individual societies or meetings of medical men will not be on the same lines, but on very differing ones, and they will be treated with the smiling and courteous disregard which is generally accorded to piffle. Let us illustrate what we mean by one example, that of the agitation for an increase of assurance examination fees. Now, if ever there was a question purely South African and not local, it is this. It is perfectly obvious that whatever those fees may be, they will always be the same all over South Africa. They cannot vary, as, for instance, private practice fees may properly vary, according to locality. Consequently, it ought to have been evident from the first that an agitation for revision could only be effectively carried on by some agency representative of the whole country, the South African Committee being, of course, indicated as an authority constituted for the very purpose of dealing with questions of this class. Yet what do we find? A collection of ten or a dozen good practitioners in one locality decides to demand an increased fee, then a Branch of the B.M.A. in quite another part of South Africa decides in the same direction, then, one by one and in each case *cum longo intervallo*, other Branches follow up, but almost every one of them naming a different scale. Then the matter, after the assurance companies had become fully alive to the position and had taken perfectly organized measures to deal with it, reaches the S.A. Committee. That committee decides on an increased fee of a particular amount, as one which all the Branches should ask for. The Branches do nothing of the kind, may more, the oldest Branch in South Africa, the C.G.H. (Western), with headquarters in the very place in which the S.A. Committee had just met, receives the recommendation of what ought to be the supreme guiding body, not with respect but with contumely, and practically turns that recommendation down by, in the first place, substituting a totally different conclusion for that recommended, and, in the second, utterly nullifying that conclusion by entrusting it to a committee of which the majority of members were representative, not of the views of the medical profession as such, but necessarily of those of the other side to the negotiation. Of course nothing has resulted, or is likely to result, from such aimless proceedings, which remind one of the attempts of a drowning man to keep himself afloat by wildly flinging his arms and legs about in all directions.

We have quoted this example as an excellent and recent one of how not to do it, but it is only one example out of many, and designed as an object lesson to impress the truism with which we set forth.

The Transvaal Municipal Congress has passed an unanimous resolution urging that none but registered midwives should be allowed to practise within municipalities.
and "operation" are synonymous, and one is quite accustomed to hear the platitude that the "surgeon is the man who is always cutting people up." This erroneous conception of the surgeon and his work ought to be dispelled, and the people to dispel it are the surgeons themselves.

The primary object of the surgeon is not "operation," but the cure of the individual by whatever means are at his disposal, and in so far as operative interference may be necessary in bringing about that cure, it plays its rôle in surgery. What its exact position is, however, can only be shown by a consideration of surgical principles.

The study of disease in all its aspects, using the term in its widest sense, is the work of both physician and surgeon, and its subdivision into medicine and surgery is for the most part arbitrary. Under the heading of "medicine" are commonly grouped those diseases in which operative interference is not necessary, or is not likely to be so; while under "surgery," on the other hand, are included those in which such interference will be, or is likely to be, necessary. At the same time, it will be readily appreciated that there is a great deal of overlapping, and many so-called medical diseases may develope conditions requiring surgical interference; whereas, similarly, many surgical diseases present medical aspects or complications.

All disease, whether medical or surgical, has a cause, although it is not always obvious, and in many cases is unknown. The causes of disease are those influences which produce in the individual a departure from the normal. They are commonly known as irritants, and are subdivided into two classes, viz.: (1) Non-infective, including mechanical, electrical, chemical, and thermal agents, X rays, etc.; and (2) infective, the chief being the micro-organisms. The consideration of the various phenomena arising out of the relationships of the irritants to the individual constitutes the subject of irritation.

Always keeping in mind the presence of a cause, the subject of irritation may be regarded, pathologically, from three points of view, viz.:
1. Its effects;
2. The reaction of the individual to it; and
3. Its complications.

In teaching, one has been accustomed to subdivide the body, for purposes of generalization, into three main sections—
1. The composite tissues, including the connective tissue, vessels, nerves, lymphatics, etc., of the part.
2. The hollow muscular systems, comprising the alimentary, vascular, respiratory, and genito-urinary systems.
3. The serous cavities, including the peritoneal, pleural, pericardial, and cerebro-spinal, the tunica vaginalis, and the synovial membranes of joints, tendon sheaths, and bursæ.

Let us consider, then, for a moment, the pathology of irritation in its relation to the composite tissues.

1. Its Effects.—The effects, which are essentially destructive, are found in all degrees of seriousness. They comprise the subject of injury, and are divisible into general and local. The general effect on the individual is that depression of vitality which is called shock, whereas the local effects depend on the structure and the function of the part affected. The most important point in the structure is that of vascularity, and the correspondingly important effect, resulting from injury to vessels, is that of haemorrhage. The variation in the functional derangement requires no elaboration, as it tends to be special to the tissue involved. The local effects may be grouped together, and constitute a "wound," though this gives a much wider significance to the term than is customary, and includes "destruction of any tissue, of any degree, in any situation, and by any irritant, non-infective or infective." Whether the skin is involved or not, whether soft or hard tissues, and whether it is produced by violence or any other agent, is immaterial.

2. The Reaction to it.—In considering the reaction we have to deal with two separate factors—(1) the irritant itself, and (2) its effects. Whether the reaction be to either or both of these, the main part of it is essentially the same, and consists of vascular and cellular changes. It is known as inflammation, and may be either acute or chronic. In acute inflammation the vascular changes predominate, while in the chronic variety the cellular changes are the most pronounced feature (Rutherford Morison). When the reaction is limited to the effects, i.e., to the destruction produced, it constitutes the subject of repair. The much vexed question of tumour-formation is too uncertain and involved to be introduced in this address, though I have little doubt that in due course it will be shown to be simply one of the manifestations of tissue reaction to irritation.

3. The Complications.—As a wide generalization, one may say that the complications of irritation depend upon increase of the irritation, either from exaggeration or extension of the original irritation, or from some other superadded. For practical purposes they may be classified as arising from—
1. Extension of the original process;
2. Secondary infection, especially sepsis;
3. Healing, partial or complete, i.e., where resolution or perfect healing has not occurred, cure usually takes place by fibrous tissue development, the commonest example of which is a scar.

Self-suggested by this consideration of irritation in its relation to the composite tissues, the general principles of treatment obtrude themselves upon us; they are—
1. Remove the cause;
2. Combat the effects;
3. Assist the reaction; and
4. Prevent complications. Should, however, complications have already arisen, it will be necessary to deal with them.

In our application of these principles, we closely follow the indications given us by Nature in her heal-
ing efforts, and the subject of "natural cures" is overflowing with interest and instruction for the enquirer. I cannot hope to deal completely with this aspect of disease, but, regarding it, as I do, to be the foundation on which we build, I must consider it in some measure.

By "natural cure" one understands the active attempts of Nature to overcome disease, and whatever reaction takes place is, in essence, beneficial to the organism as a whole, and curative locally. We meet with all degrees in what is actually attained in this natural curative process. Thus the result may be entirely constructive, both locally and generally, which is, of course, the best that can possibly be obtained. Locally, however, the cure may involve some destruction of tissue, while, from the general body outlook, the process is constructive. Again, the local result may be in the main constructive, nevertheless producing impairment or destruction of the general body function. Finally, the result obtained may be, in great part or wholly, destructive both locally and generally, leading, at the best, to a state of chronic invalidism.

It is obvious that the result depends on the efficiency of the natural reaction and the nature of the pathological condition to be dealt with, and that, while Nature's intentions are always of the very best, the curative process is often imperfect, and her attainment frequently falls short of her aim. In spite of the fact, therefore, that it may appear to be presumptuous to think of improving on Nature, nevertheless, this imperfection on her part is one of the strongest pleas for surgical interference, and, while she is generally looked upon as a good physician, she frequently stands self-condemned as a bad surgeon. However, I shall endeavour to show, in some measure, to what degree we are indebted to her for indications in treatment.

Acute inflammation is the commonest natural curative process met with, and is, therefore, that to which we naturally turn. It represents the reaction of the tissues to irritation, and though the cause of it may be any irritant, the infective type is most frequently found, usually the pyogenic micro-organisms.

The inflammatory reaction presents both general and local manifestations, the general comprising inflammatory fever, and the local giving rise to a series of symptoms and signs which have been familiar to clinicians for centuries, and consisting of redness, swelling, heat and pain, and impaired or arrested function. They are due to the local increase of vascularity and the exudate of fluid.

A. GENERAL REACTION—INFLAMMATORY FEVER.

Clinically, the chief features of inflammatory fever are:—

1. Impairment of all the organic functions, muscular, nervous, secretory, and excretory, giving rise to prostration, indigestion, loss of appetite, constipation, diminished excretion of urine, and hot, dry skin.
2. Excessive respiration from the skin. This results from the raised temperature, and leads to great thirst.
3. Increased temperature, and leads to great thirst.
4. Local reaction:—
   a. Increased vascularity and local cellular activity, and
   b. The modes of removal of the products of the process.
   1. This includes the whole of the actual local reaction.
      a. Leucocytes are greatly increased in numbers, with the result that phagocytosis is marked; and specific antibacterial and antitoxic substances are produced.
      b. Fluid exudation takes place in greater or less amount, and represents a mechanism for diluting the toxins, and even washing out of an open wound both the organisms and their products, and also bringing into contact with them a greater amount of the antibacterial substances present in the blood.
      c. Increased cellular activity is of very great importance, and has for its objects—
         1. Phagocytosis, both by the leucocytes and the endothelial cells of the part;
         2. Extra-cellular antibacterial action; and
         3. Repair of the damage to the part.
   2. This comprises the results of the local reaction, that is to say, the terminations of inflammation, which are resolution, fibrosis, partial and total destruction, and which are controlled by the degree of interference with the vascular supply.
      a. When resolution occurs, the causal agent has been successfully dealt with, and the whole of the products of the local disturbance have been removed by the lymphatics or blood stream. Repair is perfect, and the affected tissue presents ultimately no difference from the normal. When resolution does not occur, then one of the remaining terminations of inflammation necessarily results.
      b. By fibrosis, the focus may be completely delimited, and, though the causal factor may
not be entirely destroyed, it may be rendered innocuous by encapsulation. In such cases, therefore, the products of the process may not be entirely eliminated.

(c) and (d) In partial and total destruction, there is an attempt to get rid of a more severe infection, not by destroying it and absorbing the products as above, but by casting off the affected tissue with the infecting organisms present in it. It is employed because milder measures have been judged insufficient.

(c) In partial destruction, this is brought about by a molecular or particulate destruction, such as is seen in ulceration, caries, and abscess formation. In the latter case, pus has formed, there is a general tendency for it to track along the line of least resistance towards the surface, where an opening is established, and its discharge effected.

(d) In total destruction, on the other hand, the process is one of molar or massive destruction, such as is seen in gangrene and necrosis. In this event, a large mass of tissue is separated at one time.

Following the lead given by Nature, as detailed above, the treatment indicated in such an infection, where the tissue reaction is inflammatory, is as follows:—

A. General Treatment.

1. The impairment of all the organic functions, whereby they are suspended in greater or less degree, as shown by the prostration, inability to digest food, etc., indicates the prescribing of rest to all the body activities, whether physical or chemical.

(a) Physical rest is best attained by confining the patient to bed in the recumbent posture, which attitude he usually adopts naturally.

(b) Seeing that the secretory and excretory functions are essential to life, and must therefore be continued, the body is best served and they obtain the greatest relief by rendering them as far as possible passive, that is to say, a maximum of efficiency is aimed at, with a minimum of expenditure of energy. This is obtained as follows:—

The digestive impairment is best aided by the administration of a stimulating, easily assimilated, fluid diet.

The intestinal impairment is controlled by saline purges.

The renal impairment is assisted by the administration of quantities of bland fluids.

The skin activities are helped by hot bathing, and the lungs are assisted in their function by allowing the patient all the fresh air possible.

2. The excessive loss of fluid from the skin leads to the great thirst which indicates the administration of quantities of fluid. According to circumstances, this may be given orally, rectally, subcutaneously or intravenously.

3. The increased metabolism and the formation of antibacterial and antitoxic substances gives the lead for the administration of

(a) Antibacterial and antitoxic sera, preferably monotypic, and

(b) Vaccines, preferably autogenous, and also

(c) Chemical substances, which may or may not be specific, e.g., salvarsan, emetic, the numerous antiseptics, etc.

4. The presence of leucocytosis has been initiated by the administration or injection of such substances as quinine or turpentine, with beneficial effects.

It is important to keep in mind that, where the fever is excessive, it may have a pernicious effect on the individual, and in such a case must be controlled, e.g., by cold sponges or antipyretics.

B. Local Treatment.

1. The impaired function, with restricted local activity, suggests local rest, or immobilization, which is obtained by a variety of fixation apparatus or splints, if necessary.

2. Pain may be relieved by elevation of the affected part, indicated by the fact that increase of pain usually follows the dependent position, and the patient himself commonly keeps the part raised.

3. The increased vascularity and local cellular activity, which represent the natural reaction, suggest that treatment should take the line of increasing or assisting this reaction, and this may be done by—

(a) The application of moist heat, i.e., by fomentations, or poultices, etc.

(b) By the so-called Bier's passive congestion, by means of an elastic bandage or some form of cupping glass. The elastic bandage also relieves the pain, and this form of treatment is frequently seen naturally when a patient with an inflamed finger grips or ties something round the base of that finger to relieve the pain in it.

4. The natural modes of removal of the products of the process give several suggestions as to treatment, used chiefly as aids to the natural methods of removal, but sometimes forestalling them.

In resolution, where the absorption of the products by the lymphatics and blood stream takes place, this is aided by elevation of the part, which assists drainage.

Fibrosis, with the resulting encapsulation or delimitation of the focus of disease, is not initated in the treatment of these septic injections, but is quite frequently employed in malignant disease, where, by means of X-rays, radium or electricity, the development of fibrous tissue is aimed at, with a view to limiting the spread or strangling the elements of the disease.

In partial destruction, a further effort on Nature's part has been seen, viz., to get rid of the disease by a process of ulceration or the formation of an abscess.
and its subsequent discharge. These suggest two very common surgical procedures, **incision and scraping**.

**Incision** mimics the bursting of an abscess, and is usually employed to forestall it. It allows of external drainage of pus or other products instead of their removal by the lymph and blood streams, and thereby relieves the system of a considerable quantity of toxic material. It is also employed to relieve tension, and consequently pain, and so diminish the dangers arising from vascular interference. This, however, is not comparable to the other indications for it, as it represents one of those cases in which the surgeon is called in to correct an error of judgment of Nature.

**Scraping** imitates the process of ulceration, and is frequently employed to assist in getting rid of such material as Nature is already occupied in removing. It is more commonly employed in chronic conditions, rather than in acute ones.

Finally, **total destruction**, or the casting off of a focus of disease in bulk, as seen in gangrene or necrosis, suggests the removal of such a focus of disease by **excision**, or, in the case of the limbs, by amputation.

We have here, then, an example of the complete analogy between Nature's line of treatment and that adopted by the surgeon, which may be described as good and sound.

Arising from a consideration of the above facts, several important and interesting points suggest themselves.

The first is that we are here dealing with an ideal case, that is, one in which the etiology, pathology, diagnosis and prognosis are completely known and understood, and the treatment, as indicated by Nature, follows automatically.

The second point is that Nature herself employs, and indicates the employment of, what we may call both "medical" and "surgical" measures, i.e., those to which non-operative and operative procedures are analogous.

Thirdly, no doubt is possible as to the position allocated to the natural "operative" measures. They come as a last resort, after all other means have failed, and tissue, representing a focus of disease, is only cast off because it is impossible to save it.

The first of these points opens up the whole subject of the relationship of the science to the art of surgery, or, to put it in another way, the question of surgical judgment and its relation to treatment, especially operative.

Good judgment depends on an intimate knowledge of disease in all its aspects, its causation, its development and course, the natural reaction to it, and the final results which accrue. The better this knowledge the better the judgment is likely to be. It involves the questions of diagnosis and prognosis, and on these the line of treatment to be advocated follows of necessity. If a choice were to be made between a surgeon of superior judgment and one who was only a good operator, the balance would be very markedly in favour of the former. In the absence of good judgment, therefore, with its entailed good diagnosis and prognosis, good treatment cannot be systematically carried out. Good diagnosis carries with it a clear knowledge of the pathological process present and the various means of treatment available, whereas good prognosis, with a perfect understanding of the eventualities, leads to the selection of the best line of treatment for the particular case in question.

The importance of diagnosis cannot be exaggerated, and, while in many cases it is obvious, in some it is quite the reverse, and in these every possible means ought to be employed to allow of its elucidation before treatment is adopted.

Wm. Mayo has said, "You cannot always make a diagnosis, but it's a mighty good thing to try," and this is the attitude which a good surgeon will adopt. One must acknowledge, therefore, that a diagnosis is not always possible, and an operation of an exploratory nature may be necessary to dispel doubts and allow of one being made. Further, the diagnosis is sometimes wrong; indeed, the correct one is not always the best (according to the various symptoms and signs present), which anomaly is to a great extent explained by the fact that the human being is not a system of rigid tubes and blocks of inert material, such as a plumber has to deal with, and the personal factor often plays a large, and perhaps misleading, part in the investigation of disease. However, the better the surgeon, from the point of view of judgment, the fewer will be the cases in which absence or error of diagnosis will occur, and the fewer will be the corresponding exploratory operations. One need hardly say that the only man who never makes a mistake in diagnosis is he who never makes a diagnosis at all.

Good prognosis depends upon a sound knowledge of pathology and a wide experience of cases, and from a practical point of view its chief bearing on treatment depends upon the assessing of the probabilities of the success or failure of the natural and non-operative or "medical" measures. Should judgment be given against the likelihood of their success, then, if cure is to be obtained, the advocacy of operation follows as a matter of course. In such an event the earlier it is done the better, and so in these cases operative treatment will usually forestall and often completely replace any other.

It has already been pointed out that Nature, in dealing with disease, employs both non-operative and operative measures, and that the latter are only used as a last resort, when the former have failed. But operation, in surgical treatment, occupies the same relative position as in Nature's treatment, i.e., it is a last resort, with the reservation already made above, that, where judgment foreshadows the failure of other measures, such a failure is not waited for, but operation is advised and performed as early as possible. The indications for operative interference may thus be reduced to two, viz.: (1) Failure of the natural cure, and (2) failure to cure by medical means. It is therefore a truism to say that the degree of success attending surgical operation in disease is the gauge of the limitation and failure of Nature and of medicine in its treatment. Hence, from the operator's point of view, true advance in the surgical...
treatment of disease must lead to what may be best described as "surgical suicide," seeing that, as specific therapy and preventive medicine in one or other form progress, the necessity for operative interference must steadily diminish until finally one sees it limited to the treatment of accidental injuries and mechanical defects.

In an ideal scheme, then, for the treatment of disease, operative measures have no place, and the best surgery is that which approaches most closely to the ideal. Unfortunately, the present imperfect state of our knowledge of disease, and our consequent limitations so far as ideal treatment is concerned, leave open a wide field in which operative interference offers the best hope of cure to the patient. However, this interference is minimized by the surgeon of good judgment, as unnecessary and futile operations will be avoided. The failure of the natural and medical means of treatment have been postulated as the indications for operative interference, and it is just here where good judgment appears at its best, for whether or not operative measures will be necessary, what they shall be if they should be called for, and when the most opportune time will be for utilizing them, are questions which depend entirely on the adjudged efficiency or futility of the non-operative treatment.

Should operative interference be considered advisable or necessary, the next question to be settled is, "What is the operation going to be?" There can be no diversity of opinion that the best operation is that which offers the maximum of benefit with the minimum of interference, so that, if some simple and conservative procedure be efficient to deal with the condition present, it is bad surgery to employ a complicated and destructive one; and generally speaking, one might add that the efficiency varies directly as the simplicity and inversely as the complexity of the technique. The carrying out of such a principle, too, militates against the indiscriminate, casual and unnecessary operations, and one should add that the efficiency varies directly as the simplicity and inversely as the complexity of the technique. The carrying out of such a principle, too, militates against the indiscriminate, casual and unnecessary removal of tissue which might easily be preserved, often with benefit to the patient, and this is strongly indicated by Nature, for it has already been pointed out that she casts off tissue only because she is unable to conserve it. The settling of this question also depends on good surgical judgment.

Bad judgment, then, which depends on ignorance of the normal and diseased states of the individual, and on lack of the power of correlation and deduction, is responsible for bad surgery, of which we have evidence in three main issues:

1. The withholding of operations which are necessary or advisable;
2. The performance of unnecessary and superfluous operations; and
3. The performance of inefficient, imperfect, or wrongly-chosen operations.

The withholding of necessary or advisable operations is quite as much a bad mark as excessive operating, the performing of operations which are unsuited for the condition present, or of those which are not thorough or technically wrong. No doubt one of the chief causes of unnecessary and meddlesome operative interference is the comparative ease and safety with which the ordinary operations of surgery may be embarked upon, granted an average good aseptic or antiseptic technique. The results are not always obvious, thanks to the intervention of one or more of several agencies, and in this respect the vis medicatrix naturae plays a prominent part. It is invariably of the greatest assistance to good, and is often the salvation of bad work.

In counteracting and so covering up these results, one example of Nature's foresight is the provision of a reserve, both physical and functional, by which the removal of a limited amount of tissue or the interference with function to a certain degree may be borne without any deleterious result.

Where more than constitutes the reserve is put out of action, Nature's compensatory mechanism, involving the hypertrophy and increased function of what remains, may soon adjust the deficiency.

Where the local compensatory mechanism is unable to deal with the situation, one sees Nature quite often employing collateral or associated means of overcoming it.

Finally, there is still the whole of the natural reaction to irritants and their effects, which has been outlined above, and which is so important in dealing with what injury and infection there may arise.

Acknowledging, therefore, the wonderful compensatory, accommodating, and reconstructive power of Nature, all that may be needed to complete her concealment of such work is that she be allowed to perform her task in camera, and this is readily provided for by means of the closed wound.

The general principles of treatment have already been mentioned, and are:

1. Remove the cause;
2. Combat the effects;
3. Assist the reaction; and
4. Prevent complications.

The indications for operative interference have been reduced to two, viz., failure of the natural or medical means of cure. It therefore follows that, whenever, in any of the principles of treatment enumerated, the natural or medical means fail, operative interference may be advisable or necessary. As a practical interpretation of this, by taking the principles seriatim, the chief indications for operation are as follows:

1. Remove the cause.—The chief requiring surgical removal are foreign bodies, especially septic ones. Micro-organisms may occasionally be removed by mechanical and chemical means, but usually their removal necessitates the simultaneous removal of the tissue they are present in, and the procedure does not therefore come into this category.
2. Combat the effects.—The common indications for interference here are to:
   1. Arrest hemorrhage;
   2. Close a wound;
   3. Restore function, e.g., plating a fracture suturing a nerve, etc.
3. Assist the reaction.—Here, as a last resort where non-operative measures failed, operative interference has been shown to be indicated, as follows:
1. Incision, to allow of external drainage;
2. Scraping, excision or amputation in order to remove a focus of disease.
4. Prevent complications.—Operation may be necessary in any of these. They arise from—
(a) Extension—e.g., fractured ends of bone pressing on nerves, vessels, etc., or septic thrombus in a vein with discharge of emboli into the circulation.
(b) Secondary infection, especially sepsis, e.g., in a compound fracture, psosas abscess, etc.
(c) Healing—e.g., from fibrous tissue formation and its contraction, the mechanical effects of excessive callus formation, etc.

Mention has been made of operative interference being indicated for diagnostic purposes, which may be quite a valid proceeding, but one which should be reduced to a minimum. This has perhaps a special bearing in a country such as South Africa, where cases are treated at great distances and medical aid is difficult to obtain. In such cases, where the means for detailed diagnosis are not available and doubts exist, the balance is greatly in favour of operating, as much the safer course. This bears out the generally recognized claim that, as far as possible, all cases should be treated in a properly-equipped hospital, where complete investigation can be made, and where the patient has the best chance of being cured by other than operative means.

Much might have been said, in considering such a subject, on the advantages to be gained from a careful choice of anaesthetic, the employment of measures against shock, and the technique of operating, etc., but these would have required too much time, and have consequently been purposely omitted.

What one hopes to have been able to show, then, is that operation is not synonymous with surgery, that it is not the primary object of surgery, and that it is not even the first pillar of treatment on which the surgeon leans for support. On the other hand, with few exceptions, operative interference is employed because of the failure or probability of failure of other means of cure, whether of those utilized by Nature or of those non-operative measures which are commonly included under the term "medical treatment." Seeing, therefore, that the foundation on which operative treatment rests is constituted by the shortcomings of Nature and of medicine, true advance in the treatment of disease must lead to the progressive diminution in the number of operations and the gradual disappearance of the operating surgeon, except in such conditions as accidental injuries and mechanical defects. Under such conditions, medicine must temporarily find an increasing sphere of activity and importance, thanks almost entirely to the investigations of the laboratory worker, but as preventive medicine progresses towards the ideal, the physician, too, as accepted at present, must lose his material in an increasing degree and tend to disappear.

Pending the realization of this visionary ideal, however, the burden of our present imperfections has to be borne, and a very prominent part in the treatment of disease must continue to be played by good surgery, the basis of which consists of—
1. Good judgment, with all it involves, of paramount importance; and depending on this.
2. Rational treatment, non-operative or operative, as already described.

When operative measures are indicated, then the outstanding features of good work are—
(a) Conservation consistent with efficiency;
(b) Simplicity of technique; and
(c) Operative skill, which includes gentleness, manipulative dexterity, and careful speed.

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Excision of Gasserian Ganglion: Three Further Cases, with a Note on Injections with Alcohol.

BY C. C. ELLIOTT, M.D., B.S. (Lond.).

In the RECORD of July 25th, 1914, I recorded a case of excision after Gasserian ganglion. I first wish to correct a statement I made in that article by calling attention to the fact that the late Dr. Harding, of Johannesburg, published a short account of a case in the now defunct S.A. Medical Journal before my case—that is, mine was not the first case published in South Africa.

The report of my first case should be supplemented by saying that the sixth nerve paresis left after the operation disappeared in a few weeks. When I saw the man two years after he was quite free from pain or inconvenience. The gap in the skull had long ceased pulsating. The cornea, though insensitive, was not damaged. It will be remembered that I removed the whole ganglion, dividing with it the first or ophthalmic division of fifth. I now wish to record three fresh cases.

I. A lady of about 43 had severe tic on left side, in third division of fifth, for over two years. Her mother was suffering from the same complaint on both sides of the face, which only morphia relieved. When I saw the patient the tic was increasing in severity, was more constant, and was subject to violent exacerbations. Attempts to speak and eating brought on attacks, and her life had become a misery to her. Many drugs had been tried without effect.

On April 7th, 1917, I gave an alcoholic injection into the third division of fifth under morphia and hyoscine, given hypodermically. It had no effect. In May I tried high-frequency, but with no result. On May 30th I again tried alcoholic injection. I know I hit the nerve, for she had great pain down the inferior dental nerve, and partial anaesthesia, but no good resulted.

On June 5th I operated. Dr. Daniell gave ether first, and then chloroform in a dental chair in...