was quite healthy; the arytenoid bodies were not enlarged, and the epiglottidean folds were healthy. The mucous membrane of the larynx alone appeared very red and congested.

I treated this case with the direct application of iodised oil to the larynx, inhalations of iodine, and injections into the throat of a solution of chlorate of potash and bromide of potassium. Internally, she first took syrup of iodide of iron, and afterwards chlorate of potash.

The case progressed very satisfactorily, and although the lady had one or two relapses, she had quite recovered by the end of March. (I have no record of the precise date of her recovery.)

This case is interesting, showing that laryngitis may be attended with much pain and distress without extending to the epiglottis or vocal cords, and also that inhalations of the vapour of iodine, which appear objectionable where the epiglottis is inflamed, may be useful where the mucous membrane of the larynx alone is affected.

NOTES OF A CASE OF SPONTANEOUS FRACTURE OF THE HUMERUS AND FEMUR, RESULTING FROM DEGENERATION OF THE BONES.

By P. MAURY DEAS, M.B. LOND.,

Medical Superintendent of the Cheshire County Asylum, Macclesfield.

MORE than ordinary interest, both medical and medico-legal, attaches to the subject of broken bones among the insane. The tendency which still exists in the public mind to believe anything bad regarding an asylum, and especially to believe that instances of cruelty and assaults on the part of the attendants are of frequent occurrence, is in the main a legacy from the times, not yet very distant, when restraint and coercion, with their inevitable attendants, neglect and cruelty, were the recognised means of "treatment" (?) for the insane. It takes a very long time to convince people that abuses of any kind, which have long been practised and have grown into a system, are really reformed; and prejudice clings round the institution long after it is free from the old evils.

The feeling of distrust and suspicion, as to asylums, is still so strong that, when any case of injuries received by a patient is made public,

the idea of their having been received unavoidably or accidentally is rarely entertained; but the conclusion is come to at once that, because there are injuries, there must have been intentional cruelty or great undue violence.

It accordingly, I think, becomes the clear duty of those who are not only interested in the reputation of our asylums, but who have the best interests of the insane at heart, to put prominently forward any facts or circumstances which go to show that serious accidents may not only occur to the insane, when treated with every care and attention, but are more likely to occur than among other classes of people. It is now a well established fact in pathology that, in certain forms of insanity and affections of the nervous system, there is a tendency to a form of degeneration in the osseous tissue, leading to a brittle and softened condition of the bones, such that they are liable to break under the application of very slight force, or spontaneously from muscular action. The existence of this diseased state of the bones has been proved by the observations of Clouston, Rogers, and others. It appears chiefly to occur in cases of general paralysis and other allied forms of nervous degeneration.

Cases occur, from time to time, which revive in all their force the ideas of gross cruelty on the part of attendants. A patient dies in an asylum, and, after death, extensive (perhaps unsuspected) fractures of the ribs and sternum are discovered, such as in a healthy subject could only be caused by great direct violence. As a rule, the patient has been very restless and violent; probably in the acutely maniacal stage of general paralysis. The attendants have been compelled to hold or restrain him; possibly there have been unavoidable struggles in putting him to bed, getting him up, etc. If, at the inquiry, one or two fellow-patients can be produced to testify that one attendant kicked the patient, while another jumped on him, the case is perfectly clear; and the public, if not the jury, record another verdict against asylum treatment. Now, it has been repeatedly demonstrated, by *post mortem* examinations on the insane, both in cases where broken bones were found and also in cases where no such injuries existed, that there was such a diseased condition of the bones, and more particularly of the ribs, they would be liable to give way under the application of very slight force, much slighter force than would be quite unavoidable in a struggle between an excited patient and his attendants, even when the latter used every care. And as to the evidence of other patients, every one familiar with insanity knows that there are patients who, either from delusions or moral perversity, will constantly accuse, not only the attendants, but the medical officers themselves, of acts of cruelty, either to themselves or other patients, and giving most circumstantial accounts of the occurrences. This particularly applies to epileptic patients, who are often, too, apparently the most sensible and rational.

In the last notorious case of this kind, the death of Mr. Wimberley in the Camberwell House Asylum, sufficient attention does not seem to have been given to this most important question of the state of the bones. The medical evidence, as reported, was of a very casual nature, and contradictory as well; but one witness stated distinctly that he considered the ribs unusually brittle. In such cases, the condition of the bones ought to be the primary consideration. If they be sound and healthy, there cannot be a doubt that, with a number of ribs and the sternum broken, great undue violence must have been used. If, on the other hand, the bones be in the diseased state which has frequently been observed, the injuries may have been received in the most purely accidental way, either by the patient throwing himself about in his excitement, or by the necessary restraint on the part of the attendants to *prevent* his throwing himself about; and, in common justice, a conclusion as to cruelty or undue violence having been used should only be come to upon the most undeniable evidence.

From the considerations which I have alluded to, I think it of importance to place on record the notes of a case which has recently occurred in my own practice.

H. N., female, aged about 57, was admitted into the asylum as a private patient, on December 17th, 1875, under an order of transfer from the Birmingham Asylum, where she had been under treatment for twelve years. Her mental state was that of chronic mania, passing into dementia. Her mind was weak and childish; but she understood what was said to her, and could answer ordinary questions sensibly enough. At times, she was excited and noisy. She was very feeble and broken down in health, and was partially paralysed in her lower extremities, not being able to walk or even stand without assistance. She suffered much from pains in the back and legs, and often screamed out from the pain. She had a weak, probably fatty, heart, and suffered from chronic bronchitis. She continued very much in the same state, requiring care and nursing, but never violent, indeed too helpless to be so. On June 1st of this year it is noted that "she is more frail than she was; mostly confined to bed; is becoming more deformed; cannot straighten her-