subject of special study, which it has ever deserved. A good influence thus engendered, and gradually telling upon the general education of the country, will do more than any other thing to promote the improvement of our profession—first, by the better preparation of those who enter it, and, secondly, by the improved methods of teaching in it which are sure to follow; and it will contribute as much as anything to promote the future welfare of our country, and to give to our people that strength of mind and force of character which are more than ever necessary for the maintenance of our position among the nations of the earth. Whether it be in the workshop, on the bourse, in the sick-chamber, in the senate, or on the battle-field, the best educated, most thoughtful, most able persons, must take the lead. A home-striking confirmation of this is being now given in the lesson, which we ought never to have had occasion thus to learn, that English manufacture is being beaten out of the field, not in consequence of any accident or cause which we could not have foreseen, but, in great measure, because the English workmen are less intelligent, less thoughtful, less given to reading, less self-controlling, less provident, than those of some other competing countries. Must not, and ought not, success to be with the nation in which these qualities are most abounding? The question whether the prosperity and influence of Britain are to continue, whether our flag is to rule the waves of the future and for a thousand years to brave the battle and the breeze, must depend upon the education of her people, and not upon the amount, but upon the quality, of that education; that is, upon the mental training which it gives, and the thought-producing power which it evolves. Teachers and examiners are the masters of the world's position; let them feel their power and combine to use it well.

In this far-reaching work our College has an important part to perform, and is answerable to the profession and the country for the manner in which it fulfils it. It has a great inheritance; and, what is far more to the purpose, it has a great influence, and proportionately great responsibility. The wand, more potent than that of the magician, the arch enemy and sure destroyer of all magic—the wand of observation and thought, handed on to us by Hunter, and in turn wielded by Abernethy and Cooper, by Travers and Green, by Brodie, Lawrence, and others—is now in our hands, and with it the future destiny of the surgery of England, the rank which surgery is to take as a science, the degree to which it is to be raised above the level of empiricism. There is no one, Mr. President, I am sure, who more fully appreciates this than yourself; no one who, from the vantage-ground of a well-cultivated mind, watches more jealously the curricula of professional study, and is more anxious that they should represent a liberal system of education. This is one of the many grounds which give us confidence and pleasure in seeing you in the honourable position which you occupy, and which make this College gratefully accept and place among the treasured mementoes of its heroes that expressive cast of a thoughtful mind which has been lately presented by those who feel and admire your powers and the good work you have done.

The maintenance of the close connection and mutual interdependence of anatomy, physiology, pathology, and surgery, is one of the great duties of this College, which will need increasing vigilance and be a source of greater difficulty every year. The enlarging scope of each of these subjects separates them from one another, and necessitates a division in their teaching, their study, and their examination. Still the man who can best combine them and wield their united force will be best able to solve the problems of disease and shape his course to successful treatment. By this rational method only can we gain a sure footing, and be able to withstand the shocks of bold assertions which are the essence and strength of quackery, and to resist those violent vibrations of the pendulum of opinion, or rather of feeling, which, within a few years, have carried us from wholesale venesection to timidity at the application of a leech, and have threatened to drag us from the indiscriminate administration of alcohol to the total repudiation of it. If the profession be thus liable to be beaten from pole to pole by the changing blasts of fancy and fashion, it is no wonder that the public are wavering in their confidence, and are capable of being attracted by the bold promises of empiricism under whatever form its head is raised. The difficulties of the science of medicine must not be shirked by indifference or eluded by dogma. They must be admitted, sought after, welcomed. Without them, it would be no science at all. By their nature and their greatness they rank it in the forefront of science. Advancing knowledge reveals them more clearly, and tells more forcibly the debt of gratitude we owe to those benefactors of mankind who have taught us how to recognise them, and how to overcome them, and whose examples are therefore the light along the path we ought to follow.

One familiar face, Mr. President, which we have long been wont to welcome on these occasions, is looked for in vain to-day; a face,

the open, manly, and cheerful features of which told, in most unmistakable manner, the genuine sincerity and genial character of the man. In John Hilton this College has lost one of its ablest administrators and one of its most zealous servants, one who never failed from his post till his absence warned us that we should ere long be deprived of his assistance; for we knew that nothing but illness, and that of no light kind, could keep him away. His surgical acumen and good sense taught him, and made him teach others from this place, that a large share of the power for good in our hands is represented by the shield rather than by the sword, forasmuch as it consists in warding off the foes that minister to and encourage disease, and in giving that rest which may leave the processes of nutrition free to resume their natural course. He thus carried out the principles in which Hunter and (Hunter's great rival) Pott agreed, and through which they inaugurated a new and more benign era in practical surgery. Had he been more liberal to himself of the rest which he so freely prescribed for others, we might still have had the advantage of his business habits and the enjoyment of his social qualities.

In another of our Fellows, George Firth, Norwich has been deprived of a worthy successor of those eminent surgeons—Gooch, Donne, Rigby, Martineau, Dalrymple, and Crosse—who form a line the equal to which no other provincial town, so far as I know, can boast; and he was no unworthy representative of the high literary character which the city of Sir Thomas Browne has long maintained. *Integer vita*, with thoughts above the sounds of applause and the impulses of ambition, he upheld the honour and dignity of the profession by the surest and steadiest of all means: the force of a high and consistent example.

And, sir, in the seemingly brief interval which has elapsed since that memorable day when, with prince and peers and statesmen, we listened to the flowing utterances of the great orator who last performed this duty which I have so feebly attempted, how many of our Fellows and Members have obeyed the roll-call which has summoned them from a life of usefulness and activity, a life chequered with deep anxieties and heavy responsibilities and grave disappointments, on the one hand, and with glowing hope and cheering success and warm returns of thankfulness on the other. They have passed away; but they join the spirit of the day in beckoning us onward, and in warning us to seize the opportunities which life affords, for they are great and they are sudden.

REMARKS

ON

ANTISEPTIC MIDWIFERY.*

By J. MATTHEWS DUNCAN, M.D., LL.D., F.R.S.E.,
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(Concluded from page 221 of last number.)

IN maternity hospitals, antiseptics have proved of decided value, rendering healthy what were previously unhealthy, reducing the mortality of the lying-in from exaggerated amounts to a level with, or even below, that of private practice. In a general way, this may be stated as the result of preventing communication of disease directly or indirectly from one patient to another; for this use of antiseptics cannot obviate the occurrence of what are called autogenetic cases. Although the antiseptic cares in a hospital are the same as in private practice, many details are different or additional, such as the removal of the infected from the healthy, and the isolation of the nurse as well as of the patient.

I must satisfy myself by reference to contemporary literature for reports of the beneficial results of antiseptic cleanliness in hospitals. I have myself had experience in this department in the Royal Maternity Hospital of Edinburgh. The institution is merely the transformed residence of an ordinary well-to-do citizen; and the lying-in wards are three: the drawing-room and two bedrooms. Through these three rooms I have passed about one hundred patients in two periods of three months. They included a proportion of difficult and dangerous cases far above that of the general community. Labouring under many disadvantages, these women recovered in a manner which I have never previously witnessed in the hospital or elsewhere. There was in the hundred no maternal mortality, and the morbidity was extremely small. In that institution, the precautions used may be termed carbolic precautions, in addition to ordinary cleanliness. All washings of the pudenda were done with carbolic water. Consequently, the sponges and the hands of the attendants were constantly kept antiseptic. The ointment

* Read before the Medical Society of London.

used in vaginal examinations was carbolic. The physicians and students washed their hands in carbolic lotion.

In no hospital could better results be attained than in the small one referred to. But in some, as in that of Basle, many more precautions are used; and I am reluctant to express a decided opinion as to their necessity. There, besides precautions already mentioned, as soon as labour begins, the woman is immersed in a tepid bath, and at the same time a vaginal carbolic lotion of 1 in 50 is given; and the injection is repeated every two hours, if the membranes be prematurely ruptured, if the labour be protracted, if labour be induced prematurely, if the foetus be dead, and in all clinical (*sic*) labours. For hand-washing, a three-per-cent. lotion is used; and for anointing the fingers, or hand, or instruments, a ten-per-cent. ointment. If, for any reason, the hand be introduced into the uterus, or if the foetus or liquor amnii be putrid, or if *post partum* bleeding indicate uterine atony, then intra-uterine injection of a two or three per cent. lotion is made, and this may be subsequently repeated. After labour, wounds of the external genitals are dabbed with a ten-per-cent. carbolic oil, and stitched. Catgut is used for vaginal lacerations and for superficial tears about the urethra; silver sutures for deeper perineal lacerations and incisions. Catgut sutures are left to themselves; silver sutures are removed on the fourteenth day. After all, a dossil of charpie, soaked in ten per cent. carbolic oil, is placed in the vaginal orifice, and renewed as often as it falls out, and after urination and vaginal injections. Other dossils of the same charpie are placed over external wounds. Twice a day in the simplest cases, thrice a day in difficult and instrumental cases, every two hours in cases where putrid liquor amnii or foetus come away, or when there is suspicion of bits of membranes or placenta being left, vaginal injections of two-per-cent. lotion are made. If bits of membrane or placenta be left, or if the placenta have been separated with difficulty, intra-uterine injections are made twice daily with a two or three per cent. lotion. These precautions are used for twelve days. I admire the zeal of Professor Bischoff, and am sure his diligence has secured good results; yet I do not admit the necessity of so elaborate precautions, and I hope that greater simplicity may prove equally satisfactory, for otherwise it will be difficult to secure their general adoption. Meantime I regard as expedient, in all deliveries, such precautions as I have described in speaking of the Edinburgh Maternity Hospital, with such farther extension of them as common sense indicates for severe and complicated cases.

The importance of drainage or free evacuation of lochia from uterus and vagina is in some cases great—that is, when retained or putrid. These morbid conditions are not ordinary, and therefore, as well as on other grounds, the treatment of Goodell* does not command concurrence. He makes his patients “once or twice a day, after the first, get out of bed and slip into a chair”. Besides, he describes another prophylactic measure, which I give in his own words. “In a local outbreak of fever, especially of the diphtheritic form, I should, however, suggest the use, immediately after labour, of vaginal injections containing the nitrate of silver or the persulphate of iron, in quantities large enough to sear over the traumatic lesions of labour. Such injections” (he adds) “I have had no occasion to try; but they ought to inhibit active absorption and promote healthy granulation.” Dr. Wilson,† a fellow-countryman of Goodell, says: “If, as in the early part of my professional life, I should be so unfortunate as to meet an epidemic of puerperal septicæmia, I would in all cases mop out the cavity of the uterus with a weak solution of sulphate of iron in glycerine, after I had removed all coagula and induced as firm contraction as possible in the organ.” These proposed treatments I introduce here merely as contributions to the history of the subject.

Before I pass on to the last department of antiseptic midwifery, I shall refer to one most important matter: the conveyance of infection to lying-in women by physicians and nurses. Such conveyance can, I believe, be always avoided by adoption of antiseptic precautions; yet, in the meantime, I feel that belief, which implies, in the present case, something short of absolute assurance, is not a sufficient ground for assertions of complete protection from danger. Yet there is for me‡ no doubt that, if a medical man cannot quickly make himself medically clean in hands and person and dress, all kinds of medical practice, as at present carried on, are impossible with a due regard to the safety of patients. Accoucheurs should, I think, with the object of maintaining this sufficient practical cleanness avoid undertaking the duties of nurses, and avoid using the hands in *post mortem* investigations.§ Describing his unparalleled success in antiseptic ovariectomy, a distinguished surgeon remarks: “Now there is a feeling of confidence and security; the

constant fret and worry to get chemical cleanliness in one's hands, in the surroundings of the patients and her attendants, has passed away. The time is saved that was spent in cleaning the sponges, in passing the points of instruments through the flame of the spirit-lamp, and in other endless precautions. Above all, there is the feeling that the patient is protected from external agencies. Now, with a 1 in 20 carbolic solution and a nail-brush, with perhaps first a wash in turpentine to remove all fatty matter, I am safe to have my hands in any degree of putridity half an hour before an operation.”* What Dr. Keith has attained in surgery I hope is also attained in midwifery, and there can be no greater gain for the behoof of patients and the utility and satisfaction of physicians and nurses. The gain is, for ordinary midwifery practice, not counterbalanced by any danger; for the precautions in ordinary practice do not involve intra-uterine injection, nor even vaginal.

In natural cases, I regard the proposal to use intra-uterine injections as to be rejected, and all other local intra-uterine treatment. In such cases, the proposed leaving a tube *in utero* will, I believe, if carried out, produce danger, not prevent it. And these remarks apply even to the condition called “the presence of an epidemic”.

Danger from within is the last subject for discussion. It is doubtful whether or not danger ever arises spontaneously within. The germs or septic matter which set a-going putrefaction and its attendant septicæmia, and the germs or septic matter which set a-going ordinary surgical or puerperal septicæmia and pyæmia, are certainly, in the majority of cases, if not in all, imported into the female system from without. But, when they are introduced, the evil is seated within. The case is one now not for prophylaxis. That is too late. The case is one for treatment, and treatment may in all cases be conducted with rational hope of recovery till the very last. But this does not detract from the extreme importance of prophylaxis, such as has been already described.

The great majority of cases of puerperal septicæmia present no evidence of ordinary putrefaction, and I have deliberately placed them here in a separate category.

Putrefaction in the female genital passages is a matter of extensive experience, examples being frequent in sloughing tumours, hæmatoceles, abscesses, cancers, besides in abortions, miscarriages, and labours at term. The study of these shows only the occasional occurrence of septicæmic fever as the result, and this dreaded result seems only to be produced when there is a very extensive surface of absorption, or when the ichor may flow directly into the venous system, as after delivery. On the other hand, a woman may be inoculated with ordinary and much more dangerous septicæmia through a scratch. Obstetrical septicæmia from putrefaction is seen when the putrefaction occurs, and as long as it proceeds. Ordinary septicæmia, on the other hand, is, as is well known, the product, in ordinary circumstances, of the first few days after delivery, while wounds are still fresh and absorbing. Much testimony has been accumulated tending to show that little danger attends the examination of lying-in women by students engaged in anatomical pursuits, and it is worth while recalling to memory that the greatest obstetricians of the metropolis, Harvey and W. Hunter, were great anatomists. The valuable evidence of Semmelweis only appeared to favour the opposite view. On the other hand, great danger is universally believed to attend examinations made in default of antiseptic precautions by practitioners who have recently been in contact with septicæmic patients, or who have made *post mortem* examinations, and especially of cases of death in septicæmia or pyæmia. The danger of the septicæmia by putrefaction is an uterine danger; for it is almost exclusively in the uterus that dangerous putrefaction occurs. I am not aware that the danger arising from putrefaction has any relation whatever to the number of the labour. The danger of ordinary septicæmia is extensively believed to be dependent on lacerations, and obstetrical facts corroborate this in the strongest manner. Although a primipara has a specially active and well contracted uterus, she is twice as liable to septicæmia as a multipara;† for the primipara has more and severer injuries of the vagina and pudenda‡ than the multipara. When the primipara is elderly, or delivered by forceps, these injuries are greater, and her danger from septicæmia is greater. The septicæmia of putrefaction disappears with astonishing rapidity when the putrid matter is removed, or when absorbing surfaces are destroyed by cavities or covered by granulations. No analogous facts are known in regard to ordinary septicæmia. Lastly, it may be observed that the justice of the distinction here made is confirmed by the circumstance that Spiegelberg§ and others have failed to discover any special liability to septicæmia in women delivered of fetuses dead and in a state of decomposition.

The combination of the two infections is possible, and of this I have

* American supplement of *Obstetrical Journal*, August 1874.

† *Gynecological Transactions*, 1878.

‡ Matthews Duncan, *Mechanism of Natural and Morbid Parturition*, p. 446.

§ *Obstetrical Transactions*, 1875, vol. xvii, p. 132.

* BRITISH MEDICAL JOURNAL, October 10th, 1878, p. 593.

† See Matthews Duncan, *Fecundity, Fertility, Sterility*, second edition, p. 304.

‡ See Matthews Duncan, *Papers on the Female Perineum*, p. 23.

§ *Lehrbuch der Geburtshilfe*, 1878, s. 721.

seen recently an example, there being at first intense putrefactive fever, easily subdued, in a case which ended with characteristic *post mortem* evidence of pyæmia.

It is a neglect of the distinction I have just drawn, and of the peculiar anatomical conditions of lying-in women, that has led Fritsch* to the unnecessary ingenuity of appealing to a *status puerperalis* of the female constitution as the explanation of the special liability of lying-in women to septicæmia from putridity.

It is easily comprehended, then, that treatment in ordinary septicæmia is in a very different and greatly less satisfactory position than the treatment of septicæmia from putrefaction and the prophylaxis of septicæmia of all kinds. Local antiseptic treatment after ordinary septicæmia is begun is something like locking the door after the horse is stolen. Yet, even though late, locking the door may be of some use, preventing the admission of more injurious germs. I fear, however, that the theory of septic fermentation in the blood, as distinguished from the mere conveyance of putrid ichor into it from without, a theory universally adopted for this form of disease, does not allow us to attach paramount importance to the quantity of germs admitted. A little leaven soon leavens the whole lump.

We have no fine theoretical basis for antiseptic treatment of ordinary septicæmia, and we have no delightful facts or other testimony to appeal to in evidence of its utility; while there is a great amount of such evidence in favour of the treatment of septicæmia from putrefaction and in favour of the prophylaxis of all forms of the disease.

Yet there can scarcely be a doubt that hope for the future does meantime rest on the study of this matter; for, striking at the sepsis, we believe we are striking at the root of the disease. Many treatments of puerperal fever are directed against symptoms. Some attack the rate of the pulse, some its weakness, some the temperature, and so on; and of the utility of such treatments I desire here to say nothing. Antiseptics are directed against the essence of the malady. Just as benefit has been supposed to arise from improving the conditions or symptoms referred to, so benefit from local antiseptic treatment is alleged—Fritsch describing a lowering of the temperature as produced by antiseptic intra-uterine lotions; but the value of the observation is lost, from the author not having distinguished between the two forms of septicæmia that prevail.

It is natural, and I believe proper, to imitate surgeons in cleansing and dressing a wound even when septicæmia is present. Such care consists in the use of drainage and in antiseptic cleanliness; and I do not hesitate to secure the evacuation of the uterus when lochia are retained, and to use antiseptic cares if there be any discoverable occasion for them. In most cases of ordinary septicæmia, no such treatment is called for, the lochia being not retained, and the discharges being healthy.

There is one important department of antiseptic midwifery that must not be passed over, although it is second in importance to what we have been considering. It is the antiseptic management of the child, and for it the same prophylactic and therapeutical antiseptic cares are as valuable as for the mother. The subject is in all, except its practical aspects, one that has been long fully recognised, and in this place I shall do little more than mention it. The child is liable to infection through its umbilical ulceration and vessels. Here it may imbibe poison from a putrid cord, or it may receive ordinary septicæmic infection. The child is believed also to be liable to be infected through inspiration of foul or poisonous matter more or less deeply into the respiratory tract. It appears that the delicate organism of the infant is easier poisoned than its mother's, and the poison affects its system differently. Besides producing inflammation and other ordinary septicæmic and pyæmic changes, it may produce in the child inward fits, trismus, and nervous conditions that are not observed in the mother. The same prophylaxis and treatment that are useful for the mother are equally useful for the child, when varied so as to suit its peculiar circumstances.

There are in this paper many imperfections arising from its authorship, for which I can only plead, in palliation, the haste with which I have prepared it. Such imperfections are of little moment to any one but myself. The great imperfections arise from the incompleteness of our knowledge; and I shall be amply rewarded for the trouble I have taken if I have contributed to the diffusion of sound views or stimulated any of my professional brethren to further investigation.

* Volkmann's *Sammlung*, No. 107, s. 789.

LECTURE

ON

THE VARIOUS FORMS OF SKIN-IRRITATION DUE TO THE ADMINISTRATION OF DRUGS.

BY ROBERT FARQUHARSON, M.D., F.R.C.P.,
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(Concluded from page 224 of last number.)

PASSING now to the various eruptions produced by the internal administration of drugs, I shall first lay down, so far as I can, one or two headings of causation, and then run over each substance which has the property of causing any marked cutaneous manifestation. And first, we are naturally led up to the recollection, that a part of the poisonous action of several agents expends itself on the skin, and that, again, something of this nature may also be observed as a regular sequence of their minor physiological effects, when pushed up to a certain point.

Secondly, some rashes are due to irritation of certain structures, like the sebaceous glands, through which a particular drug is normally eliminated in part; and others are distinctly of the nature of nettle-rash, depending on stomach-irritation; or the blood-corpuscles may be disorganised or broken up, and we may have purpura. Defects of elimination may account for a good deal, and it is quite reasonable to hold that, if the principal means of exit for any particular drug are blocked up, we are liable to meet with unexpected excess or irregularity of physiological action. Thus, we find kidney-disease in many of the recorded cases of bromide-rash; and Brunton and Power (*vide* Brunton's *Goulstonian Lectures—BRITISH MEDICAL JOURNAL*, 1877) have experimentally shown that, if digitalis be given until the renal arteries are powerfully contracted, its elimination is checked, and poisonous symptoms may suddenly arise, or, on the contrary, elimination may be too swift to allow the drug time enough to act, and this specially occurs in the case of curare, which is thrown out of the blood so rapidly by the kidneys, that administration by the mouth produces none of those toxic effects which are so well marked when hypodermic infection is employed.

This question of the integrity of the eliminating organs in connection with therapeutics is of vast importance; and, although it has received the attention of Gubler and other eminent men, I recommend it to your attention as a good field for future investigation, counselling you, meanwhile, to consult an interesting paper by Duckworth "On the Passage of certain Substances into the Urine in Healthy and Diseased States of the Kidney", in the third volume of *St. Bartholomew's Hospital Reports*.

Finally, we have a class of cases which cannot be explained at all, and which we say are due to idiosyncrasy; and of this we have a good example when we find that a simple small dose of an usually harmless drug brings out the irritable rash. With these principles to guide us, then, let us approach the various substances in succession, beginning with arsenic, which, in poisonous doses, causes cutaneous irritation, with an eczematous eruption. Herpes has also been observed during its ordinary medicinal administration; and as it is partly eliminated by the skin, it stimulates that structure, and has a powerful influence over some of its more chronic affections, very injuriously irritating the more acute disorders of an inflammatory nature.

Phosphorus, also, is a cutaneous stimulant, and has been recommended for the purpose of encouraging the insufficiently developed, or prematurely faded, rash of the eruptive fevers; but the only skin affection for which it is primarily responsible seems to be purpura, which occasionally coincides with gastro-intestinal derangement and jaundice, in preceding the fatal issue of a poisonous dose.

We next come to iodide and bromide of potassium, which produce definite, but, luckily, comparatively rare, skin-eruptions, which have recently been much discussed. The limited time at my disposal will not allow me to do more than give a very terse *résumé* of the work of many industrious authors; but those who wish to pursue the subject further may profitably consult Wood and Ringer, but more especially Tilbury Fox, who, in his paper before the Clinical Society, gives very exhaustive references to the opinions of our best authorities on the iodide of potassium rash. This, in its most common form, appears as papules, quickly becoming pustular, and bearing a strong superficial resemblance to acne, which, indeed, it is usually held to be. Dr.