

without any effort all the knowledge that is necessary. "It is desirable," as you remark in your admirable article, "that before a student presents himself for public examination he should possess certificates from his teachers of having gained sufficient knowledge to justify his attempts." And why should not this be required? Such a regulation would revolutionise medical teaching, and would secure what you so much desiderate—the improvement of the teachers themselves. It would stimulate the communicative powers of the lecturers, and by holding frequent *viva voce* and written examinations on the subjects discussed in their lectures they would find out where their teaching had been defective or misunderstood, and be able to remedy it. Moreover, by requiring certificates of the proficiency of the taught, instead of the present certificates, the teachers would be put more distinctly on their trial. A certain amount of discredit would be reflected upon them by their pupils' failure. For if a pupil were rejected by the licensing body, this would imply, not only that he had been insufficiently instructed, but that his instructor, in giving him a certificate of proficiency, was unable or had failed to find out his deficiencies.

It is absolutely necessary, however, before teachers will be willing to adopt such a plan, that the vagaries of examiners must be controlled; and, whilst the questions set in the pass examinations ought to be sufficiently searching and comprehensive, they should at the same time be strictly confined within the range authorised by such a schedule as I have above referred to.

I am, Sir, yours, &c.,

Cambridge, Oct. 10th, 1873.

P. W. LATHAM.

BLOODLESS OPERATIONS.

To the Editor of THE LANCET.

SIR,—I must claim for an English surgeon and for British surgery some share at least in whatever merit there may be in the employment and the recommendation of that method of saving blood in amputations with which Professor Esmarch's name is now coupled. The surgeon is Mr. Clover. The amputation in which he employed a method in all respects almost exactly similar to that which is now advocated was performed twenty-one years ago, in June, 1852. I was present at, and assisted him in, its performance.

The case is as follows:—Mr. B——, fifty years of age, had been struck twenty years previously by a cricket-ball on the lower part of the thigh. Abscess followed, and sinuses formed which never healed. In March, 1852, Mr. Clover trephined the lower end of the femur, and removed some sequestrum. Erysipelas and deep suppuration followed. Increasing exhaustion setting in and a considerable portion of femur being found to be necrosed, amputation was proposed, and, after consultation, agreed upon.

On June 9th, 1852, the patient was put under chloroform, and as he was very weak it was thought of much importance to save as much blood as possible. Mr. Clover accordingly adopted the following method to effect this:—The limb was raised, and a narrow bandage was applied very tightly from the toes nearly to the perineum; a screw tourniquet, without any compress, was then applied immediately above the bandage. The bandage was then unrolled from the thigh, and the limb removed by antero-posterior flaps, the bone being divided about two inches below the trochanter minor. Scarcely any blood was lost, and the patient made a rapid recovery.

The recommendation to which I allude is contained in the three last editions of the "Science and Art of Surgery." It is as follows:—"In those cases, as of chronic disease, in which it is of great importance to save blood as much as possible to the patient, it is a good precaution to bandage the limb tightly from below upwards immediately before the tourniquet is applied, thus preventing to a great extent the venous congestion." (Ed. of 1864, p. 19.)

It will be seen that the method adopted by Mr. Clover in 1852 is identical in principle with that employed by Esmarch, and only differs in one point of detail—viz., the use of a tourniquet band instead of an india-rubber tube as the means of arresting the entry of blood into the bandaged

limb. Of the two I should consider the web band of a screw tourniquet far safer than india-rubber. The latter is a very uncertain material, and, after having been laid aside for some time, is apt to become hard and brittle, so that there might be danger of its snapping when much stretched. The webbing of a tourniquet band is quite safe, can neither yield nor snap.

In conclusion, I may say that the simple raising of a limb in the perpendicular position for a few minutes before the application of the tourniquet is quite sufficient to empty it of blood, more particularly if friction or gentle pressure from below upwards is combined with position, and that tight bandaging is quite unnecessary. This simple process is, I understand, much employed in Edinburgh, and was used with perfect success at University College Hospital on Wednesday last by Mr. Berkeley Hill in an amputation through the lower third of the leg.

Esmarch's real merit appears to me to consist in having applied this method to other operations on the limbs than amputations.

I am, Sir, yours, &c.,

Oct. 11th, 1873.

JOHN ERIC ERICHSEN.

To the Editor of THE LANCET.

SIR,—In to-day's issue of your valuable journal, p. 532, you mention several probable dangers which may accrue after operations performed according to the plan introduced by Esmarch; but there is one great change in the circulation produced by it which struck me as being important to consider as to its advantages and safety. Before the operation is performed the amount of blood is, or may be supposed to be, adequate to all the exigencies of the entire system, and that the heart and general vascular system contained as much blood as may be safe for them to bear.

When, however, an elastic ligature of great power is applied to a limb, and progressively tightened from below upwards, its object and effect must be to empty the vessels, thereby forcing the blood into a considerably diminished vascular area, and so creating a sudden relative surcharge, which may not be safely endured. I have ventured to make this suggestion, the fallacy or the truth of which can only be proved by facts.

I am, Sir, yours &c.,

Manchester, Oct. 11th, 1873.

THOMAS RADFORD, M.D.

CEPHALOTRIPSY.

To the Editor of THE LANCET.

SIR,—In your issue of October 4th, Dr. Radford, of Manchester, took exception to a remark of Dr. Carey's in an account of a case of cephalotripsy, in which the latter says "he thought of Dr. J. Braxton Hicks's plan of removing the calvaria and canting the base." Dr. Radford said "it was not Dr. Braxton Hicks's plan, but many years ago was described and practised by the late Dr. Hull." Lest any of your readers should think I had claimed the credit of others' work, I write to say that I have nowhere made any such claim. In the paper read before the Obstetrical Society (see Obst. Soc. Lond. Trans., vol. iv.), entitled "An Inquiry into the best mode of Delivering the Fœtal Head after Perforation," I most distinctly referred to Dr. Hull as having pointed this out. I remarked that it was curious that, with the exception of Burns, the succeeding authors were silent upon the point; yet so it was. I had written my paper in rough, when, searching through Burns, I found his allusions to Hull and his repetition of the experiments confirming him. After him the principles which regulate traction after perforation were lost sight of, and in difficult cases force rather than skill was triumphant. Since the reading of my paper many authors have expressed their sense of the value of the principles involved; and as the oftentimes formidable operation of craniotomy and cephalotripsy ought not to be undertaken without a clear comprehension of the principle, I shall be amply rewarded if my paper discussing the whole subject have been instrumental in advancing our knowledge.

Yours truly,

J. BRAXTON HICKS.

George-street, Hanover-square, October 10th, 1873.