careful consideration, and leads naturally to the question—What ends are proposed in the contemplated operation?

I take it that these are,—First, the saving of life endangered by the pain and discharge attendant on the disease of the joint; and,

Secondly, the procuring of a more efficient and less deformed member than it could otherwise have been. These two may be regarded as good and sufficient reasons.* That both ends have been attained in some of the recorded cases,† I think there is no reason to doubt, for the fact stands upon the testimony of most respectable and trustworthy men. Mr. Syme's assertion, therefore, that a recovery of a patient after the operation is a distinct evidence of its uselessness, I confess, appears to me to be unjust and illiberal, for we are assured that the state of the patients previously was most unpromising. Why are we not to believe the testimony of those who have thought the operation worthy of consideration, and have practised it or seen it practised, as well as that of those who do not appear to have done so. I have never witnessed one of these operations, but I hold myself bound to believe until I can disprove them, when they are otherwise entitled to credit, the statements of those who have. These lead me to the conclusion that there are cases in which both life and limb may be saved. Yet the evidence in favour of the operation is not such as to lead me to anticipate that it will be frequently or generally adopted with success—the relative number of recoveries to the deaths is very small. In some the death of the patient has no doubt been hastened; in others, an amount of disease has been found that was not expected, and that could not be removed; in a third class, a temporary benefit has been effected by removing the local irritation, but the patients have subsequently sunk from the effects of internal disease. About one case in four of these operations performed in London during the last few years (so far as I can learn) have been successful. It is to be hoped that the unsuccessful cases will soon be published; they are, perhaps, more important than the successful ones. Mr. Henry Smith is entitled to much credit for his fair and straightforward account of his case. Two successful cases have happened to Mr. Fergusson, and six or seven others, in his and others hands, have terminated fatally.

What we want, it appears to me, is a full history of all these cases, both before and after the operation; the state of parts found at the time of the operation; and the post-mortem examinations where death has occurred. We want, also, every case reported in which surgeons may have the opportunity of examining the condition of the joint and body generally, where no operation has been performed. Though the specimens in the museums are very numerous, of the majority there is no record. We want, further, to know what is the average proportion of recoveries and deaths from this disease under ordinary treatment: and lastly, some means by which we can, with probability, at least, determine the extent to which the joint is affected in any given case—that is to say, the means of forming a "rational diagnosis."

The operation still appears to me to merit consideration. The success or failure of it will not, I think, influence the value of similar operations on the elbow and shoulder. Experience has established their worth. It is highly desirable that every one who has the opportunity should endeavour to contribute what he can towards deciding the merits of the operation. The truth will be arrived at the more quickly the more numerous the observations made by those capable of making them.

Since writing the above, Mr. Syme's remarks in *THE LANCET* for March 10, and Mr. H. Smith's rejoinder, have come under my notice. Without further comment on these, I would just say, that I cannot reconcile Mr. Syme's statement—"If the joint is carious the patient must die," with his further observation about the cripples with distorted limbs, who regain health, and live for years with ankylosed joints. Surely these joints have been carious, and the occurrence of recovery proves more than Mr. Syme requires.

I am glad to see Mr. Smith acknowledging the importance of the constitutional complications of the disease in question.

I shall feel obliged by your inserting these observations in

* A third has been suggested, which I deem superfluous—viz., the reputation of the surgeon!

† The degree of usefulness of the limb after the operation is a matter of great importance, as, in spite of the best directed efforts to the contrary, ankylosis often occurs (generally, I may say) with the limb in a very distorted position; inducing secondarily, considerable curvature of the spine, where this desirable end occurs spontaneously. This never need be the case after operation. In Mr. White's case, (the best, I suppose, on record,) the limb was very useful, but never grew after the operation.

your journal, where I trust to see this matter fully discussed in that spirit which ought to animate inquirers after truth and fellow labourers in a common sphere of honour and usefulness.

Duchess-street, Portland-place, March, 1849.

OBSERVATIONS ON THE CAUSE OF DEATH AFTER DELIVERY IN THE CASE OF HER ROYAL HIGHNESS THE PRINCESS CHARLOTTE OF WALES.

By ROBERT LEE, M.D., F.R.S.,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON, PHYSICIAN TO THE BRITISH LYING-IN HOSPITAL, AND LECTURER ON MIDWIFERY AT ST. GEORGE'S HOSPITAL.

THE short sketch of the Life and Writings of the late Dr. Joseph Clarke, of Dublin, recently published by my distinguished friend, Dr. Collins, contains the following letter, addressed by Dr. Sims to Dr. Clarke, at p. 68:—

London, November 15, 1817.

MY DEAR SIR,—I do not wonder at your wishing to have a correct statement of the labour of her Royal Highness Princess Charlotte, the fatal issue of which has involved the whole nation in distress. You must excuse my being very concise, as I have been, and am, very much hurried. I take the opportunity of writing this in a lying-in chamber.

Her Royal Highness's labour commenced by the discharge of the liquor amnii, about seven o'clock on Monday evening, and pains followed soon after; they continued through the night and a great part of the next day, sharp, short, but very ineffectual. Towards the evening, Sir R. Croft began to suspect that the labour might not terminate without artificial assistance, and a message was dispatched for me. I arrived at two on Wednesday morning. The labour was now advancing more favourably, and both Dr. Baillie and myself concurred in the opinion that it would not be advisable to inform her Royal Highness of my arrival. From this time to the end of the labour the progress was uniform, though very slow; the patient in good spirits, pulse calm, and there never was room to entertain a question about the use of instruments. About six in the afternoon the discharges became of a green colour, which led to a suspicion that the child might be dead; still, the giving assistance was quite out of the question, as the pains now became more effectual, and the labour proceeded regularly, though slowly. The child was born without artificial assistance, at nine o'clock in the evening. Attempts were for a good while made to reanimate it, by inflating the lungs, friction, hot-bath, &c., but without effect; the heart could not be made to beat even once. Soon after delivery Sir Richard Croft discovered that the uterus was contracted in the middle in the hour-glass form; and, as some hæmorrhage commenced, it was agreed that the placenta should be brought away by introducing the hand. This was done about half an hour after the delivery of the child, with more ease and less loss of blood than usual. Her Royal Highness continued well for about two hours; she then complained of being sick at stomach, and of noise in her ears; began to be talkative, and her pulse became frequent; but I understand she was very quiet after this, and her pulse calm. About half-past twelve o'clock, she complained of severe pain in her chest, became extremely restless, with a rapid, irregular, and weak pulse. At this time I saw her for the first time, and saw immediately that she must die. It has been said that we were all gone to bed: that is not a fact. Croft did not leave the room. Dr. Baillie retired about eleven, and I went to my bed-chamber, and laid down in my clothes at twelve. By dissection, some bloody fluid (two ounces) was found in the pericardium, supposed to be thrown out in articulo mortis. The brain and other organs all sound, except the right ovary, which was distended into a cyst the size of a hen's egg. The hour-glass contraction of the uterus still visible. A considerable quantity of blood in the cavity of the uterus; but those present differ about the quantity, so much as from twelve ounces to a pound and a half; the uterus extending as high as the navel. The cause of her Royal Highness's death is certainly somewhat obscure; the symptoms were such as attend death from hæmorrhage, but the loss of blood did not appear to be sufficient to account for a fatal issue. It is possible that the effusion into the pericardium took place earlier than what was supposed, and it does not seem to me to be quite certain that this might not be the cause. As far as I can judge, the labour could not have been better managed. That I did not see her Royal Highness

more early was awkward; and it would have been better that I should have been introduced before the labour was expected; and it should have been understood that when the labour came on, I should be sent to without waiting to know whether a consultation was necessary or not. I thought so at the time, but I could not propose such an arrangement to Croft. But this is entirely *entre nous*.

I am glad to hear that your son is well, and, with all my family, wish to be remembered to him; we were happy to hear that he was agreeably married.

I remain, my dear doctor,

Ever yours most truly,

JOHN SIMS.

P.S.—This letter is confidential, as, perhaps, I might be blamed for writing any particulars without the permission of Prince Leopold."

Thirty-two years have passed away since this event occurred, and Sir Richard Croft, Dr. Sims, Dr. Baillie, and all who witnessed the scene, except, perhaps, the husband of the Princess, have followed her Royal Highness to the grave, and carried with them whatever further information they possessed respecting the case. How little its true history is now understood throughout the world, may be learned by the following passage in a paper entitled the "Heart-clot," published by the learned Professor Meigs, of Philadelphia, in the *Medical Examiner, and Record of Medical Science*, (America,) March 9, 1849:—"It is understood that the young Princess Charlotte, whose death at Claremont cast a mournful gloom over the whole British empire, died within fifteen minutes after the birth of the Prince, and that there was no very considerable hæmorrhage, no laceration, nor other incident that might fitly explain the suddenness of her decease."

If this letter of Dr. Sims be compared with the following statement, which was published three weeks after the event, it will be seen that those documents contain all the authentic information we now, or probably ever shall, possess respecting the history of the case.

"Case of the late Princess Charlotte of Wales."

"The editors, having been sufficiently apprized that the profession expected from them some account of this case, the lamentable termination of which has cast such a settled gloom over the British empire, immediately on learning that the physicians who attended it did not mean to publish any statement, (a resolution on the propriety of which, under the circumstances, they perfectly coincide,) strenuously endeavoured to obtain every information respecting it from such sources as could be depended upon. Their exertions have been successful, and they are now enabled to present a report to their readers, which may be regarded as strictly authentic.

"The Princess Charlotte, previous to her confinement, was in good health, and immediately under the eye of her accoucheur, Sir R. Croft, who resided at Claremont for three weeks up to the moment in which she was taken ill. Dr. Baillie, also, was in attendance, chiefly, we have been informed, on account of a promise exacted from him by the Princess, that he would be near her on this occasion. Her spirits were excellent, and she anticipated only the most favourable issue of the event, which was hourly expected.

"She was first made sensible of her approaching delivery at seven o'clock on Monday evening, the 3rd of November; but the labour-pains were so inefficient, although acute, as scarcely to evacuate the water, which had ruptured the membranes at the commencement of the labour—a circumstance, however, which every accoucheur knows prognosticates nothing either uncommon or untoward. In this manner the labour proceeded slowly for twenty-six hours, the Princess being frequently up, and walking about, from finding that the pains almost left her when she was in the recumbent position. About this time, also, judging from the inefficiency of the pains, and the little progress made in the labour, we understand that Sir Richard Croft suspected that there were either twins, or that there existed some irregular action of the uterus; and as it was probable a consultation might ultimately be required, he wrote to Dr. John Sims, requesting his immediate attendance. He had in the meantime provided everything that could be wanted, should it be found expedient to have recourse to artificial delivery.

"Dr. Sims arrived at Claremont at two o'clock in the morning of Wednesday, but did not then see the Princess, and as the cause of this has been grossly mis-stated, we think it proper, in justification of an honourable man, and so highly respected a member of the medical profession as Sir Richard Croft is well known to be, to state that we have been informed, from a quarter which we must credit, that it was proposed by

Sir Richard to Dr. Sims, that he should then be introduced to the Princess; but both Dr. Sims himself and Dr. Baillie thought his presence at that time could not be productive of any benefit, but might agitate the patient. Dr. Sims therefore declined entering the lying-in room. No consultation was at this period necessary, as the labour was evidently advancing, though slowly; but on hearing the statement of the situation of the Princess from Sir Richard Croft, Dr. Sims concurred in the opinion, that everything should be left to Nature.

"About noon on Wednesday it was first suspected that the child might be dead, or that it might be born in a state of suspended animation, and every known means of recovery were immediately prepared. Still the labour continued to be scarcely progressive, the pains being such as tend to forward birth rather by moulding the head, so as to admit of its easy passage, than by forcible expulsion. When this was completed, the pains became more efficient, and at the termination of fifty hours from the commencement of the labour, the Princess was delivered, by natural efforts, of a still-born male child. No great discharge followed the birth, but it was soon discovered that the uterus was acting irregularly, and taking on the hour-glass contraction; and an unfavourable separation of the placenta was anticipated. This likewise, in some degree, accounted for the protracted character of the labour.

"At half-past nine o'clock, a discharge of blood occurred. Dr. Sims, who was then employed in an adjoining room in endeavours to re-animate the infant, was instantly informed of this occurrence, and in consultation with Sir Richard Croft, agreed that the immediate separation and removal of the after-birth was necessary. It was effected with little difficulty, and was followed by a very trifling discharge, either of fluid or coagulated blood.

"The Princess was now as well and composed as ladies usually are immediately after delivery, and continued so until a quarter before twelve o'clock, taking frequently small supplies of nourishment; but at this time she became restless, and rather talkative, and complained of being sick. She vomited, but nothing was ejected, except a little camphor julep, which she had taken; and at this moment her pulse was firm, steady, and under 100; she again was composed. About half-past twelve, however, the breathing became impeded; the respiratory organs were evidently under the influence of spasm, and continued in that state till she breathed her last, at half-past two o'clock, exactly five hours and a half after her delivery.

"In this afflicting state of the case, Dr. Baillie and Dr. Sims, who had been called into the room when the breathing first became affected, united their judgment and skill with that of Sir R. Croft, but in vain, to avert the impending calamity. Art proved unavailing, although everything which it could devise, and which experience could suggest, was attempted.

"On the 7th of November, the body was opened by Sir Everard Home, assisted by Sir David Dundas, Mr. Brande, and the apothecary of Prince Leopold's household, and the following, we believe, is a pretty accurate statement of the appearances these gentlemen observed:—

"The membranes of the brain presented their natural aspect; the vessels of the pia mater were less distended with blood than was to be expected after so severe labour; the ventricles of the brain contained very little fluid; the plexus choroides was of a pale colour, and the substance of the brain had its natural texture. The pericardium contained two ounces of red coloured fluid; the heart itself and the lungs were in a natural state; the stomach contained nearly three pints of liquid; the colon was distended with air; the kidneys and other abdominal viscera were in a natural state. The uterus contained a considerable quantity of blood, and extended as high up in the abdomen as the navel, and the hour-glass contraction was still very apparent."—*The London Medical Repository*, December 1st, 1817, vol. viii. p. 534.

I think there is internal evidence to prove that this information was communicated by Dr. Baillie, from the verbal report furnished to him by Sir Richard Croft.

Exhaustion of the nervous system of the uterus, and of the whole nervous system of the body, from a labour which was protracted to fifty hours; hæmorrhage after the birth of the child; hour-glass contraction, retained placenta, its artificial extraction, and subsequent internal hæmorrhage, took place in this case, and appear quite sufficient to account for its fatal termination. The delirium, restlessness, vomiting, oppression of breathing, and rapid feeble pulse which followed, are the ordinary symptoms witnessed in cases of fatal uterine hæmorrhage.

It has been stated to me, upon the authority of a celebrated physician who died several years ago, and who was long officially connected with the royal family of England, that her Royal Highness the Princess of Wales was thrice bled from the arm, and rather copiously, during the latter months of pregnancy, to avert certain symptoms which were considered to indicate undue plethora. If this were the fact, and we suppose that thirty-six or forty ounces of blood were abstracted on these three different occasions during pregnancy, an explanation could be more readily furnished of the want of contractile power in the uterus during the labour, its relaxation alone after the extraction of the placenta, and the sinking which ensued in consequence of a comparatively slight internal hæmorrhage. The fatal result might, however, have occurred without the depletion, if this was actually practised during gestation.

Savile-row, Burlington-gardens, 1849.

CLINICAL REMARKS IN SURGERY.

By JAMES SYME, Esq.

PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF EDINBURGH.

On Amputation Below the Knee.

THE circumstances which were held to require removal of the leg, so generally admit of remedy by amputation at the ankle-joint, that there is now comparatively seldom occasion for the former operation. But the following cases seem to admit of no other measure; and the method pursued in its performance which has been employed for some years past in the clinical wards of the Edinburgh Royal Infirmary, appears to be the most convenient for the purpose.

CASE 1.—A. B.—, aged thirty-seven, carter, from the neighbourhood of Falkirk, was admitted on the 29th December last, suffering from the effects of a compound fracture of his right leg, which had been sustained six months before. No distinct account of the treatment was received, so that little information worthy of reliance could be obtained, except in regard to the position of the limb which had unfortunately been straight, with the knee extended. On examination, it was found that the wound had healed soundly, but that the bones remained ununited. The fracture of the tibia seemed to have been transverse, and its broken ends were greatly displaced, being drawn past each other, so that the sides of the shaft lay in apposition. The leg was shortened to the extent of nearly four inches, and so far from being of any use to the patient, rendered him entirely unfit for any active employment. As in these circumstances the only mode of treatment which seemed to promise any chance of restoring firmness to the bone was excision of it to a sufficient extent, for permitting re-adjustment of the surfaces, and as this expedient, at all times very uncertain, and not free from danger, would, on the present occasion, even in the event of success, have rendered the limb too short for being of any use to the patient, it was deemed, on the whole, best to perform amputation below the knee.

On the 16th of January, the patient having been brought completely under the influence of chloroform, two semi-lunar incisions were made from side to side of the leg before and behind, about a hand's breadth below the tuberosity of the tibia. The flaps of skin thus formed, having been dissected back to the distance of an inch above the commissure of the incisions, the muscles were divided and retracted so as to permit the bones to be sawn an inch below the tuberosity of the tibia. The wound healed almost entirely by the first intention, and the patient obtained a most comfortable stump, with which, having waited for a suitable apparatus, he walked out of the hospital on the 19th of March.

CASE 2.—P. M.—, aged twelve, was admitted on the 12th of August last, on account of an injury of his left leg, by the wheel of a loaded cart passing over it. Extensive suppuration, involving the ankle-joint, and sloughing of the integuments, with repeated hæmorrhage, having greatly exhausted the patient's strength, and threatened to prove fatal, if not arrested, amputation below the knee was performed on the 6th of September, as in the case just related, and with a no less satisfactory result, the patient being dismissed on the 30th of October, with an excellent stump.

The introduction of anæsthetic agents into the practice of surgery has divested amputation below the knee, by "flap," of its principal advantage. The facility, rapidity, and consequently less protracted pain of this method, greatly recommended it, so long as the patient retained sensation, but can-

not be taken into account after safe and effectual means have been adopted for the suppression of suffering. The respective merits of the operations by flap and circular incision, with regard to the results of their performance, therefore, at present admit of fair consideration and comparison. Now, although nothing can be more neat or satisfactory in appearance than the covering provided for the bones by a well-proportioned flap, at the time of its formation, every surgeon of experience must have remarked, that in many, if not most cases, the stump, so far from realizing this favourable promise, ultimately proves unshapely and uncomfortable. The muscular part of the flap, by its weight and tendency to retraction, constantly disposes the edges of the wound to separate, and in the event of their primary union, to widen the cicatrix between them, while the presence of plasters employed to prevent this effect produces one still more mischievous, by exciting inflammation, ulceration, or even sloughing, in the integuments lying on the fore part of the bone. When the cure is completed, therefore, it too frequently happens that the large fleshy cushion preserved is of no use whatever in protecting the bone, which is divested of any covering except an adherent cicatrix, even under the favourable circumstance of the sore healing, and not proving a permanent source of irritation. It may be added, that as, in order to obtain a flap of sufficient length, the incision must be carried low down the leg, there is a greater risk of retaining in the stump textures impaired for healthy action by disease or injury, than when the parts higher up the limb are employed for the purpose. In the following cases, all the bad consequences just mentioned existed to an extreme degree, rendering the stumps not only useless, but burdensome and distressing; and both of the patients, it will be remarked, obtained complete relief through the performance of an operation which, if adopted in the first instance, would in all probability have rendered any other measure unnecessary.

CASE 3.—P. N.—, aged twenty-one, was admitted on the 18th of December last, on account of a painful and useless stump, of which he gave the following history. About twelve months before, he had had the leg amputated through the middle, in a provincial hospital, for mortification of the foot after fever. The stump sloughed, and a second amputation was performed below the knee, by the formation of a large flap from the calf of the leg. The sore did not heal, and he had been obliged to walk with the assistance of crutches, as an artificial limb could not be tolerated.

On the 22nd, chloroform having been administered, two semilunar incisions were made from side to side of the stump, including the whole extent of adherent and imperfectly cicatrized part, which was two inches in breadth. The integument was detached in part up to the tuberosity of the tibia, and behind to the same level, thus exposing the muscular cushion, which had been preserved with so little success for covering the bone. A circular incision, followed by the saw, removed the whole of this bulbous mass, and permitted the integuments to meet freely, when their edges were brought together. The wound healed soundly, and the patient obtained a stump in every respect comfortable.

CASE 4.—J. R.—, aged twenty-one, was admitted on the 20th of December last, on account of a most unseemly and distressing stump, which had resulted from amputation below the knee, by single flap, performed six months before, in consequence of mortification following an injury of the leg. The cicatrix, adherent to the bone, was fully three inches in breadth, with an ulcerated surface along its whole extent, while the muscular texture formed a large projection behind and below the raw surface in front, and consequently was of no use in protecting the bone.

On the 22nd, a similar operation to the one last narrated was performed, although with some doubt as to its practicability, from the vicinity of the cicatrix to the joint. The integuments in front did not admit of any elevation, and when the saw was applied, it encroached a little on the ligament of the patella. Nevertheless, an ample covering of skin was obtained, and notwithstanding a rather troublesome hæmorrhage from the small vessels, some hours after the operation, the wound was soundly healed on the 10th of January.

In a report of the Edinburgh Surgical Hospital, published twenty years ago, the following passage appears:—"In performing amputation for diseases of the foot, it is usually thought proper to amputate at no greater distance from the knee than is sufficient to afford the patient a convenient support for the body, unless he can afford the expense of procuring an artificial limb. It appears to me, however, in all