the departure of the latter from the island, became shorn of its beams, and Hygeia was overshadowed by a cloud. Before the end of the year "fever of a severe bilious remittent type became prevalent," and three cases proved fatal. In 1874, there were 221 cases admitted under the head of fevers, and "most of these cases were complicated with enteric symptoms, in many cases severe."

Now, *why was the 29th regiment so exceptionally fortunate?* I think that anyone who has studied the medical history of European regiments in the West Indies, will admit that this question deserves to be italicised. For a more or less complete answer to it I must refer to papers of mine in the *Lancet* for 1880, volume 1, page 560 and 599. Here, I will notice only one point. Whilst other regiments had been sent to the West Indies from more or less debilitating climates, such as Gibraltar, Malta, or Bermuda, the 29th was sent from a very healthy and invigorating command, from Canada, where, for nearly two years and a half, it had been laying in a stock of disease-repelling vigour. Two years in such a climate must impart to the human economy a resisting power against morbid forces, very different from that to be gained by a residence of the same period in Malta.

I do not, of course, mean for a moment to insist that a regiment sent from Malta to the West Indies must suffer; or that a regiment sent from such a climate as Canada cannot suffer; but, I desire to strengthen the idea that a very important factor in estimating the effects of deteriorating or of lethal influences on any regiment, is a consideration of the hygienic characters of the place from which it comes; and, believing this, I hold there is much to be thought of before sending a regiment from Malta to Barbadoes to take the place of one removed therefrom in consequence of an outbreak of yellow fever.

Whether the few facts I have brought together, and the remarks which I have made, will convey to other minds the impression produced on my own, I cannot say; but the end which I have in view will certainly not be attained, if they are found wanting in suggestiveness.

POISONING BY CHROMATE OF LEAD IN WEAVERS.

By ROBERT C. SMITH, M.D.,

Bachelor of Science in Public Health, Univ. Edin., Manchester.

ON February 12th, 1881, Mrs. B., aged 30, a weaver in a cotton-mill, came to me for advice and treatment. She had been unable to follow her work for the previous six weeks, and was suffering from great weakness, wandering pains in her limbs, and anæmia. Her gums showed well-marked signs of lead-poisoning. There was no albumen in her urine. She attributed her illness to the inhalation of a yellow dust that was given up from the yarn in the process of weaving an orange-coloured cloth. She had always enjoyed good health before being employed at this class of goods. She gave, as a reason, that it was the coloured dust (lead dichromate) which had made her ill; that her fellow-workers, when engaged at the same kind of work, sooner or later sickened; and that there were many others at home ill from the same cause.

Mary C., also a weaver at the same mill, applied for advice a few days after Mrs. B.; and had, like her, been engaged as a weaver of orange yarn. The blue line was very distinct. Her breath was offensive, and the skin and conjunctivæ were of a distinctly yellow colour. There was no albumen nor bile in the urine; nor had she any tenderness over the liver. She suffered from tormina and wandering pains over the body, and was very costive. Under treatment, the yellowness of skin passed away; but the blue line remained long after other symptoms of lead-poisoning had disappeared.

Jane C., sister of the above, was visited by me at her own home on the same day. I found her also affected with lead-poisoning. She appeared at first sight to be suffering from an acute attack of jaundice: her skin and conjunctivæ were intensely yellow in colour. There was obstinate sickness, and purging of dark sap-green motions (probably stained with chromium oxide). The urine contained albumen and a trace of chromium, but no bile nor lead. This patient recovered with great difficulty—the staining of the tissues, sickness, and purging ceasing first, but the blue line is still yet present.

The above are types of cases that were of constant occurrence, about nine months ago, in the practices of medical men in the neighbourhood of the mill in question. I had eight patients at once from the same mill under treatment for this form of lead-poisoning. Another medical man has had twenty, and a third has had from thirty to forty similar cases in all under observation. One of the mill-hands, under the care of a fourth medical man, dying from lead-poisoning, an inquest was held, when, at the *post mortem* examination, this gentleman found distinct traces of lead in the liver. Public opinion having been drawn

to the dangerous nature of the work, pressure was brought to bear on the employers, who have since then caused the yarn to be more carefully dyed and prepared before being woven. They have also insisted on the winders and weavers wearing a muslin respirator over the mouth and nose, when at work; and the use of hooks to thread the shuttle, instead of sucking the web through its eye with the mouth, under a penalty. By these precautions having been rigorously carried out, the operatives, though still weaving chromes, no longer suffer from lead-poisoning.

In the cases which I have observed, the yellowness of the skin is the first symptom to disappear, and the blue gums the last; and chromium is found in the urine, and probably in the fæces. I therefore conclude that, after absorption, the dichromate undergoes decomposition within the blood; the lead being fixed in the tissue, whilst the chromic acid combines most probably with soda—a compound which is intensely yellow, and stains the liquor sanguinis and skin for a time; and, finally, leaves the body by the liver and kidneys.

OVARIOTOMY IN GENERAL HOSPITALS.

By JAMES E. ADAMS, F.R.C.S.,

Surgeon to the London Hospital.

THE desirability of performing ovariectomy in general hospitals must be admitted to be a matter requiring some consideration, seeing that there are some surgeons, my colleague Mr. Hutchinson in particular, who think it better to send all patients requiring this operation to special hospitals; and this opinion is mainly based on the improving statistics of the practice of those who have made this operation a specialty, and through whose praiseworthy efforts the operation has become one of the most brilliant in surgery. There are, however, many reasons against declining to do this operation in ordinary hospitals, especially where there are large schools; and I hope to be able to show that patients operated on by us do just as well, and show as good an average as those dealt with by others. What reasons are there against it? Is it because we cannot have a sufficiently pure air, pure dressers, nurses, and materials? I aver that—by complete disinfection, isolation, Listerian methods of operating, careful selection of specially trained nurses, rigorous exclusion of all sponges and dressings not absolutely new and carbolicised—we can place our patients in conditions just as favourable as in any special hospital. If we could not, we ought to abstain from opening the peritoneal cavity at all, and decline all kinds of abdominal section. Do we lack the necessary manipulative skill or knowledge in dealing with difficulties? As to the former, the hands of any skilled operating surgeon should be good enough for the work; and to assume that we lack the latter, is paying a poor compliment to the lucidity of the various writers who have so carefully recorded and published such large masses of evidence as are now before us. My view is, that the specialists have given us the means of learning, and that it is the duty of surgeons in large hospital practice to acquire knowledge and to diffuse it. Nevertheless, I would not advise any patient to undergo any operation in my wards, if I thought it could be done with less risk in a special hospital; but this is the very thing which I do not believe; and I undertook my ovariectomies with the firm conviction that the preventable causes of danger or death could be as thoroughly eliminated in the London Hospital as elsewhere. I can only adduce the facts that occur in my own practice, and they are very few in number; but, so long as the belief holds that ovariectomy is not safe in a general hospital, the opportunities for extending our experience and enlarging our statistical tables are not likely to be frequent. Of five ovariectomies (properly so-called), including one woman aged sixty-one, where there were numerous adhesions, all recovered. There were two cases, besides, in which an operation was undertaken with a full knowledge of the probable difficulties and dangers, which terminated fatally; one being a soft solid malignant tumour involving the peritoneum, and the other a large succulent fibroid attached to the fundus of the uterus. The statistics, including the cases of my colleagues, extend back as far as 1878, and show a mortality of 23 per cent.; and even this, though including one or two very unfavourable cases, will bear comparison with some of the numerous series lately published. No one is more gratefully appreciative of the results obtained by, and the means of acquiring information given by, the masters and pioneers in this branch than myself, and I have no desire to acquire a special reputation as an ovariectomist; but I should like to show, if possible, that it is not only justifiable, but desirable, to perform these operations in those hospitals where patients seek relief in the first instance, instead of having to banish them to a distant institution. My argument, if I have made myself clear, is not in the direction of bold-

ness or rashness, but in that of increased caution, combined with an earnest desire that we should avail ourselves of the means of knowledge placed before us.

My cases were all treated on Listerian principles, the pedicles trans-fixed and tied with carbolised silk, and enclosed within the abdominal cavity.

PERINEAL CURVE AXIS-TRACTION FORCEPS.

By S. MACVIE, M.B., C.M., CHIRNSIDE, N.B.

RECENT attempts to obtain the advantages of axis-traction in forceps operations have resulted in contrivances so cumbrous as little likely to be adopted by the main body of the profession. I am, therefore, induced to describe a modification of the double curved forceps for the attainment of the same object, which I have lately successfully employed, and which has the merit of simplicity to recommend it. This modification does away with the necessity for traction-rods and all other extra aids; and consists simply in the addition of a perineal curve to the ordinary double curved forceps.

Taking Simpson's "intermediate" forceps to work upon, I have added about two inches to the length of the stem of the blades, that is, of the part intervening between the commencement of the cranial curve and the lock. This additional length I have so bent that, with the blade *in situ*, it shall curve round the fourchette and pass backwards over the perinæum until it touches a line prolonged downwards through the traction axis of the blades. At this point, I have again bent the stem, so that the remaining part of the added length and the handle thereon shall continue in the traction axis line.

Such is the modification. Briefly, I have neutralised the pelvic curve by the addition of a perineal curve, so that the focus of resistance lies in the line of traction; and the instrument, in this respect, becomes practically a straight forceps. Nor is this advantage obtained at any cost, except the addition of one-and-a-half inches to the total length of the instrument. The "perineal curve" simply re-confers the power of axis traction which was sacrificed by the adoption of the pelvic curve, and without limiting the range of applicability bestowed by the latter. Therefore in the ordinary "intermediate" forceps, thus modified, we have an instrument of the widest utility, endowed with the power of axis traction; suitable wherever forceps are required, except where the obstruction is exceedingly high; and neither unhandy in the simplest nor inefficient in the most difficult cases. This modification is also valuable since it is equally applicable to the "long" forceps, and, moreover, it deprives the short straight forceps of the single superiority it possesses.

I do not pause to contrast in detail the merits of the "perineal curve" with other contrivances for the same purpose. In principle, they are identical. But in efficiency the former is fully equal to the latter; while for handiness and simplicity it is much superior. But I may mention a few particulars in which my experience shows that it excels the instrument out of which it has grown.

1. With the tip of the blade directly in the line of the handle, its introduction is easier and its adaptation more precise.

2. When the under (posterior) blade is introduced first, the handle lies far behind the fourchette, and entirely out of the way of the introduction of the upper blade.

3. For the same reason, the operator is less interfered with by the patient's thighs, both while introducing the blades, and during the extraction of the head; and suffers less loss of power from the handles projecting far in front when the head is passing under the pubic arch. In fact, from first to last, the operator occupies a more commanding position.

4. The lock, being well behind the fourchette, cannot possibly inflict any injury upon the soft parts during the adjustment of the handles.

5. The instrument, being practically straight, is capable, when the head has fully entered the pelvis, of aiding the movement of rotation. This is an advantage afforded by no other instrument whatever at such an early stage.

6. Lastly, and mainly, it confers all the advantages of axis-traction. These need not be enumerated. But it may be permitted to say, that it does so with the slightest departure from the simplicity of the instruments in common use; and with no departure whatever from the manipulative procedure at present practised.

Messrs. Young and Sons, North Bridge, Edinburgh, are the makers.

DR. J. E. A. BALL, of Biard, Texas, reports, in an American contemporary, the case of a negro woman who gave birth to a child at the age of sixty. The age of the mother was authenticated by the record of her birth, in possession of her former owner.

ON A CASE OF ECTROPION SUCCESSFULLY TREATED BY TRANSPLANTATION OF SKIN FROM THE ARM.

By LOUIS H. TOSSWILL, M.B.,
Surgeon to the West of England Eye Infirmary at Exeter.

At a meeting of the South-Western Branch of the Association held at Exeter on October 5th, 1881, I showed a patient from whose arm and forearm I had removed large pieces of skin on July 28th, 1881, transplanting them to his left upper and lower eyelid respectively. The operation has proved so successful, that I propose to describe the case somewhat in detail; and I have the more reason for doing so, because the operation in question appears to have been but rarely performed in this country.

C. W., a boy, aged 10, was severely burnt about the head and face several years before he came under my care, the result being an amount of disfigurement which exceeded anything that I remembered to have ever seen before. The whole of the left side of the face and forehead presented one uniform surface of dull white cicatricial tissue; the outer two-thirds of the left upper lid was much everted, even when the boy looked straight in front of him. The edge of the upper lid was dragged up close to the margin of the brow, against which the lashes rested, with their points directed upwards; and when the boy attempted to close his eye, or to look downwards, the eversion became still more marked. There was considerable corneitis with opacity present in the left eye, due in part probably to the eyeball remaining uncovered during sleep, so that he appeared to be staring at anyone standing by his bedside. The position of the edge of the left lower lid was shown by a row of lashes, apparently growing from the cheek, an inch or so below the eyeball, and the mucous membrane was to a considerable extent replaced by what could not be distinguished from ordinary skin. Over this surface the tears were continually flowing, and had produced an excoriation. In addition, the almost complete eversion of the lower lip, over which the saliva was constantly running, the right eye with an opaque and staphyломatous cornea (sight quite lost), and a considerable ectropion of the right lower lid, produced an amount of deformity which was certainly unusual in its extent. As the dense cicatricial tissue extended over the whole of the left side of the face, and along the forehead to the outer side of the right eye, and also partly involved the right side of the nose, and the skin immediately beneath the right lower lid, there was no healthy skin available for the formation of a flap, whether sliding or otherwise, and it appeared to me that there was only one operation which presented even the very faintest hope of success. The boy being placed under chloroform, I made an incision parallel with the edge of the left upper lid, as shown by the row of lashes mentioned before, and about a quarter of an inch above it, and dissected the remains of the lid well down over the eyeball. I then made a similar incision just below the edge of the lower lid, as evidenced by the lashes growing from the cheek, and dissected up the remains of the lid, until the two lids thus formed could be easily approximated, leaving a large raw surface above and below the eye, from which the bleeding was so free, that one or two small arteries had to be twisted. I then pared slightly the edge of each lid, and united them with two or three strong silk sutures; next, I cut off from his right arm, with a sharp triangular knife, a semicircular piece of integument, about two and a quarter inches in length, by one and an eighth in breadth, carefully cleaned it from all areolar tissue and fat, and secured it in the gap above the eye by means of four fine silk sutures. The flap for the raw surface beneath the eye was obtained from the forearm, and was about two-thirds as large as the flap from the arm. It was carefully cleaned of areolar tissue like the other, and fastened into its bed by means of five fine silk sutures. Goldbeaters'-skin was placed over both lids, and over this abundance of cotton-wool, which was kept in its place by an ordinary roller bandage. The outer dressings were changed at the end of four days, but the goldbeaters'-skin was not removed until the sixth day, when some of the stitches were removed from the flaps. The remaining sutures were removed two days later. Eleven days after the operation, the stitches which united the lids were removed, and the latter were found to be firmly grown together. On the following day, the lids were separated by means of a bistoury, when the cornea was found to be much improved in appearance. The dressings were gradually left off, but were not entirely discontinued until about a month after the operation.

The graft on the upper lid remains almost exactly the same in size as when first placed in its bed; and even now, four months after the operation,