the skin, the alimentary canal, and the lungs, and discussed, among other matters, von Behring's and Calmette's views.]

THE CULT OF IODINE AND THE DREAD OF SKIN.

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THE many papers which have lately appeared upon the action of iodine preparations upon skin in the practice of surgeons seem to me to be a reincarnation of the old dread of skin. I have not yet seen evidence that other surgeons have carried the ritual of iodine into the regions which it has invaded in my practice for many years. The end of another year prompts me to record my faith in the cult of iodine evolved unconsciously from the days when "Bryant's sherry," otherwise "diluted tincture of iodine," was in general use with me instead of carbolic acid—1 in 20—which played havoc with my skin, and more than once produced carboloria.

It is over twenty years ago that a German sailor was brought to the Cardiff Infirmary about midnight with a "huge bark" of his shin, caused by the crank-shaft of an engine. The damage had received "first aid" treatment, for "the bark" had been plugged with waste wrung out of oil. The skin of the shin for a few inches below the knee had been stripped up, carrying with it periosteum and ligamentum patellae. The knee-joint had been freely opened, and into it the "first aid" dressing had been introduced.

A large bucketful of "Bryant's sherry" was prepared, and the patient was anaesthetized and turned on his face in order to get the fully flexed knee-joint into the lotion. After thorough cleansing by immersion and mopping, the parts were replaced and the joint put at rest by splinting. Next morning by daylight I was alarmed to find that my hands were discoloured by iodine, showing that the "sherry" was stronger than was usual in my practice; the patient's skin was stained in the same way, and this caused me some anxiety, for I feared "irritation." My fears turned out to be groundless, for the case did well, and my dread of an overdose of the iodine preparation vanished. The man returned some months afterwards with the compliments of a German professor upon the good result obtained by the treatment.

Slowly and by cautious steps I got into the practice of applying the undiluted tincture by means of the eye end of a needle to the redness which often resulted in suture holes before the use of gloves was introduced into my practice in 1898. An account of this appeared in the *BRITISH MEDICAL JOURNAL* in January, 1899, the first paper, I believe, to be published in this country on the subject.

I well remember that in one of the first cases in which I used screws, a case of fractured tibia with displacement due to oblique injury, in private practice in 1896, redness and signs of "irritation" were observed a few days after operation; removal of all sutures with free swabbing of the wound with the tincture gave a happy result, for all went well. From that time until the present tincture of iodine has on and off played an important part in my routine practice in almost every region upon which operations are done, and I will indicate briefly the conditions in which I think it is of great use, because it has a strong action as an antiseptic, and there is little or no tendency to absorption through the lymphatics.

In the Nursery.

In order to minimize the risks of infection during accidents in childhood I kept a stock bottle of tincture of iodine in the nursery in order to have it promptly applied to bruises, "gravel rashes," etc. I gave up carbolic fifteen years ago, because on returning home I often found that there was no visible evidence of its having been applied to the required spot. I therefore substituted the tell-tale iodine, and was often amused to find that in such a case as that of a small scratch upon the front of the knee, iodine had been diligently applied half way up the thigh and down nearly to the ankle—ritual run riot. During the last few years, when visiting many home and foreign clinics, I have been amazed to find that those who

know better than a nursemaid do very much the same thing when they paint mahogany colour the whole of the front of the abdomen and part of the chest in cases of appendectomy!

I will now leave the subject of iodine and skin, and will give illustrations of cases in regional surgery where I feel the use of iodine is indicated, either on account of pre-existing sepsis, or because I feel that there is a possibility of infection in a clean wound—in such cases, for instance, as an accidental tear in a rubber glove, or those in which during an operation upon quiet gall-bladder and appendix troubles septic conditions are found.

Brain Surgery.

In cases of abscess of the brain I always fill the cavity with the pure tincture, and plug with gauze soaked in it. I may cite a case from my friend Mr. Naunton Morgan, F.R.C.S.E., of a large abscess of the frontal lobe which would not heal up satisfactorily until I removed the hernia cerebri with the cautery, and then dealt with the cavity by swabbing it with iodine.

Cerebellar Tumour.

In a case of a large tuberculous tumour which was removed successfully, the cloth which had been in contact with the skin came accidentally in contact with the damaged cerebellum, and in order to render the area less suitable for the growth of organisms, I painted freely with iodine.

Cerebral Tumour.

Last year I removed successfully an extraordinary tumour—a large calcified parathelioma, or endothelioma, from the left lateral ventricle. As I had removed the tumour with a naked finger and thumb dipped in iodine, I afterwards gently swabbed the damaged area of the cortex cerebri with iodine. The wound healed up promptly.

Abdominal Surgery.

In all cases of abscess due to appendicitis I always and immediately apply iodine freely to the surfaces that have been exposed by incision and mopping up of the pus; the result, in my opinion, has been more satisfactory than it used to be before its introduction.

Suppuration of Right and Left Ovarian Cysts.

A woman, who had been very ill with pain and pyrexia for over a week, had a fixed hard tumour occupying the abdomen from about 2 in. above the umbilicus downwards to the pelvis, where on vaginal examination I found an immovable hard vault. The operation had to be done expeditiously, and whilst placing the gauze roll above the tumour to isolate the intestines many ounces of offensive pus welled out through two gangrenous patches on the posterior surface of the cyst right into contact with them. After much serious trouble and difficulty in dissecting the left tumour from Douglas's pouch, uterus and bladder, I was compelled to leave three long haemostatic clamps upon big vessels at the bottom of Douglas's pouch. I then found that there existed a second small suppurating cyst in the right ovary, the size of my fist, attached to the appendix and ascending colon, and this also during its removal burst through one gangrenous patch in the cyst wall. As the peritoneum had been packed, only the pelvis and parietal peritoneum were flooded; after careful and forcible mopping the whole surface and the intestines were dealt with by pouring in about two ounces of iodine and swabbing. The forceps were removed on the second day, and after a little oozing through the opening left the case did well.

Urogenital Surgery.

In several cases of pyonephrosis, some large with pul-taceous material in the calyces, and extending down a dilated ureter, I have been able to get the damaged kidney restored to function without a fistula in the loin. I am much more conservative as regards the removal of kidneys damaged by tubercle or calculus than the majority of surgeons whose practice I have had the privilege of witnessing; I was led to adopt this conservative attitude by two incidents. The one occurred in my practice many years ago: a lady had a large pyonephrosis with creamy contents; when the patient was convalescent with a drain in her side, I told her husband that, in my opinion, it was advisable to remove the kidney. Afterwards he told his wife of my views and we had a further consultation. They

did not accept my advice, which at that time I believe was in accordance with the view of the majority of urogenital surgeons, and perhaps now. The wound in the side healed up firmly, and the patient has remained quite well and has borne several children. This is a significant example of the curability of tubercle in organs which are easily removable, and perhaps too often removed. The other case was that of a practitioner, who removed a kidney that he thought had been irretrievably damaged by calculi; it turned out to be the only kidney the patient possessed.

In all the kidney cases of the above nature I thoroughly and forcibly mop the removable material from the interior of the cavity and wash with iodine.

Urethrotomy.

Since I introduced into my practice the method of injecting tincture of iodine forcibly by a glass syringe half full of air, both before and immediately after performing urethrotomy, I have not been worried with "urethral fever" or other symptoms of septic absorption from the wounded urethral canal.

Prostatectomy.

At the annual meeting of the British Medical Association in Toronto (1906) I advocated the plan of performing prostatectomy in two stages in cases where patients suffered severely from toxæmia, partly on account of the fact that an operation created additional raw surface, through which an additional dose of septic matter took place at once; this, in my opinion, too frequently turned the balance against the patient. Since that time I have given up the operation in two stages (*à deux temps*), because I have improved the technique in the direction of prevention against the immediate absorption from the raw surfaces made at the operation. This is done in the first place by a preliminary injection of an ounce of tincture of iodine into the bladder before distending it with air; by my combined method of performing prostatectomy, which usually takes only a few minutes, I have been able to save several moribund patients since the introduction of the free use of iodine—one was an octogenarian with calcified arteries, which showed almost like stems of "churchwarden" pipes upon the radiographic plate.

Rectal Operations.

After thoroughly mopping the mucous membrane—for example, in operating for hæmorrhoids—I swab the mucous membrane with iodine, and then pass an anchored iodine-soaked mop up the rectum for about six inches. This prevents a possible infection of the field of operation; when the operation is finished the mop is pulled out.

Psoas and Iliac Abscess.

Lastly, I should like to draw attention to the following method of treating psoas or iliac abscesses which have not been previously incised nor broken down spontaneously. After opening the abscess in one or more places, according to the requirements laid down by Treves many years ago, I complete the evacuation of the pus and of the lining membrane in the thorough manner which he advocated. I then flood the whole of the interior of the cavity with tincture of iodine, and then mop it dry; afterwards the whole cavity is plugged firmly with a roll of sterile gauze, and the wound closed by mass sutures. The patient is then swathed in cotton-wool, and bandaged firmly in order to keep pressure from without upon the dressing within. On the second day the mass sutures and the gauze are removed from the cavity, and the wound is closed "in tiers," as in the ordinary operation for hernia.

I have twice performed this operation with success upon double psoas abscesses, but not at one sitting.

Every surgeon suffers more or less from what may be called "the dread of skin," and in my case the cult of iodine has developed to such a degree that I venture to record the way it has almost imperceptibly evolved.

THE Research Defence Society has opened a bureau at 171, Piccadilly (opposite Burlington House), for the exhibition of pictures and specimens and the distribution of literature.

ABERRANT AND RECURRENT OSTEOMYELITIS.

BY

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UNDER the heading of "Acute Epiphysitis," a very instructive article appeared in the JOURNAL of July 20th, 1912, by Mr. Charles M. Kennedy, F.R.C.S., and I venture to publish the notes of three cases occurring in my practice, which support and partly supplement the conclusions arrived at by him. Mr. Kennedy applies the term "acute epiphysitis" to that acute destructive inflammation of the growing end of bones usually due to virulent infection by the staphylococcus. He dislikes the term "osteomyelitis" as applied to that disease, because it is vague, and though admitting that "epiphysitis" is a misnomer, he prefers it on account of its convenience. I prefer the term "osteomyelitis," which, although it covers conditions other than the disease above mentioned, has the merit of being a more exact description of the actual pathological condition. It is the name used by the Glasgow school of surgeons, and favoured particularly by Sir William Macewen, whose work in connexion with the disease is well known. In my opinion "epiphysitis" holds the same relation to "osteomyelitis" that "typhilitis" did to "appendicitis." Both are misnomers, are incorrect, and ought not to be used; the names of medical and surgical diseases should be made to indicate, as nearly as possible, the exact anatomico-pathological condition of the structures involved.

CASE I.

H. M., a boy aged 14 years, came under my notice on February 28th, 1911. He had a rigor two days before, and complained of pain at the upper part of the right thigh, made worse by walking or standing. His temperature was 103° and pulse 120. His face was flushed, the eyes bright, and tongue coated with a dirty white fur. The urine was distinctly albuminous. Physical examination revealed a spot of definite tenderness at the upper part of the thigh just below the middle of Poupart's ligament. Percussion of the outer side of the right trochanter also caused pain in this part. The hip-joint moved freely and without pain in all directions, except for slight adductor spasm when the thigh was abducted. There was no swelling or discoloration of the skin over the painful area. None of the other joints were swollen or painful, and apart from headache he made no complaint of pain in any other part of the body. The heart sounds were quite clear. On the face, chest, and back brownish stains and flat adherent scabs, due to impetigo contagiosa, were discovered. I suspected he was suffering from acute osteomyelitis of the upper part of the right femur, and asked a surgeon to see him in consultation. The latter concurred in my opinion, but, as the local signs were somewhat abating, it was considered advisable to wait and watch how the symptoms progressed. The following day, as the boy's general condition had not improved, the temperature being still 102°, I sent him to the Royal Alexandra Infirmary, Paisley. Owing to the doubtful nature of local signs at the upper part of the right femur, operation was again deferred, but two days after I received a note from the surgeon saying that he had been obliged to operate on the left tibia, where he found about a pint of pus under the periosteum, which was completely stripped from the shaft. No complaint of pain in that region had been made by the boy either before or after entering the hospital, and the condition was only discovered by the surgeon himself in course of his examination. After operation, slight pain continued in the upper part of the thigh, but no further advance of symptoms took place here. The temperature remained at 102°, pulse 112, and signs of pyæmic infection of the lungs occurred, from which death took place about three weeks after admission to hospital.

Mr. Kennedy, in his paper, mentions cases which are admitted to hospital with pyrexial symptoms and a tender spot. These are entered as "epiphysitis," and if they recover, as sometimes happens in a few days without operation, they are then most probably ascribed to mono-articular rheumatism. The case above reported, no doubt, would have been classed as "epiphysitis" of the upper part of the right femur, but the occurrence of definite symptoms of acute osteomyelitis of the tibia of the opposite leg makes it more than probable that there was a primary focus of osteomyelitis in the upper part of the right femur, which although it, in a manner, abated or retrogressed, was undoubtedly responsible for the subsequent infection of the tibia. The simultaneous occurrence of impetigo contagiosa on the skin, when the bone symptoms developed, is a striking illustration of the theory that skin lesions are the chief sites of entry for the organisms (staphylococci) of acute osteomyelitis, and