into leukæmia, lends, I think, support to the view I take. These blood diseases associated with changes in the cytogenic organs, have, as Dr. Pye-Smith has pointed out, much in common with idiopathic anæmia. Many of the symptoms—the frequency of hæmorrhages, irregular pyrexia, their severity and ingravescence, the resistance to preparations of steel, and the more or less marked influence of arsenic, and the almost invariably fatal issue—are common to both.

Thus I consider all cases in which anæmia is not symptomatic should be regarded as idiopathic. The term “idiopathic anæmia” was, as is well known, first employed by Addison for that particular form of anæmia of which he gave such a masterly description. Others besides myself³³ have urged that it should be restricted to the class of cases described by Addison. The progress of our knowledge, however, in my opinion, now renders it advisable to enlarge its meaning so as to embrace all primary anæmias, and to use it as a generic term, including several species. Of these species two are well defined—chlorosis, and the form described by Addison, which has by common consent come to be called “pernicious anæmia,” and which name, I now think, it is useless to oppose. Probably, besides these two species, there are other distinct forms of idiopathic anæmia to which I shall have to allude in subsequent lectures.

ON REMOVAL OF THE UTERUS FOR CANCER.

By THOMAS KEITH, M.D., F.R.C.S.Ed.

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A MARRIED lady, 55 years of age, daughter of perhaps the most well-known provincial surgeon of Ireland, was sent to me by Dr. Smith, of Belfast, in the end of July last. Though never strong, her general health was always good. She lost her only two children in giving birth to them, on account of some narrowness of the pelvic outlet that required instrumental interference. The periods had ceased for four years without any unusual disturbance. Twelve or fourteen months ago, after some fatigue or exertion, she first noticed slight red discharge. This soon developed into a hæmorrhage, which gradually increased in severity. She lost flesh, became anæmic and feeble, and her general health gave way.

There was too easily recognised epithelial disease of the cervix, extending into the cavity of the uterus. As I was just leaving town for a holiday, I destroyed at once the whole of the sprouting bleeding surfaces by potassa fusa. After a few days' rest in bed the patient went north to Forfarshire, in the hope that the bracing air of the Grampians would recruit her failing health. The house was high above the sea level, and the weather was cold and wet. Finding that after three weeks she was losing rather than gaining ground, she returned south to Ramsgate, where her health improved. She looked better, though still feeble, when I saw her again in the last week of September. Though there was no hæmorrhage whatever since the caustic potass was used, it was too evident that the disease had spread during the last two months. The vaginal surface was still untouched. The uterus was high in the pelvis, as is generally the case in stout people, and there was a little narrowness of the outlet. In other respects the local conditions were not unfavourable for extirpation.

After two days' rest, the uterus, which contained a small fibroid, was removed by the vagina. As the uterus was drawn downwards the ligaments were tied in small portions. When possible, catgut ligatures were used, silk only to the upper and firmer part of the broad ligaments, which contained the round ligaments and Fallopian tubes. The ovaries and tubes were quite healthy, and were not interfered with. The large wound into the abdominal cavity was closed by horsehair sutures. No drainage tube was used. Some trouble arose from protrusion of intestine, and some pieces of appendices epiploicæ were always in the way, notwithstanding the presence of several flat sponges. The only anxiety after operation arose from the feebleness of the patient; yet she was up and was moved into another room in sixteen days, and left London on the twentieth day after operation.

³³ *Lancet*, 1878, vol. ii, p. 797.

The first time I performed vaginal hysterectomy for cancer was in the Edinburgh Infirmary in 1881. The same principles guided me then as in the above case, except that I brought down the fundus of a very large uterus through the posterior opening, having first washed away thoroughly a quantity of putrid discharge that had escaped from the uterus into the vagina. This bringing down of the fundus is an unnecessary proceeding. I do not think that it helps the tying of the broad ligaments, and it may be not free from danger. I have not done this again. In this case, from the size of the uterus, the opening was very large, and ten horsehair sutures were needed to close it—one-half this number is generally sufficient. It is nine years since this operation was performed; there has been no symptom of return, and the patient is in the best of health.

I have often wondered why vaginal hysterectomy is so seldom performed in this country. It has for years been a recognised operation in America, in Germany, and in Italy, where it is frequently performed by the galvanic cautery. One reason may be that here it has fallen through between the surgeon and the gynaecologist. I am one of those who believe that we shall ere long see this operation, as well as all other abdominal work, pass into the hands of the regular surgeon, of one whose daily work it is to stop hæmorrhage and close wounds. It was not till ovariectomy was undertaken by a hospital surgeon (then Mr. Wells) that confidence in that operation was established.

The total removal of the uterus for malignant disease must, as a rule, be a better operation than the partial removal of the organ. No one nowadays thinks of removing a bit of a cancerous mamma. To remove as much of the uterus as is possible without opening into the peritoneal cavity, and then to follow up the disease of the cavity by the free use of the cautery, seems to me to be monstrously bad surgery. If the disease be confined to the lips it may be sufficient to stop at the internal os, but even this is not free from some danger. I have again and again opened into the peritoneum in my early efforts, though I have not seen any harm arise from this.

A few weeks ago I saw a lady in whom this accident happened, and on whom I operated nearly ten years ago. She had already been operated on several times before I saw her, and she is one of the few who have kept well. Now, I would never hesitate between the partial and complete removal, for from all we know there may be cancerous nests in the very fundus, even though the disease may seem to the eye quite local and limited. On this point it is refreshing to have the opinions of the German surgeons at the international meeting at Berlin in August last; Martin, Hegar, Olshausen, and many others gave no uncertain sound. Be the method of operation what it may, the great thing is that the principle of operation for total extirpation of a cancerous uterus is now established. There is no difficulty in the operation. It requires care, and there is seldom any trouble in applying the ligatures. There seems to be no reason why it should be attended with a large mortality. Its immediate risks are not great. I have not yet had the misfortune to lose a patient after it.

The two things to be attended to are the careful stopping of all bleeding, and the most rigid antisepsis or cleanliness, as some call it. Drainage is not necessary; indeed, there is little to drain if the wound be carefully closed, and it should be as carefully closed as any other abdominal wound. I prefer strong horsehair to anything I know. These sutures cause no irritation; they may remain in any length of time, and are easily removed. Possibly catgut may be better, but I have had a long experience of horsehair, and am satisfied with it. Many years ago an old medical friend came for me in haste to stitch up a badly torn perineum and rectum in the case of a lady whom he had just delivered by forceps. Some weeks after he called to tell me that she had done well, and was leaving town that afternoon. I asked when he had taken out the stitches; there were seven or eight of them. He had never thought of them, for he supposed I had used catgut sutures. He made some excuse for making an examination before she left, but he found no trace of the sutures, and he has confined her since without accident.

The practice of securing the broad ligaments by strong locking forceps, or even by specially constructed clamps, and

letting these remain on for some days, or till they drop away of themselves, does not commend itself to me as good surgery; neither do I care to use the cautery. The chief risk of this operation arises probably from hæmorrhage, and death from hæmorrhage is not infrequent when the cautery is used. The reason of this is that the action of the cautery must be incomplete, there being no room to apply pressure behind the cauterised parts. The simple way to do this operation is to do it with scissors, to go as wide of the disease as the bladder or ureters will permit, to stop all bleeding and oozing, and to close the wound carefully, uniting peritoneum and all the structures. Some are cured, or die years after of other diseases; and when death does come from a return of the disease, it comes in a milder and less terrible form, generally from some intraperitoneal affection. The misery of the spreading of the disease on to the vagina and outwards, and opening into the bladder and rectum, is generally saved to the patient and her friends.

It need not be added that discrimination in selecting cases for operation is absolutely necessary. Unfortunately, the number who are alarmed in the curable stage is few, for the symptoms of the beginning of cancer of the uterus are unknown to, and are thus overlooked by, the patient. Her attention is rarely drawn to symptoms before the disease is past surgical interference. Operated on at an early stage, uterine disease will show results not much inferior to operations for cancer in other parts of the body.

EXTRACTS FROM AN ADDRESS ON THE PRESENT POSITION OF ANTISEPTIC SURGERY.¹

*Read in the post-graduate course of the University of Toronto,
December 19th, 1890.*

By J. WILLIAM WHITE, M.D.,

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For several years it has been my custom in my lectures at the University of Pennsylvania to pass rapidly over the evidence in support of the antiseptic theory of wound treatment, with the remark that the time for argument had passed, and that it was merely necessary now to present such facts as might serve to make clear the principles involved and to emphasise the enormous benefit that has resulted from the application of those principles to practical surgery.

I also thought that the whole history of the development and establishment of this great theory, while including the admirable labours of hundreds of medical men in all parts of the world, and constituting one of the brightest chapters in the record of human progress, yet centred around the figure of the English-speaking surgeon, whose name was identified with it from its incipency, in whose mind the grand conception first took practical and definite shape, and whose patient, unassuming, conscientious work in elevating his original thought into a working hypothesis and in transforming the latter into a theory of worldwide acceptance, seemed to me to present perhaps the best, and certainly the most important, example of the application of purely scientific methods to practical surgery to be found in the history of the profession.

When, however, a noted surgeon, a successful operator, and a vigorous controversialist undertakes to traverse the whole line of thought and argument upon which my confident acceptance of the theory was founded, denies its basal facts, ridicules its logic, jeers at its methods, challenges its records, and attacks its author and his supporters, it seems to me proper that those of us who are teachers should once more review the evidence, consider the situation, and, according to our conclusions, publicly reaffirm or renounce our faith in the theory and practice of antiseptics.

The antiseptic treatment of wounds might, under Mr. Tait's ruling, be described as a treatment directed against

the causes of putrefaction in wounds; but a more accurate definition expands it, as Mr. Cheyne has suggested, so as to include treatment directed against the cause, not merely of the putrefactive fermentation, but of all fermentations.

The sterility of the blood and tissues is denied by Mr. Tait, who says "the germs exist already in the blood and elsewhere, and are ever present, according to the best authorities." The elaborate and carefully conducted experiments of Hauser,² Watson Cheyne,³ and others completely contradict this statement, which is really the foundation of Mr. Tait's argument. The germ theory of fermentation is undisputed. Fermentation in wounds can, therefore, be prevented by the exclusion of germs; it has been shown microscopically that these can be kept out (asepsis) or can be destroyed (antiseptics); practically, therefore, it only remains to show the effect upon patients with operative or other wounds of excluding or destroying germs to show the value or lack of value of antiseptics and the antiseptic theory. By looking back a few years to the very beginning of the employment of antiseptics we can obtain the most striking and convincing evidence of the effect of treatment directed almost exclusively, though then very imperfectly, against the introduction of bacteria.

The record of the work of Professor Lister may well begin our series of examples. In Glasgow, in 1864, 1865, and 1866, Mr. Lister's mortality in a series of operations of all sorts was 45.7 per cent., largely from septic diseases. About this time he began to employ gradually some antiseptic methods in his treatment of wounds and during operations. In 1867, 1868, and 1869, his mortality fell to 15 per cent. At Edinburgh, having greatly improved the details of his system, we find that from 1871 to 1887 he treated 553 grave surgical cases with a mortality from septic disease of only 0.36 per cent., a diminution in the death-rate which, when we remember that these different results were obtained by the same man operating upon the same class of patients and for the same injuries or diseases, is so striking as to be in itself conclusive. Still later, an opportunity was afforded to compare Mr. Lister's results with those of a colleague, Mr. Spence, working in the same hospital, but declining to employ antiseptic methods. The total results of their major operations showed that Mr. Spence lost just about three patients where Mr. Lister lost one, while the deaths from infective diseases were 2.4 per cent. among Spence's cases, and one-third of 1 per cent. or eight times less among those of Mr. Lister. When we turn to the work of other surgeons, we find evidence, if possible, still more conclusive of the value of these methods. Nussbaum has shown that during forty years in the clinic under his own direction as well as that of his predecessors, among whom was Stromeyer, the deaths from wound diseases were so common that patients with even the slightest injuries often succumbed to them; that erysipelas and abscesses were matters of daily occurrence; that 80 per cent. of all wounds and sores were attacked with hospital gangrene, and that nearly all patients with compound fractures died; and he states that immediately upon the introduction of the antiseptic system, all these diseases vanished; and healing by first intention, previously almost unheard of in his service, became the rule instead of the exception. Professor Volkmann, in an address before the International Medical Congress which met in London in 1881, testified strongly and clearly to the results obtained in his own practice, selecting two subjects especially, compound fractures and major amputations, as evidence of the value in his hands of the antiseptic method. He said that the mortality after compound fracture had, during the long labours of the surgeons who preceded him as well as during his own, reached the sad height of 40 per cent. Immediately before he adopted the antiseptic method of treating wounds, his last twelve patients with compound fracture had all died of pyæmia or septicæmia. From that time up to the period at which he delivered this address he had treated 135 compound fractures without losing a single patient from either of these wound diseases; 133 were cured; 2 died, one of fatty embolism of the lungs during the first few hours, and one, a drunkard, of delirium tremens. As to the amputations, he asserted that he now cured each year by the antiseptic method more cases of amputation of the thigh, for example,

¹ A reply to Mr. Tait's recent criticism of Sir Joseph Lister's Berlin Address. The full text, with tables, will be published in the forthcoming number of the *Annals of Surgery*.

² *Archiv f. experiment. Pathologie und Pharmacol.*, Bd. xx, p. 182.

³ *BRITISH MEDICAL JOURNAL*, March 3rd and 10th, 1888.