mity may be traced to the ill-judged restraints and fatigues to which young persons are condemned for the attainment of fanciful accomplishments. The term education, as usually understood at the present day, implies only moral and intellectual cultivation. Mr. Locke added to this mental culture a series of rules and observations necessary for preserving and strengthening the bodily constitution, and comprised them under the expressive term physical education:—"Thus embracing the more enlarged and comprehensive purpose of promoting general health, and preserving the bodily frame and mental organs in the full and vigorous exercise of all their functions."

The physical education inculcated by Locke, I am sorry to say, has been lamentably overlooked in the curriculum inflicted upon the females of the middle and higher ranks; and it is to the neglect principally of physical education, that all the evils arising from lateral curvature may be attributed. Within the last few years the members of the profession have had their attention directed to the benefits that arise from physical education. Among the many writers who have laboured in this cause, no one, perhaps, has shown the evils which result from the present course of female instruction in a more correct and forcible view than Dr. Barlow, physician to the Bath Hospital. In the first volume of the "Cyclopædia of Practical Medicine" a most valuable paper on physical education is drawn up by that gentleman, in which I find many of my own observations noted down, and my deductions from them confirmed. I had, with much care, compiled a table, illustrating the horrors of scholastic slavery, but fearing that any private view on this subject might be considered partial, I prefer extracting part of a note appended by the learned editor, Dr. Forbes, to Dr. Barlow's most excellent remarks:—

"The amount of exercise, or rather the extent to which the *want of exercise* is carried in many boarding-schools, will appear incredible to those who have not personally investigated the subject. The following is the *carte* of a young ladies' boarding-school, drawn up on the spot, a few years since, from the report of several of its inmates:—

"At 6 in the morning the girls are called, and rise; from 6 to 8, learning or saying lessons in school; 8 to 8½, at breakfast; 8½ to 9, preparing lessons out of school, some of the girls permitted to do so in the garden; 9 to 1, at various tasks in school; 1 to 1½, out of school, but must not go out of doors; reading or working and preparing for dinner; 1½ to 2, at dinner; 2 to 5, in school, various tasks; 5 to 5½, tea; 5½ to 6, preparing to go out; dressing or reading, or playing in school; 6 to 7, walk, generally arm-in-arm, on the high road, many with their books in their hands, and reading.

"Two days in the week they do not walk in the evening at all, being kept in for dancing; but, by way of amends, they go out on two other days from twelve to one, and then they miss writing. It is to be remarked that they never go out unless the weather is quite fine at the particular hours allotted for walking. They go to church all the year round, twice every Sunday, on which day no other exercise is taken.

"From 7 to 8, for the older girls, reading or working in school (this is optional), and then prayers; for the younger, play in school, and prayers; at 8 the younger go to bed; from 8 to 9, the older, reading or working, as before; 9, to bed.

"The twenty-four hours are, therefore, thus disposed of:—

In bed (the older 9, the younger 10)	9
In school, at their studies and tasks	9
In school, or in the house, the older at optional studies or work, the younger at play	3½
At meals	1½
Exercise in the open air	1

24

"The above account was taken from a second or third-rate school, and applies more particularly to the season most favourable for exercise, summer."

It is not necessary for me, Gentlemen, to dwell more upon the subject on the present occasion. I will, in my next lecture, lay before you such principles of treatment, for the cure of lateral curvature, as I have found most practically useful.

ABSTRACT OF A REPORT OF THE SURGICAL CASES AND OPERATIONS

THAT OCCURRED IN THE
MASSACHUSETTS GENERAL HOSPITAL,

From May 12, 1837, to May 12, 1838.

By GEORGE HAYWARD, M.D., Surgeon to the Hospital.

FRACTURE OF THE LOWER-JAW.

Six cases of this accident were admitted into the hospital during the year. Two of them were simple, and four compound fractures; and I should think that this was not far from the usual proportion, judging merely from my own practice. The jaw is covered on the inside with so thin a layer of soft parts, that the injury which is sufficiently violent to cause the fracture, is in many cases powerful enough to lacerate these.

My purpose in noticing these accidents, is to speak of a simple mode of treatment, which is applicable to many cases, and which I have frequently found very efficacious. When the bone is not comminuted, and there are teeth on each side of the frac-

ture, the ends of the bone can be kept in exact apposition by passing a silver wire or strong thread around these teeth, and tying it tightly. In several cases of fracture of the jaw, in which the bone was broken in one place only, I have, in the course of the last few years, adopted this practice with entire success, and without the aid of any other means. It will be found very useful, also, as an auxiliary, in more severe cases, in which it may be required to use splints and bandages, or to insert a piece of cork between the jaws, as recommended by Delpech. It requires some mechanical dexterity to apply the thread neatly: but in large cities we can avail ourselves of the skill of dentists for this purpose, and I have in this way been frequently indebted to the ingenuity of my friend, Dr. Solomon Keep.

FRACTURES OF THE THIGH.

When this accident occurs below the middle of the bone, it is usually treated at the hospital by extension and counter-extension. The apparatus used for this purpose is a modification of Desault's, the modification consisting principally in the adaptation of a screw to the cross-piece which connects the splints together at the bottom, and to this screw is attached the band or sock which passes around the ankle. By this means the extension is made more in the direction of the axis of the bone, than by the original machine, and the fractured surfaces are consequently brought more in contact.

The objections that are often made to this apparatus I have not found to hold good to any extent in practice. It rarely produces much irritation in the perineum; I have never seen ulceration there but once from this cause, and this was in a patient of a peculiarly irritable habit. It is more apt to give trouble about the ankle on which the extending band is applied, and I have seen the heel ulcerate and slough in a few cases. These ulcers are exceedingly obstinate. Something, no doubt, may be done to prevent them by careful attention, but they will occasionally occur, even when the utmost vigilance is employed.

Another inconvenience which sometimes follows the use of this apparatus is the stiffness of the knee. I have never known this, however, to be permanent; but it often continues several weeks, and is in some instances quite troublesome.

Notwithstanding these objections, I prefer this apparatus to any other that I have ever used for treatment of fractures of the shaft of the thigh-bone, below the middle. Fractures of the condyles of course require a different mode. In the great majority of those cases which I have seen treated in this way, there was but little if any shortening, deformity, or lameness, and the patients hardly suffered at all while under treatment.

I am aware that writers urge many other

objections to this apparatus, but I feel confident that most of these are theoretical, and are advanced by those who have never given it a trial, or have used it perhaps in cases where the fracture is high up, and in which I have no doubt that other means will be found more useful.

Mr. Amesbury's apparatus for fractures in the lower half of the thigh-bone I have never employed, merely because the one I was accustomed to answered the purpose so well.

It must be admitted, however, that in fractures of the upper third of the thigh the modified apparatus of Desault does not do so well as when the bone is broken lower down. This is especially true in fractures of the neck of the bone, either within or exterior to the capsular ligament. Some have supposed that when the fracture is entirely within the ligament, bony union never takes place, whatever treatment may be adopted. But this is not correct, for there are well authenticated cases to the contrary. It is no doubt difficult to effect bony union in this accident, because the head of the bone, when thus detached, is nourished only by the vessels of the round ligament, and because it is not easy to keep the fractured surfaces in contact and the parts completely at rest. But even ligamentary union will be much more complete if these circumstances are attended to, than if they are neglected; for if the parts are not kept together, the ligament will be much longer than it otherwise would be, and the limb consequently less useful.

When the fracture is high up, there are, of course, more muscles inserted into the lower fragment, and consequently there is greater danger of displacement than when the fracture is lower down, and it is also more difficult to confine the pelvic portion of the thigh-bone. Something more than mere extension and counter-extension is frequently necessary to bring the fractured surfaces in apposition under these circumstances; and it is very important that steady pressure should be made so as to keep them in close contact. Every one, who is at all familiar with the treatment of fractures, knows how great a power pressure exerts in bringing about a bony union.

Now, Desault's apparatus is not calculated to make this pressure, and some have thought that in fractures of the neck of the thigh-bone, the inner splint is apt to separate the fragments by pushing the lower portion outward.

There are other indications which are not perfectly answered by this machine, when the fracture is high up. But it is unnecessary to speak of these, as it is not my object to make a treatise on the subject, but merely to notice an apparatus which I think accomplishes the intention of the surgeon more completely than any other that I ever saw. This

is Mr. Amesbury's fracture-bed. It is adapted to all fractures of the thigh, occurring in the upper third of the bone, requiring slight modification in each case, and so constructed that the part on which the thigh is to rest can be made longer or shorter, as may be necessary to adapt it to the size of the patient. During the last year I have used it several times; in one case of the fracture of the neck of the bone within the capsular ligament, and in another of the neck exterior to it. Both of these did well. There was scarcely any lameness or shortening of the limb, and the patients suffered but little while under treatment.

There was recently a patient in the hospital with a fracture just below the great trochanter, who used this fracture-bed. He was placed upon it immediately after the accident, and kept there five weeks, and was perfectly comfortable during the whole time. He has recovered the entire use of his limb, without any perceptible lameness or shortening.

INFLAMMATION OF THE HERNIAL SAC.

The four following cases came under my care during the past year. They were new to me, and I am inclined to think that they will be so to most of my readers, as I can find no description of precisely similar ones in any work which I have consulted. I regard them all as inflammation of the hernial sac, having many common features of resemblance, and differing from each other only as they were in different stages of inflammation. In one of them the sac was gangrenous; in the second, fibrine was effused in abundance, but no pus formed; in the third, suppuration took place; and in the fourth, the inflammation was so much reduced that it no doubt terminated by resolution.

These cases will be best understood by giving the hospital record of each, made at the time, and I shall present them in the order in which they occurred.

CASE 1.—Michael Murphy, ætat. 40, married; labourer; Irish.

July 20. States that since childhood he has always had an inguinal hernia of the left side, easily and entirely reducible at all times; never any incarceration that he is aware of. Six days since was attacked with pain in the abdomen about umbilicus, described as colic; got some cathartic medicine, which operated. Three days ago hernia came down, and has not been able to reduce it since. Has been bled twice, and the taxis attempted by several without success. Has not had much pain in the tumour; no vomiting.—Took salts yesterday, which operated. Now, pulse 88, of moderate strength; tongue, white coat on lobes, moist; strength good; no sickness; no pain nor tenderness of epigastrium; some tenderness in left iliac region, less in

right. On examination, on the left side there is an inguinal hernia, the size of two clenched hands, to the touch hard, without resonance; integuments slightly reddened; external ring tightly girt around the neck of the tumour, which is remarkably large and firm; some pain upon pressure; hernia probably omental.

A purgative enema was first given, which came away without operation. The taxis was then attempted in the warm bath, but without success, although the size of the tumour was somewhat diminished. The patient was then ordered the following:—

Croton oil, one drop;

Jalap, enough to make a pill. Every four hours till free operation.

Ice to be assiduously applied two hours. A consultation to be called for to-morrow, at 11, A.M., to decide on the propriety of operating under the present circumstances.

6, P.M. Four full dejections after one pill; no reduction of tumour; pulse as before.—Apply bitter fomentations through night.

21. Scrotum oedematous at bottom; tumour still the same; pulse 88; very little pain; slept part of night. A consultation being held, it was decided to perform the operation.

11, A.M. Operation by Dr. Hayward. Patient being placed upon the table an incision was then made from the edge of the ring two-thirds down the tumour, dividing the integuments. The different fasciæ, which were much thickened, were then divided on a director, in the usual manner. The sac being thus exposed, was opened; it was one quarter of an inch in thickness. On opening the sac a gangrenous odour was emitted, and on further examination nothing was found in it; but the sac itself was in a gangrenous state. It was then decided to remove the sac, which was accordingly done, though with much difficulty, on account of the numerous and strong adhesions. In the removal of the sac the tunica vaginalis testis was punctured, and about two ounces of the water of a hydrocele escaped. Several arteries required ligatures, principally in the cellular membrane of the scrotum. The remaining portion of the sac bleeding freely, a ligature was placed round it. The finger passed into the ring detected no stricture. The edges of the wound were then brought together and retained in place by a single suture. Adhesive plaster, pledget, dry lint, compresses, and a T bandage completed the dressing. The patient was then conveyed to bed.

22. Some pain in back yesterday, P.M. Slept pretty well in night; now quite easy; pulse 88; no tenderness of abdomen; tongue, thin white coat as before; no pain in bowels; no dejection.—Castor oil, one ounce.

23. After oil five dejections; night quite

comfortable. Now, skin of good temperature; pulse 88; tongue as before; no tenderness nor fullness of abdomen; the whole of scrotum, together with testicle, swelled to five times the natural size; on right side oedematous, without pain; upper part of wound open, discharging considerable offensive serous fluid; portion of cellular membrane, &c., in a gangrenous state.—Yeast poultice to upper part of wound.

24. Continues comfortable.—Castor oil, half an ounce.

25. After oil two dejections; continues quite comfortable; swelling of right side of scrotum quite gone; of left side less, still hard, as if testicle enlarged; sloughs separating; much thin yellowish discharge; no pain; pulse 84; tongue cleaner.

26. One dejection yesterday; continues much the same; copious discharge of bright orange fluid from wound, with escape of gas on pressure, probably from the sloughing of the cellular membrane. If no dejection at 2, P.M., oil half an ounce. Rice and milk.

It is unnecessary to give any more of the hospital record. The patient continued steadily to improve, the wound healed completely, and on the 12th of September he was discharged "well."

This case, it will be perceived, was taken for omental hernia. It is true, however, that coughing did not give any impulse to the tumour when the hand was placed on it. But this was the only symptom that was wanting, and the absence of it was accounted for on the supposition that the omentum had formed strong adhesions to the neck of the sac, and that the tumour was in this way, as it were, insulated.

An operation seemed to be called for, as the tumour was increasing in size and tenderness, rendering the patient unable to stand, except for a minute or two at a time, and producing a great degree of oedema of the scrotum on both sides, which it was feared might terminate in sloughing.

The result, perhaps, may be thought to have justified the course that was adopted. If the case had been left to the efforts of Nature there would have been extensive, if not fatal, sloughing, even admitting that the patient could have escaped peritoneal inflammation, which was, no doubt, very much to be apprehended.

How far this state of the sac might be attributed to the attempts made to reduce the hernia, it is not easy to say. But it is certain that these were not great or long-continued after the patient was admitted into the hospital, and it will be seen by the third case that very severe inflammation of the sac may come on spontaneously.

The second patient was admitted into the hospital before the first was discharged, and his case is thus entered in the records of the house:—

CASE 2.—Edwin Beard, ætat. 19; single; ostler, Boston.

July 31. Patient reports that he has had a small inguinal hernia of the left side about one year. Has worn a truss, which, however, has not fitted him, the hernia occasionally escaping. Three days since the tumour appeared, and has not been reduced since. Has worked till this morning, when he went to consult a truss-maker concerning a new truss, who advised his entrance here. Has had no constipation, no vomiting, and no symptoms of strangulation. No pain in tumour before to-day, and that only after being handled by several persons, who attempted to reduce it.

(On examination—tumour, the size of a hen's egg, at the left inguinal ring, firm, elastic, slightly tender; neck of tumour girted by ring; no impulse on coughing; cellular membrane of scrotum somewhat infiltrated; pulse 64, of good strength; tongue clean; bowels open this morning; purgative enema now; twelve leeches to tumour. Liquid farinaceous diet.

August 1. Slept quite well in night; tumour as yesterday; very slight pain; two copious dejections; no tenderness of abdomen.—Eight leeches to tumour.

2. More swelling of tumour; more redness; rather more tenderness and pain; pulse and tongue as yesterday; no dejection.—Solution of sulphate of magnesia, three ounces. Poultice to tumour thrice daily.

3. More pain in tumour; size increased; more redness; more tenderness; considerable oedema of scrotum; otherwise well; appetite good; may have broth.

4. Pain in tumour greater; size, redness, tenderness, &c. increased; tenderness especially about ring; pulse 88; tongue, thin white coat; no tenderness of abdomen; bowels open; appetite good.

5. Some oedema of tumour, pain, &c. as yesterday.

7. Size of tumour less; oedema still; indistinct and uncertain sense of fluctuation; otherwise well.

9. Tumour rather diminishing; tenderness less; appearance of inflammation less; otherwise well.

11. Considerable diminution of tumour; tumour at present about three inches in length, very firm, no indication of suppuration; tenderness much less; testicle plainly distinguished below tumour; some oedema of scrotum; pulse and tongue good.

17. Swelling much diminished; now firm, hard, not tender; scrotum quite free from oedema; otherwise well.—Omit poultice; apply the following lotion:—

Muriate of ammonia, half a drachm;
Vinegar, water, of each a pint.

18. Tumour perceptibly diminished since last report.

23. Tumour diminishing and softening; otherwise well.

27. Tumour the size of a walnut, or perhaps a little larger, quite hard; otherwise well.

30. Tumour much the same. Apply mercurial plaster, 3 by 2.

31. Veins of scrotum and spermatic chord somewhat distended; otherwise the same.

Sept. 1. Tumour softening and diminishing; in other respects well.

5. Redness increased by walking; no impulse on coughing. To wear suspensory bandage.

7. Discharged well.

CASE 3.—Thomas Dancaster, ætat. 40; single; seaman; England.

Feb. 8. Patient reports—about twelve months ago noticed a small tumour, referred by him to the situation of the external abdominal ring of the right side, easily reduced by himself, and often returning into abdomen on lying down. Tumour was about “as large as the end of his thumb,” and has appeared several times since, especially if his bowels became costive, as they frequently were, but he thinks not after any unusual exertion. Sometimes it did not come down for two or three months. Tumour has not been in the least painful or tender at any time till February 2nd, nor has it incommoded him in any way.

2. Patient sailed from Eastport, and exerted himself in pulling ropes, &c., but not more than was usual with him, and about midnight was seized with severe pain across upper part of abdomen and about umbilicus, and towards morning with pain in right iliac region, the pain elsewhere ceasing. Since then the tumour has been constantly increasing in size, pain, and tenderness. On night of sixth, when he arrived at Boston, the tumour, he thinks, was not larger than an egg, but since has increased very rapidly. Has had little or no sleep for three nights past; appetite has been impaired by pain, but has had no chills, headache, or nausea; general health has always been pretty good; when on shore has been in habit of using ardent spirits freely; has never worn a truss.

Now, pulse 66; appetite small; tongue slightly coated; five dejections yesterday, after salts; much pain in tumour. Upon examination a large tumour, commencing about two and a half inches within, and one inch below right superior spinous process, and running obliquely downwards and inwards, and terminating just above the testicle, being five inches long, and three inches broad at widest part, having a straight and abrupt face outwards, but inwards gradually rounding off towards hypogastrium, having a decided fluctuation across its middle. Integuments oedematous, with a blush of redness, and somewhat tense; much tenderness on pressure; no impulse

felt on coughing, but pain is increased by it.—Solution of sulph. of magnesia, three ounces, and repeat if need. Eight leeches to tumour; large poultice after leeches; milk and vegetable diet; horizontal posture.

9. Experienced much relief of pain after leeches; slept but little, was restless. Now, tumour quite tender, but less painful than at entrance, and rather more fluctuating. Four dejections.

20. Fluctuation now very decided; slight pointing about middle of tumour, near its outer edge; slept but little from pain; tenderness increased; pulse 68; no dejection. —Sol. of sulph. of mag. $\mathfrak{z}\text{ij}$., and repeat if need.

11. Slept but little, restless in the night, and had considerable pain. Early this morning abscess broke spontaneously, and discharged freely, perhaps $\mathfrak{z}\text{ij}$. in all. Discharge thick, purulent, with some coagula, rather dark and slightly foetid; tumour now diminished, less tender, little painful, redness less; appetite improved; no headach. Six dejections, at least, after two doses.

12. Has had but little pain; slept well; appetite pretty good; two dejections; tumour less, but slightly tender, not painful; quite hard in most parts.

14. Doing very well; no pain; but very slight tenderness in tumour; little discharge; slept well; appetite good; one dejection; simple dressings.

15. No dejection; no pain; discharge scanty.—Sol. of sulph. of mag. $\mathfrak{z}\text{ij}$., and repeat if need.

23. Abscess almost entirely healed; slight tenderness just opposite spine of pubis on outer edge; some induration; walks about, though not with perfect ease.

March 9. Abscess entirely healed; no tenderness; some induration for about one inch below abdominal ring; impulse or motion of intestine felt on grasping remains of tumour close to ring; no trouble in walking or stooping.

20. Discharged well.

It must be admitted that there is some obscurity about these cases, but the supposition that in all of them the hernial sac was inflamed, seems to explain them better than any other. It is true that the sac does not ordinarily take on inflammation to any considerable extent; at any rate, it rarely becomes thickened by it. In cases of strangulated hernia, in which the operation is performed, we often find the sac very thin, and semi-transparent, as much so as in health, though it may have been subjected to a great degree of pressure in the attempts made to reduce the hernia. On the other hand, it is certain that in the first case the trouble consisted solely in inflammation of the hernial sac, which had become excessively thick and gangrenous. There was no protrusion of omentum or intestine, and there was no

strangulation; and yet this case had more marks of hernia than any of the others. It proves, unequivocally, that the hernial sac can undergo changes of an important character, such as are calculated to render the diagnosis difficult; and these changes seem to be the result of inflammation, which may come on spontaneously.

All these patients had, for some time before they came under treatment, been subject to hernia; in all of them the tumour was small, extending but little if at all beyond the external ring, occupying the inguinal canal. From some cause a protrusion, to a considerable extent, of some of the abdominal contents, took place, carrying before them, of course, the hernial sac; in two of the cases there seems to have been, for a short time, some symptoms of strangulation, which soon passed off; but in all of them, the contents of the sac, whatever they may have been, were no doubt returned into the abdomen.

There was, in the first case, the most satisfactory evidence that the tumour consisted solely of hernial sac. It was cut down upon and laid open; it contained neither omentum nor intestine, but it was inflamed, thickened and gangrenous.

In the second case there was no well-marked symptom of strangulated hernia, or even of reducible hernia; there was no impulse on coughing, no constipation, no vomiting or nausea, and no pain, except in the tumour; the outline of the hernial sac could be distinctly traced with the hand, and its upper part was tightly girt by the external ring. Under an active antiphlogistic course it was gradually reduced in size, but the sac could be still felt, though it became thinner, and much contracted; the pain subsided, and the patient found no inconvenience in resuming his ordinary avocations.

The circumstances attending the third case enabled me to form a satisfactory opinion of the precise nature of the difficulty. When the contents of the abscess were discharged, the finger could be passed in at the opening, and the hernial sac could be traced up to the abdominal ring. As the inflammation went off the sac contracted; but it could be plainly felt in its whole extent, though much reduced in size, at the time the patient left the hospital.

The following operations were performed during the year:—

Amputation of thigh	3
.. leg	3
.. toes	3
.. forearm	1
.. fingers	1
Cataract	2
Fissure of the rectum	1
Fistula in ano	6
.. urinary	1
Hare-lip, double	1

Hernia, inguinal	1
.. femoral	1
Hydrocele, by incision	1
.. palliative operation	1
Ligature of femoral artery	1
Paracentesis abdominis	1
Polypus of the nose	2
Prolapsus ani	3
Removal of cancer of breast	3
.. .. tongue	1
.. .. face	1
.. hæmorrhoids, internal ..	3
.. hydatid of breast	1
.. nævus, by ligature	1
.. tumours, various	4
.. .. chronic mam. ..	1
.. fungus hæmatodes on abdomen	1
.. do. of breast	1
.. testis	1
.. tonsils	1
Trephining	1

Total 63

AMPUTATION.

Of the seven large limbs that were removed, six were done by the circular operation. This fact is noticed, from the circumstance that Mr. Liston has recently seen fit to denounce this operation in unqualified terms, declaring it to be "vile and inadmissible" in all cases where there are two bones in the limb. It is not, perhaps, surprising that an individual should have a decided preference to that particular mode of operating which he has adopted; but it is remarkable that he should give a sweeping condemnation of a method which has the sanction of some of the greatest names in modern surgery. The flap operation is better adapted, no doubt, to some cases than the circular; but there are very many others in which I believe the latter will be found to be the best. In fact, I must confess, that where circumstances will admit of the performance of either, I should operate by the circular incision. It has, to my mind, advantages over the other method that more than counterbalance the greater length of time which is required for its performance. A better stump, it seems to me, is made by it, and the parts heal with quite as much readiness. A patient, from whom I removed the leg above the knee by the circular operation, in June, 1837, walked out in sixteen days after the amputation, the wound being entirely healed. An artificial limb was fitted to the stump in a few weeks after, and upon this he has walked with great comfort ever since.

Two of the amputations were performed in consequence of that peculiar affection of the knee-joint, so well described by Sir Benjamin Brodie, in which a remarkable change of structure takes place, nearly the whole of the interior of the articulation being converted into a gelatinous mass. The patients

were both young men, a little more than twenty years of age, of scrofulous habit. The disease had in each existed several years, increasing gradually, but at no time attended with severe pain. The constitution at length becoming affected, an operation was advised. One of them, whose limb was removed more than a year ago, has since enjoyed uninterrupted health. He recovered rapidly, and is the individual to whom I referred as having walked out so soon after the amputation.

The second patient convalesced more slowly; the system seemed to suffer much more from the shock of the operation; but in three or four weeks a favourable change took place, and he was discharged from the hospital "well," in forty-four days after the removal of his limb. His health continued good for some months, when the other knee began to be slightly affected, which he at first attributed to fatigue and over exercise. Whether this trouble has assumed the same character as the original disease, and what his present situation is, I am unable to say, as he resides at a distance from the city and I have not seen him since he left the hospital.

I have noticed these two cases, because it is not long since this peculiar affection of the knee-joint was first described, and because it is not yet well understood. My own experience in relation to it would lead me to believe that it is not so malignant in its character as it has usually been supposed to be, and that if amputation be performed before severe constitutional symptoms appear, the life of the patient will oftentimes be preserved.

CATARACT.

Cases of disease of the eye are not numerous at the hospital, and no doubt will become less so, as the means of that excellent institution, the Massachusetts Charitable Eye Infirmary, are more enlarged. We had but one patient with cataract during the year. He had amaurosis in one eye, attended with complete loss of vision, and a cataract in the other, which came on in consequence of an injury. This eye was also slightly amaurotic, and the sensibility of the iris was somewhat impaired. His sight was only sufficient to enable him to distinguish the light, and opaque bodies when they passed between him and the light.

I operated twice on this patient, dividing the cataract and capsule, and leaving them to be dissolved. The first operation gave him some degree of vision, but finding, after waiting three months, that portions of the capsule and the cataract still remained, I operated again, and the solution went on more rapidly. Neither operation was followed by much inflammation. When he left the hospital his sight was so much improved that he could distinguish objects and walk about without assistance. There was rea-

son to believe that a greater improvement would take place, as absorption was still going on, and I have since learnt that this is the case.

FISSURE OF THE RECTUM.

There is, perhaps, no surgical operation that affords so much relief as that for fissure of the rectum, and there is hardly any disease that is more painful. It consists in a superficial ulceration of the rectum, sometimes extensive, but more often narrow, and rarely more than an inch in length. It is found more frequently on the sides and posterior part of the gut, than on the anterior; it extends down to the sphincter, and can usually be brought into view, if the patient strains down. When this cannot be done, it can be felt by introducing the finger, though this is attended with great pain.

The greatest suffering is experienced at the time of defecation, and it is then often so severe that the patients are obliged to lie down for some time after. The pain is attributed by Dupuytren to a spasmodic contraction of the sphincter; this seems probable from the relief that the division of the sphincter gives in these cases before the ulcer heals; and from the fact that the same train of symptoms is sometimes met with when no ulceration can be detected. There is reason to think, too, that there is nothing peculiar in the character of the ulcer, as it usually heals so readily after the operation; and this circumstance favours the opinion that it is often the result of mechanical violence, produced sometimes by hardened feces, and at others by strong efforts made in parturition. It is very certain that it is more frequent in females than in males, and more common in those females who have borne children than in those who have not.

This complaint is aggravated by cathartics, and though anodyne enemata afford some relief, I have not found anything but the operation sufficient for the cure. This consists in dividing the sphincter, either by cutting from within outwards, or from without inwards, carrying the incision, if practicable, through the centre of the ulcer. The method from without inwards I should think was to be preferred, as you can, in this way, by passing the finger into the rectum and cutting upon it, limit more precisely the incision, than when you cut from within outwards. The dressing and treatment are the same as after the operation for fistula in ano.

The patient on whom I operated at the hospital was a healthy man of thirty-seven years of age. The difficulty had existed about four months, and was always greatest when the bowels were constipated. The trouble was steadily increasing; the pain was extreme after every defecation, and his sufferings were so great as to unfit him for his ordinary duties. In all other respects his health was good.

On examination I found just within the margin of the anus, towards the sacrum, a narrow ulcer, an inch or more in length, quite tender and painful to the touch. The bowels having been emptied by an enema, the operation was performed in the following way:—The fore-finger of the left hand having been introduced into the rectum, a spear-pointed scalpel was thrust in outside of the sphincter, till it reached the point of the finger, thus including the sphincter between the edge of the scalpel and the finger. Both were then simultaneously withdrawn, the scalpel cutting its way through the fissure. Lint was introduced between the lips of the wound, and a compress and a T bandage completed the dressing. For two or three days he had slight spasms about the anus, which were relieved by anodyne fomentations. But after this period he had no trouble; his defections gave him no pain, though the ulcer was not healed, and he was discharged from the hospital "well," in fourteen days after the operation, in all respects able to resume his ordinary avocations.

HERNIA—INGUINAL, AND FEMORAL.

There was, strictly speaking, no operation at the hospital during the year, for inguinal hernia; the case which was entered as such by the house-surgeon has already been spoken of in the remarks on inflammation of the hernial sac. In almost all the important particulars the operation there noticed resembled that for strangulated inguinal hernia; but it will be recollected, no doubt, that the sac was found to be much thickened, empty, and gangrenous; that it was removed, and the patient recovered.

The operation for strangulated femoral hernia was performed on an unmarried female 35 years of age. She first discovered the hernia three years ago, and in a year after it became strangulated, and was reduced by the taxis. From that time she had worn a truss, but this had not always prevented the hernia from descending.

About half-past eight o'clock on the morning of the operation, while coughing violently, the hernia came down and became strangulated. She had medical aid at 11 o'clock, and I first saw her at 1, P.M.; as the taxis had been ineffectually tried I advised, before further attempts, venesection and the tobacco glyster. These having been used, I saw her again at 3 o'clock, and made another attempt at reduction. This not succeeding, she was removed to the hospital, and the operation was performed at four o'clock.

This was done in the way recommended by Sir A. Cooper. Two incisions were made, one across the tumour, and the other at right angles to it, in the form of the letter T inverted, J. The sac contained about two inches of small intestine, no omentum. The stricture was so firm that though strangulation

had existed but seven hours and a half, the intestine was almost black, but not gangrenous. As soon as the stricture was divided and the bowel returned, she was much relieved. The operation gave her but little pain, but her sufferings had been intense during the whole time the strangulation existed. The bowels were freely evacuated by two ounces of the solution of salts, which were given a few hours after the operation, and the patient ultimately did well, though her convalescence was tedious.

This case would not have been noticed, had it not been for a peculiar circumstance connected with it. She was menstruating at the time of the operation; this discharge was then suddenly suppressed, and did not reappear for some months. Though everything connected with the hernia did well, the wound healed kindly, and the bowels were either open spontaneously or easily moved by gentle laxatives, she was feeble for a long time, and troubled with a variety of complaints that could not readily be explained, though they were probably in some way connected with the sudden suppression of the catamenia.

There was a morbid condition of the mucous membrane of the whole alimentary canal, affecting particularly the mouth and pharynx and rectum, attended with a copious secretion of viscid mucus. She had severe pain by paroxysms in the bladder, vagina, uterus, and about the anus, and though these were relieved by leeches and other means, it was apparent that her sufferings were very great. No sooner would one set of symptoms give way than another, equally distressing, would appear; and this state of things continued, though in a less severe form than at first, for nearly three months, till, in fact, the menstrual evacuation made its appearance. From that time a perceptible, though gradual, improvement in her health took place.

It is certainly not usual for a sudden suppression of the catamenia to produce such grave symptoms, and it can only be explained by supposing either that she was in a morbid state at the time of the strangulation, or that that, together with the operation, might have rendered her unable to resist causes of disease that under ordinary circumstances would have had but little influence.

LIGATURE OF THE FEMORAL ARTERY.

This operation was performed in consequence of secondary hæmorrhage after amputation below the knee. The patient was very feeble, having suffered from the affection of his limb eighteen years; this latterly had assumed a fungoid appearance, and had occasionally bled. It was found, at the time of the operation, that the posterior tibial artery was softened and diseased to such an extent as to render it difficult to secure it. This was at length accomplished,

and the ligature remained on twelve days. It then came off spontaneously, and in twenty-four hours after an arterial hæmorrhage took place. This was arrested by the tourniquet; a second occurred on the following day, the compression having been removed from the artery, and a slight one again in the night. The whole amount of blood lost was inconsiderable, but he was already so much reduced that the loss of any was an injury. It was, therefore, determined to tie the femoral artery, and this was done thirty-six hours after the first hæmorrhage. He lost no blood, and he suffered but little pain in the operation. The wound and stump both healed kindly, and in a few weeks he was discharged, perfectly well, from the hospital.

ASPHYXIA FROM DROWNING.

MR. READ'S SUCKER.

To the Editor of THE LANCET.

SIR:—In a late number of THE LANCET I observed a communication from Dr. J. Hancock, relating to, and in praise of, an instrument invented by Mr. Read, which instrument is called an hydraulic respirator; and, as I conceive that Dr. Hancock's recommendation is founded on incorrect data, directly opposed to the most common principles of mechanics, I could not resist a desire of explaining why I consider the instrument in question positively injurious as a means of removing "mucus and foul air from the air-tubes," and negatively so, by preventing the adoption of those means best calculated for the restoration of the patient—means which were conceived on sound theoretical principles—the correctness of which has been amply proved by subsequent practice. It is true there is very much to desire in the treatment of asphyxia, let it arise from what cause it may, particularly so long as the opinion prevails that an individual may be recovered after a *continued* submersion of twenty or thirty minutes, and even a longer period.

But to the question—Is Mr. Read's instrument calculated to fulfil the indications of Dr. Hancock and the inventor? I grant it may, as far as regards supplying the place of the stomach-pump and enema-syringe, but I do not believe it superior to those instruments, the former of which may be made to act in either capacity; and it may be made the means of performing artificial respiration, but certainly *not* on the principle stated by Dr. Hancock, viz., by *first* exhausting the lungs, and then allowing them to fill again by the *natural pressure* of the atmosphere. Dr. H. observes, "a stroke or two of the piston exhausts the lungs, and immediately the air flows in from the natural pressure of the atmosphere." Now I have

been a good deal puzzled with this sentence, and cannot imagine how the lungs could be filled with air, merely by the pressure of the atmosphere, taking it for granted that the instrument had previously exhausted them, which I deny its power to do.

I have always believed that in performing artificial respiration the lungs were filled in opposition to the pressure of the atmosphere, except on a part not calculated to offer any obstruction to its passage into, or out of, the chest; and were it not for the elasticity of the ribs, it would be impossible that the lungs could be filled in this way. Again, is not the pressure of the atmosphere exerted, in an equal degree, upon the entire surface of the body? and bearing this fact in mind, it will require a tolerable stretch of the imagination to conceive that the air would enter the chest in opposition to the tenfold pressure exerted upon its surface. On similar grounds I deny the power of the instrument to remove "mucus and foul air from the air-tubes," or of any human being, by sucking, however "strongly," the *nose* of a drowned person; unless there is an artificial opening made into the lungs, forming a second communication with the external air, when, indeed, this "desirable operation" may *possibly* be performed successfully; but I much doubt whether any one would like to *prove* that he possessed the hardihood to adopt my modification (I won't dare to say *improvement*) of this *new* operation.

I cannot understand how a man, even one gifted with the most exquisite and unusual *sucking power*, could make that power exert its influence beyond the mouth and pharynx; and I believe that to extract "mucus from the air-tubes" by such method is physically impossible. If any one can *possibly* doubt the correctness of my reasoning, I beg to advise him to put the operation to the *test*, and if, after a *fair trial*, he is convinced that he has obtained more mucus than existed in the nasal cavity, I will confess myself, with peculiar pleasure, a convert to such belief, being always willing to adopt an opinion *practically* sustained.

I wish also to express an opinion, being rather sceptical on this point, that the case of "Henry Price," noticed by Mr. Read in the public prints, and mentioned by him to Dr. Hancock, is like the majority of cases noticed in public prints, viz., a gross exaggeration, or wilful perversion, by some interested or marvellously disposed witness, of the real or presumed facts of the case; and in support of this view I cannot do better than refer those who have read, and those who have not, to Mr. Woolley's communication, published in THE LANCET for 1836-7.

I have reason to believe that in many cases of drowning the fatal termination has resulted from too much, rather than from too little being done. Practitioners are in gene-