finer parts, it is white, from having only a much lower degree of vitality.

The lacteal and lymphatic fluids may, therefore, be considered as venous blood. This appears from their assuming different colours, and possessing coagulating properties, varying according to the different states of the animal. In strong and healthy horses, if destroyed while in perfect health, and under moderate excitement, the lymphatic fluid assumes a white or straw-colour in those parts of the lymphatic system situated near the circumference and centre of the circulation; but, on the contrary, in many of those which are destroyed when under great as well as diminished excitement, it commonly assumes the same character of dark venous blood in those parts of the lymphatic system, situated nearest the centre of the circulation as the thoracic duct, and the second order of the lacteals and lymphatics. This we find from the functions of digestion being suspended, from severe pain produced from open joints, punctures in the feet, &c., also by exposure to severe cold without food.

Royal Veterinary College,
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ON THE EXTRACTION OF THE TEETH.

By S. J. Stratford, *Surgeon of Worcester.*

The extraction of the teeth has, by many surgeons, been considered a contemptible occupation, and unworthy the notice of a well-educated practitioner; it is, consequently, now practised by the regular dentist, or abandoned to men who have not had the benefit of a regular surgical education. I feel, however, that whatever will tend to the relief of pain should not be below the surgeon's consideration, while the principles of the operation ought to be perfectly understood, to do it with correctness and facility. I believe, however, that many practitioners have abandoned its employment, more from its difficulties, and the unsatisfactory nature of their attempts, than from any ideas of the disreputable feelings attached to it. These difficulties, I am convinced, have originated from the want of due consideration of the nature of the diseased condition of the tooth, or of the variety and action of the instruments they have employed; but when the action of the one is properly applied to the nature of the other, all the difficulties vanish; and here I cannot but reprobate the employment of the same instrument in such various and different diseased condition of the teeth; it shows a want of reflection, and mechanical knowledge, which should not evince itself in the present day.

I will not now venture to speculate on the nature of caries, or the mode of its production, but consider the amount of disease under three heads:—1. Simple caries; 2. Extensive caries; 3. Death of the tooth.

1. *Simple Caries.*—Under this head I would consider that extent of disease which has exposed the lining membrane of the tooth to the degree, that no operation of the dentist, such as stopping, &c., could effectually relieve the pain, or stop the progress of the caries, where, indeed, no considerable portion of crown has become implicated.

2. *Extensive Caries* I would apply to that amount of disease which has destroyed the crown, or all the bony part, leaving but a thin shell of enamel.

3. *Death of the Tooth.*—Here I would be understood to mean, the dead stumps which have remained after the crown was broken off, or destroyed, by caries; they are generally level with the gum, are of a dark colour, and cause irritation and inflammation by their presence to the neighbouring parts; they have long ceased to be alive, and have now lost that firm connexion with the socket which they possessed before that vitality was destroyed.

The nature and action of the instruments should particularly enter into our consideration. A great variety of instruments have been recommended for the extraction of teeth; each operator has boasted some new invention, to which he has ascribed particular excellence; but that they have not possessed the merits ascribed to them, is obvious from their very limited employment: many are of a complicated nature, and difficult of application. I am, however, convinced, that the more simple their construction, the more easy will be their employment, and the more obvious their effects. The instruments which I have found most applicable to the extraction of the teeth are—the forceps, the key, and the punch, the use of each of which are indicated by the condition, or position, of the tooth.

The forceps can be employed only in the case of simple caries, where there is a considerable portion of the bony material of the tooth remaining, constituting a degree of firmness which will resist the grasp of the forceps, and will not crumble under it. The forceps should be of sufficient size to afford an easy purchase to the hand, while they are made so that the inner surface of the blade fit exactly to the crown and sides of the tooth; for this reason, the operator should be possessed of a considerable variety, so as to fit all different gradations of size. When, then, we have chosen the pair of forceps that fit exactly to the tooth, we must take care to embrace the neck, for

if we merely take hold of the crown, the forceps are liable to slip. Having taken a firm hold, we give the forceps an alternate lateral motion, also tending to the perpendicular; by the first we separate the adhesion of the tooth to the socket, and by the latter we draw it from its position. The forceps are most applicable to the incisors, or cuspidate, but, if they have a sufficient curve in their blade, they may also be employed to extract the bicuspid and molar teeth. The curve of the forceps must vary with the positive position of the tooth, so that the extremity of the blade fits in a perpendicular direction to the crown of the tooth, when precisely the same movements must be used, and the extraction of the tooth will generally follow. For the sake of convenience to the operator, the forceps would generally seem most applicable to the teeth of the upper jaw; they may, however, be employed to the back teeth of the lower with nearly the same facility. I apprehend, that the reason the forceps have occasionally parted is more from the make of the instrument than any fault in their application, for when the blade is made too hollow, so that but the extremities of the blades touch the tooth at two opposite points, which are often too sharp, the grasp of the operator is liable to cut the crown from the body of the tooth, instead of extracting it; but when due attention is given to their application this can never occur.

The use of the key is demanded when there is such extensive caries that there is no purchase for the forceps, or when we find it more convenient, as in the lower jaw. The manner of placing the key must depend upon the extent of the caries, and the position of the tooth. When we can find sufficient of the tooth remaining on the inner side, to form a purchase for the claw, it must be placed upon it, and the fulcrum on the opposite side, so as to turn the tooth outwardly; but when a better hold is on the outside, the tooth may be turned towards the inside. Sometimes the tooth, instead of being perpendicular, has a lateral direction, especially the back teeth; in that case we should always apply the fulcrum on the side to which it inclines, and the claw on the opposite, for reasons which will be presently noticed. The action of this instrument is that of a lever, and justly to accomplish its action it requires to be judiciously applied. The fulcrum should be flat, and must be applied to the gum, opposite to the alveolary process, while the claw should be of sufficient length, that it may easily reach to the opposite side of the tooth, its extremity being placed upon the neck, exactly opposite to the upper part of the fulcrum, and these must be kept precisely in a horizontal direction. We then turn the handle of the instrument gently and steadily, taking care that the claw does not slip from its hold. This acting on the fulcrum will cause the claw to raise the tooth from its socket; but when the tooth has a lateral direction, if we apply the claw on the side to which it inclines, we cannot raise it in a perpendicular direction, in consequence of the inclination of the roots of the tooth, and would rather force the tooth down into the socket, if the power we employed did not break the crown from the body, while the thicker and stronger nature of the alveolary process in this instance might form some impediment to its extraction. In every instance in which the key is used, the alveolary process must yield, in some degree, at particular points. The power applied to the upper part of the tooth must compress the superior part next the fulcrum of the instrument, while the fangs, or roots, of the tooth will press upon the lower part on the opposite side; hence the reason that these processes are so frequently broken. This, however, is an accident of little moment, for the alveolary processes are sure to be absorbed as soon as the tooth is totally removed.

The employment of the punch is demanded in the extraction of old dead stumps, which, in consequence of a loss of vitality, are separated from all intimate vascular connexion with the living apparatus, and are even commenced to be removed by absorption. The manner of applying this instrument, is to introduce it between the stump and alveolary process, and to poise the latter from its socket. The best plan is, first to lance the gum immediately above the alveolary process, and then to pass the punch down firmly between these parts, and when we have insinuated it a sufficient distance, we must turn the handle of the punch from the perpendicular direction to a right angle, when we easily raise the tooth from its position; we must be careful to place a finger on the opposite side of the tooth, guarded by some substance, so as to receive the instrument should it slip; this, however, very seldom happens if proper care has been taken to introduce it a sufficient depth before we make the turn. The point of the punch need not be made very sharp, but should be wedge-shaped, so as easily to be insinuated between the stump and alveolary process. Care is particularly necessary not to attempt its use but in those cases to which it is applicable; in these it requires but little force; but if it is used before the tooth is dead, and separated from its connexions with the alveolary process, we may do very considerable injury from the power it will be necessary to use, in our attempts to extract it. The extremity of the punch may be introduced with sufficient facility on either side of the

stump, while it may be used equally on the upper and lower jaw.

These are the principles which have guided me in the extraction of the teeth, and when followed up I have found them to be perfectly successful, while, by attention to them, I conceive I have been enabled not only to remove the tooth with facility, but to save my unfortunate patient a considerable amount of pain.

MEDICAL BIGOTRY IN IRELAND.

THERE is something monstrously anomalous in the medical, as well as in the political affairs of Ireland. Religion, in that country, is an insuperable bar to all promotion, in civil as well as medical appointments. The exclusion of Dr. Tuomy from the professorship of the practice of medicine, in the Dublin School of Medicine, is only in strict unison with the bigotry which has always distinguished the College of Physicians in that country. During the formidable epidemic fever of 1816, which ravaged the whole island, there was not a physician in Dublin so successful in the treatment of the typhus, as it was called, as Dr. Tuomy. His deep research into the writings of the native physicians, during the preceding epidemics of the most remote periods, and his attentive and faithful observation, and unsophisticated experience, enabled him to adopt a practice very different from that of many of his contemporaries. He remained a close observer of the fanatical reveries of many of his rivals, who became very generally insane with the Sangrado practice then revived, which, by the way, had been extensively employed by Sydenham, and by the Irish physicians of his day, in former epidemics. While many of the medical officers of the large fever hospitals of Dublin, were depleting every emaciated creature that famine consigned to their management; Dr. Tuomy never adopted depletion in this wholesale manner, but contented himself with local detraction of blood by leeches or arteriotomy. In this way he relieved the brain, and then employed cold to the head freely, while he exhibited mercurial and vegetable cathartics to relieve the abdominal viscera, and then diaphoretics. When postration set in, he exhibited dietetical, as well as medicinal, stimuli, and freely employed an old celebrated remedy in typhus—a combination of yeast and wort, with wine, porter, &c. His success was most brilliant, for while hundreds of victims had been immolated at the shrine of Sangrado, scarcely a single patient lost his life in the Clinical Hospital, under Dr. Tuomy. But Dr. Tuomy worshipped his Creator in the ancient national manner, and here was the "head and front of his offending." It was therefore piously resolved, that the septennial election of professors should be revived, and the Doctor excluded. In fact it is the established usage, that the professors are never re-elected; but the law gave the College the power of so doing, if their high mightinesses thought proper. The other professors of the reformed and more modern religion were left undisturbed, though many of the worldly given of the profession considered that neither its honour or dignity was promoted, by one "of the elect" of the professors making pious excursions to villages adjacent to the Irish capital, in the capacity of methodist preacher. Yet such a man, without any private practice, is retained as a clinical professor, while men of practical experience are excluded. But this is only in accordance with the system that has always distinguished the School of Medicine. The professors content themselves with reading old fashioned and obsolete lectures, and seem to close their eyes and ears to all modern improvements, and hence the vast superiority of the lectures in London and Edinburgh. Here then is one of the chief causes that induces Irish students to repair to those places, where they shall derive the best instruction. Another great defect in the Dublin School of Medicine is this—that they cannot confer medical degrees. Thus, after all examinations for testimonials (which are similar to those in Edinburgh) shall have been complied with, the candidate receives a *testimonium*, which is a certificate on a sheet of paper, that he is qualified to practise medicine, in the opinion of the professors. If the holder of this certificate become a medical witness, the first question he will have to answer is, whether he is a physician or surgeon? He cannot say he is one or the other on the authority of this testimony; and here is another cause which induces students to repair to schools in which they can obtain the doctor's degree. In the Dublin University, the degree of M.D. is not conferred sooner than twelve years, as in the old-fashioned sisters of Oxford and Cambridge.

The by-laws of the Irish College of Surgeons are equally anile, for no person can become a member of that wise corporation, unless he shall have been apprenticed to some one of the junta, who monopolise the management of the College. The pupil is to pay 150*l.* as an out-door, and from 300*l.* to 500*l.* as an in-door apprentice, and to be bound for five years, during four of which, he may indulge himself in the manly sports of the field, or the mazes of the drawing-room, and not exchange two sentences with