I have endeavoured to prove the truth of the proposition by statistical data obtained from the Registrar-General's publications, attested by the returns of the Census Commissioners; but, unfortunately, they do not refer to the same districts and are not based upon exactly the same foundations, so that the data do not correspond. There are, however, some striking points made out. Thus, taking the "England Tables," the mortality in the year 1871 among ministers of religion was 666; of these, 464 lived to be over forty-five years of age, or 69 per cent. Taking the number of deaths among gardeners—men much exposed to vicissitudes of climate—1,949 died; and of these, 1,335, or 68.2 per cent., lived more than forty-five years. Then, passing to the other end of the death-roll, I find, out of 725 brewers who died in the same year, 294, or 41 per cent., only reached the age of forty-five; and of 2,728 publicans and eating-house keepers who died, 49 per cent., or 1,330, were over forty-five. These facts show that the occupations which bring men into contact with the sale of alcoholic drinks materially shorten their lives.

When we come to deal with the character of disease which causes death, statistics do not help us. I have waded through an immense mass of figures without satisfactory result; for upon this point statistics prove nothing. A reference to the physiological effect of alcohol will easily explain why this is so. I have shown that its effects may fall upon any one of the excretory organs or upon any part of the nervous system. It follows that a very large number of persons may die from disease induced by a too frequent application to alcoholic drinks without the remotest suspicions in the minds of themselves or their friends that such is the case. Disease of brain, heart, lungs, kidneys, stomach, indeed of every organ of the body, may have its first origin in alcoholic excess, although the person so affected may be a temperate man and have never been drunk in his life. I have, therefore, been reluctantly compelled to put statistics aside. I have also looked carefully into the reports of the National Temperance Hospital, and have compared it with reports of similar institutions in which stimulants are freely used; but as the results, as based upon the reports, are fairly open to objection, I do not use them here. The difficulty of obtaining the life-history of a given case renders all hospital returns unsafe and unsatisfactory as bases upon which to found a basis for the treatment of disease. That temperance does promote length of life is a truism which even the intemperate are ready to grant, although we have not much statistical proof of its soundness. I may, however, support my statement by a return which has been kindly given me by a director of the Temperance Provident Life Office; being a statement of mortality from 1866 to 1877. The insured lives are divided into two sections: teetotal and general. The temperance section gives, as the result of twelve years' working, 1,619 claims expected, the actual number being 1,156; whilst in the general section, 2,846 claims were expected, 2,807 were made. The claims in the temperance section were 28.5 below the expectation, whilst in the general section they were 1.4 per cent. below only. This return is a clear proof of the commercial value of abstinence.

In concluding my subject, I have only to remark that alcohol in any of its forms may be a good medicine, but is a bad diet, and that its action as a poison is visible among all ranks of society. It is our duty as medical men to advise our patients accordingly.

WORCESTER.—The estimated population in 1877 was 34,626; the deaths 865; and the death-rate consequently 24.05 per 1,000, and the zymotic death-rate 4.2, which is much in excess of the average, in consequence of the great mortality from measles, scarlatina, and diphtheria. Dr. Strange states that he has inspected the whole of the district during the year, and especially the poorer houses; and finds a great improvement in their sanitary condition as compared with former years, as roofs have been made watertight, yards better paved and drained, and the interior of the houses is more cleanly. Articles of food were analysed, and found to be fairly good; the mortuary is finished; and the removal of nuisances has been fairly carried out.

CREWE.—Dr. Lord reports that a special inquiry was made during the year as to the sanitary condition of the workshops, lodging-houses, bakehouses, slaughter-houses, piggeries, etc.; and fifty-six notices to abate nuisances on these premises were consequently served. The water-supply is good, most of the sewers ventilated, and the streets kept clean; but he says that the ash-pits are a great nuisance. The birth-rate was 37.5 and the death-rate only 14.1 per 1,000 living, against 15 in 1876. Dr. Lord, however, is not satisfied, as there were nearly 50 per cent. of deaths under five years of age. The chief mortality from zymotic diseases was caused by scarlet fever, and the next by typhoid, viz., eleven; but no special cause is given for these deaths.

CLINICAL LECTURE

ON

AMPUTATION AT THE HIP-JOINT:

CASE ILLUSTRATING A NEW METHOD OF COMPRESSING THE COMMON ILIAC ARTERY.

By RICHARD DAVY, M.B., F.R.C.S.,
Surgeon to the Westminster Hospital.

GENTLEMEN,—I shall endeavour to-day to engage your attention on the gravest amputation in surgery, viz., that at a hip-joint. For the practical elucidation of this lecture, I will read the notes of the boy's case who is now in this theatre; next I will describe in detail the method of operating; and will lastly carry out the whole procedure on the dead body.

C. C., aged 9, school-boy, was admitted into Mark Ward on July 10th, 1876, suffering from morbus coxæ (femoral and acetabular) on the right side. In 1874, he had two severe falls, one especially from a cliff near Yarmouth; pain in the right hip and lameness set in at once. Some months afterwards, swelling and puffiness were noticed over the right hip; the abscess, however, did not open over the articulation, but burrowed along the adductor group of muscles; and, in June 1875, a sinus formed at the junction of the middle and lower third of the thigh. Suppuration was watery and profuse; the limb became everted and drawn up towards the abdomen. He was admitted because alarm had arisen from his emaciation. From July 1876 until January 1877, he was kept in the recumbent posture; had a most generous diet and quinine; rest to the joint was maintained; and at times he was slung in the open air in a hammock. The boy was so surely losing ground that, on consultation, it was agreed to remove the right thigh at the hip-joint.

Method of Operating.—In all severe amputations, one of the first considerations of the surgeon is to anticipate shock and to prevent the loss of blood. I am inclined to permit any patient to have a glass of wine or brandy and water about one hour before the operation; the result partakes more of a sedative than stimulating character; apprehension is lessened; cardiac tone is gained; fitness for the ordeal is exhibited. The American surgeons, with their characteristic ingenuity, devised pressure on the abdominal aorta for hæmostatic ends during amputations high up towards the pelvis. Lister arranged a horse-shoe clamp and screw-pad for compressing the aorta above the umbilicus. I saw this mechanism (1860) used in Symes's brilliant operation on gluteal aneurism at the Royal Infirmary, Edinburgh; but in 1874, during the delivery of the Surgical Lectures at the College of Surgeons in London by Professor Holmes, I drew the lecturer's attention to the possibility of controlling the aorta, common iliacs, and internal iliacs by pressure through the rectal wall, and wrote the following note to the BRITISH MEDICAL JOURNAL.

"June 20th, 1874.—*Compression of the Internal Iliac Artery.*—Sir, —Mr. Holmes, in his lecture on Gluteal Aneurism at the Royal College of Surgeons, June 8th, mentioned the late Mr. Symes's case, treated by boldly laying open the sac, and restraining the hæmorrhage by Lister's aortic clamp. It may be well to draw surgical attention to the fact that the internal iliac artery may be effectually compressed for a time by pressure through the rectum on the true pelvic wall; a less serious procedure than compression of the aorta through the abdominal wall.—I am, etc.,
RICHARD DAVY."

On January 16th, 1877, this case presented a fair opportunity for testing the suggestion. The right leg and thigh were emptied partially of blood by Eschsch's bandage. Chloroform was administered, and about one fluid ounce of sweet oil was sent up his empty rectum. A straight lever of wood (run smooth and round out of a lathe) was introduced *per rectum*; the small end was applied over the right common iliac artery between the lumbar bodies and psoas magnus muscle; the projecting part of the lever ran nearly parallel to the left thigh.

My colleague Mr. Thomas Bond readily compressed the common iliac artery by elevating the projecting arm of the lever, the perineal tissues acting as a fulcrum. Accordingly, as Mr. Bond elevated or depressed the lever, so did the right femoral artery cease or continue to pulsate. The left femoral was undisturbed, beating with regularity throughout. A long square anterior flap was made by transfixion over the joint; the muscles and capsule were divided, and a short posterior cut severed the limb. The arteries were tied, sutures in-

serted, and the boy placed in bed. About a wineglassful of blood only was lost.

January 30th.—The stitches were removed.

February 3rd.—The ligatures were removed.

May 16th.—He was discharged convalescent. Three sinuses were together weeping half an ounce of pus *per diem*. The boy looked fresh and well.

February 15th, 1878.—The boy says now that he is quite well; two sinuses are discharging a little, and that little is becoming less every day. He gains weight and flesh.

My finger in the acetabulum readily entered his pelvis during the operation; a loose piece of bone was removed; and this pelvic mischief accounts, in my opinion, for the yet present sinuses.

Fig. 1.—The rectum is supposed to be transparent. 1. Psoas magnus muscle; 2. Iliac muscle and exterior cutaneous nerve; 3. Genito-crural nerve; 4. External iliac artery; 5. External iliac vein; 6. Bladder.

In this operation, I have demonstrated that surgeons possess a new method of controlling hæmorrhage; and as an amputation at the hip-joint must ever represent a grievous loss of tissue, any amelioration in its performance must be welcome to the surgeon and the patient. I venture to say that compression of the iliac artery *per rectum* is less serious than compression of the aorta through the abdominal wall; that the former is more *easy and reliable* than the latter, a straight smooth lever alone being required; that the circulatory system is far less disturbed, by reason of the circulation in the opposite limb remaining undisturbed; and no danger results to the rectum from the lever if guided by the hand of an expert surgeon.

[Mr. Richard Davy concluded by demonstrating the operative details on the dead body; and suggested that this new method of compressing the aorta and iliacs might apply to many operations in pelvic surgery.]

M. RICHET has, he considers, demonstrated that the gastric juice is a combination of hydrochloric acid with tyrosine and leucine. M. Richet's researches bear especially upon the nature of the albuminoid substances in combination with the acid.

CLINICAL LECTURE

ON ANTISEPTIC OSTEOTOMY FOR ANKYLOSIS AND DEFORMITY.

By RICHARD BARWELL, F.R.C.S.,
Surgeon to Charing Cross Hospital.

GENTLEMEN,—Some months ago, I spoke to you concerning the value and use of osteotomy in cases of ankylosis of the knee. I mentioned why, in most cases of true ankylosis at that joint, it would very nearly always be found a most efficient substitute for the more severe operation of excising a wedge of bone from the angle. One of the cases brought to your notice in that lecture, was one of true or bony, the other one of false or fibrous, ankylosis. I now show you a third. A. T., aged 14, also a case of false ankylosis, upon whom I performed osteotomy of the femur very close to the knee, and who has now, you see, a quite sufficiently straight limb, with which he walks very well indeed; the better, too, for possessing a slight amount of mobility at the point of ankylosis. Now, before we go on to another sort of deformity, to which I more especially wish to direct your attention, allow me to say a few words concerning this operation in falsely ankylosed knee-joints. There are very many cases of this sort, in which stretching the fibrous bond with a certain degree of force is the best possible treatment. You have seen me do this a great many times so as to procure a very useful and mobile limb. But there are other cases, like these two, R. B. and A. T., in which the surgeon finds one of two impediments. One is produced by extreme and invincible shortening of the posterior crucial ligament, which causes, if the surgeon wrongfully persevere, posterior luxation of the tibia, partial or total, while extension is produced; the other obstacle only arises when the joint has been more disorganised than in the above event, so that throughout what was its whole, or nearly its whole area, fibrous or fibro-cartilaginous bonds unite the bones. If these bonds be fairly long, the knee may simply be put straight by manual power; but if they be short, and if the shape of the joint-surfaces be much altered, considerable force will be necessary, and this force is in such cases extremely likely so to rend the union that a knee movable in all directions—a flail-joint as it is called—will result. This joint on the knee is very useless, or worse. Therefore when, the patient being narcotised, the surgeon meets with such difficulty, that either one or the other of these misfortunes appears imminent, it is wise to abstain from further effort, and to divide the femur as close as he can to its lower end, either then or on some future occasion. The result will be a rapid and safe convalescence, and an extremely good limb quite sufficiently straight and with a certain, perhaps a very useful, amount of mobility at the knee. Thus much I have felt it right to add to the subject of my former lecture. We will now turn to another class of deformity.

Rickets produces certain curves of the bones which, if they persist, are extremely ugly and detrimental. I say if they persist, because it is desirable to guard against the notion that I would advocate operative interference during early childhood, or while there is a fair chance of spontaneous recovery—for a certain number of young people do recover even from pretty severe distortion of the bones, if they can be placed in the best circumstances for such cure to take place. But a large number of such children, especially after a certain age, do not recover, but must remain permanently distorted, unless operative surgery intervene. The cases which I will show you immediately are not the first cases of rickety distortions remedied by surgery, though one of them offers the largest results hitherto attained or attempted. In 1861, Billroth operated on a bent tibia, and has since repeated the procedure (Langenbeck's *Archiv*, vol. i, p. 677); and, in 1874, Mr. Howard Marsh published in the *Medico-Chirurgical Transactions* three cases in which he had partially divided the tibia with the saw and had fractured the fibula, and one case in which he had removed from the tibia a wedge-shaped piece of bone, a very severe operation unlikely to be repeated.

A few words concerning the *rationale* of the method which I practice may be desirable. My mode of carrying it out you have witnessed. It will be seen at once that, if a bone abnormally bent be