

Address.

SOME SURGICAL TENDENCIES FROM A MEDICAL POINT OF VIEW.¹

BY REGINALD H. FITZ, M.D., BOSTON.

IT was not without considerable hesitation that the honor of addressing you this evening was accepted, especially as what I am about to say is somewhat opposed to the prevailing tendencies of the day and relates rather to differences of opinion than to well-established principles. If I pay too much attention to the other side of the subjects brought before you, it is because this is less urgently advocated at present than the reverse. The importance of the subjects, however, is unquestionable since they belong to the borderland of medicine and surgery and may be stated as some surgical tendencies from a medical point of view.

The region mentioned obviously includes both the province of the physician and the domain of the surgeon. These terms may be supposed to represent the modest claims of the former and the imperialistic tendencies of the latter. It is common ground, however, and the successful advance of either surgeon or physician into the region previously occupied by his colleague will always be welcomed, provided the interests of mankind thereby are served.

The improvement in methods of surgical procedure during the last thirty years has so greatly increased the number and variety of surgical operations that it has seemed to me desirable to question the value of some of these, and especially to pay more attention to the subsequent history of the patient than to the immediate success of the operation. As physicians, we have been duly impressed with the progressive diminution in the mortality-rate of operations, but we are far more concerned with the degree of benefit which the patient may have experienced. For centuries the pathologist has taught that there are diseases so mortal in their progress as to be regarded as practically incurable. The advance of knowledge shows that the number of these apparently incurable diseases is somewhat diminished by a more intelligent classification of symptoms and lesions, and that all diseases which have received a common designation are not necessarily identical. There still remains, however, a considerable group of what the physician regards as hopeless cases, and of late years, especially, he has been in the habit of asking his surgical colleague to make some attempt to relieve the condition of these patients. Numerous efforts have been made and most encouraging results have been published, especially elsewhere. Unfortunately, when the comparison is drawn between such results and those under familiar conditions, the conclusion is not so satisfactory as is to be desired.

It will readily be admitted that a sufficient trial of surgical treatment is justified in many cases

where mechanical disturbances exist which medicinal treatment cannot relieve, provided the life of the patient is not endangered by the operation. Experience has shown that certain cases previously regarded as extremely dangerous or fatal without surgical treatment have been greatly benefited if not cured by such treatment. On the other hand, experience also has shown that immediate death, extremely short relief or prolonged suffering have resulted from operations designed to give longer life or greater freedom from distress than the physician could hope to offer. The surgeon is willing to operate upon the presumably hopeless case because the patient often survives the operation and may be benefited. The benefit is to be hoped for, since at times the diagnosis proves faulty and remediable conditions are found. If the diagnosis proves correct and incurable lesions are met, the patient is regarded as no worse off than before the operation, while the latter may relieve suffering and prolong life. The physician, therefore, is encouraged to transfer his patient and give him what is often called the benefit of the doubt. Unfortunately, a not infrequent result of the operation under such circumstances, is the death of the patient somewhat earlier and with more suffering to mind and body than if spared the surgeon's aid. In such cases the value of the doubt must be considered as problematical.

The failure of the surgeon to relieve to any great extent the sufferer from a supposed incurable disease leads him to request the transfer of the patient at a time when the characteristic features of the affection are less pronounced, with the hope that the morbid process may be arrested at an early stage. Indeed, he may wish to attempt relief at a time when in the light of our present knowledge it is impossible to make a diagnosis. The physician may suspect the grave, perhaps fatal, nature of the malady, but, owing to the similarity, if not identity, of the symptoms to those of less serious conditions, he feels compelled to wait for further developments.

The surgeon, on the contrary, would at once make an exploratory incision on the ground that the better the patient's general condition the less the immediate danger from the operation to the patient's life, and, if the supposable lesions are encountered, the chance of relief is increased. But the diseased appendix is found normal, the acute intestinal obstruction proves to be a phantom tumor, the incarcerated gallstone is nonexistent, the abdominal tumor becomes a harmless enlargement of the liver. Exploratory laparotomies are undertaken for the relief of suspected cancer of the stomach and no cancer is disclosed. There are the patients, too, often more desirous of the operation than is the surgeon who is to perform it. The experience presumably is not unique in which a patient undergoes removal of the ovaries, uterus and vermiform appendix for asserted pelvic and abdominal pains and subsequently presents herself for surgical exploration of the region of the pancreas. The pain referred to this organ proves, without operation, to be depend-

¹ Anniversary discourse before the New York Academy of Medicine, Dec. 5, 1901.

ent upon disordered gastric function of neurotic origin.

Dr. Foote, at a recent meeting of the Harvard Medical Society of New York, reported the case of a young man who complained of abdominal pain. The physical examination showed the scars of four laparotomies, one of which had been performed in Russia and three in this country. On the same occasion Dr. Gibson mentioned that a normal appendix, seven inches long, had been removed from a patient who claimed to have had previously seven attacks of recurrent appendicitis. The patient, not content with this demonstration of a normal appendix, subsequently applied at the Roosevelt and Bellevue hospitals for treatment for appendicitis. It is not to be wondered at that the host of neurotic and neuropathic men and women seek for operative relief for real and fancied ailments when they receive such advice as the following, taken from the editorial column of a daily paper: "It is probably true that the Dowager Empress Frederick's life could have been saved if she had been willing to have her stomach amputated. There are enough stomachless human beings alive and flourishing, and slight enough record of failures of the operation, to have made the chances distinctly even. The discomforts are not many, either; a few rules must be followed. The food must be cut up very fine and carefully masticated. One must show moderation at meals. The man without a stomach cannot eat as much as the man who has one. Everything must be warm, because the stomach, which heats food for the intestines, is missing."

Exploratory laparotomies, whether by advice of the physician, desire of the surgeon, or urgency of the patient, are only too frequent. They are not without considerable danger, and often disclose conditions which cannot be relieved, and which might have been appreciated without an operation; the high mortality in such instances often is attributed by the surgeon to the disease and not to the operation. Not infrequently they are undertaken without sufficient forethought. They tend to make the physician superficial in observation, since the diagnosis is to be made definitely by means of the operation. They lead the surgeon to become only too ready to act upon the diagnosis of those often incompetent to make them either through ignorance or inexperience, since the actual condition is likely to be made clear by his skill. Each case should carefully be scrutinized both by physician and surgeon before this operation is undertaken. The former may find conditions which will nullify the success of any operation; the latter may be led to recognize that the exploration can but add to the discomfort of the patient without prospect of any definite relief. It should not be made for diagnosis simply, but always for the purpose of curing disease or of relieving suffering. The art of the surgeon should ever be regarded as sanatory and should be called upon as rarely as possible to make a diagnostic procedure of what is essentially a therapeutic measure. The exploratory operation which dis-

closes nothing is more likely to reflect upon the judgment of the surgeon who performs it than to represent a tribute to his skill.

In partial justification of some of these statements, as well as of others which are to follow, I have asked a former assistant, Dr. G. A. Waterman, to examine the records of the Massachusetts General Hospital during the period of 10 years from 1890 to 1900. This decade was selected as it is recent enough to include many of the advances which have been made in operative technics, and the years represented are sufficiently numerous to furnish an experience of profit. The value of the evidence lies in part from its source, and in part from its representing the experience in a single institution of a number of surgeons identified with the practice of surgery in general.

The following table shows the increasing frequency and various results of exploratory laparotomies at this hospital. It is not asserted that all such operations occurring during the years included are tabulated, only as many as could readily be ascertained by an examination of the records, hence the figures are to be regarded as chiefly of relative value. Many successful explorations undoubtedly are recorded under other titles than that of exploratory laparotomy. The total mortality and the failures to cure may be distinctly less than stated, but they indicate sufficiently that an exploratory laparotomy, except in especially selected cases, is an operation which carries a very decided immediate risk to the life of the patient, and a very considerable doubt as to the degree of relief to the symptoms. In general, with the increasing frequency of these operations, there is some lessening of their mortality-rate, although the percentage of relief and cures is not especially improved.

FREQUENCY AND RESULT OF EXPLORATORY LAPAROTOMIES AT THE MASSACHUSETTS GENERAL HOSPITAL FROM 1890 TO 1900.

Year	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
Number of operations	10	5	15	13	15	21	39	23	42	30
Cases of malignant disease	8	2	9	8	5	8	25	7	28	18
Number of deaths	3	2	7	8	7	9	11	13	16	11
Failure to relieve	6	2	5	3	2	5	22	3	17	13
Relief or securing diagnosis	1	1		1	2	5	5	4	6	5
Cure			3	1	4	2	1	3	3	1
Percentage of malignant disease	80%	40%	60%	61%	33%	38%	64%	30%	66%	60%
Percentage of deaths	30%	40%	46%	61%	46%	42%	28%	56%	38%	36%
Percentage of failure to cure or relieve	90%	80%	80%	84%	60%	36%	84%	69%	78%	80%

The relief of suffering and the lengthening of life are legitimate aims for the surgeon as well as for the physician. The methods of the former are necessarily so much harsher than those of the latter that it may well be questioned whether too many operations are not performed with these objects in view. Granting that life may the more be prolonged by the aid of the surgeon, is the life thus extended worth the living? Neither physician nor surgeon can answer this question with any degree of certainty until the life of the pa-

tient has been lived. But the physician and surgeon are called upon to advise and are not always united in their opinions. It is often the tendency of the surgeon so to express himself to the sufferer that the latter frequently is made more hopeful than is justified by the evidence at hand. He is likely to bring before him the most favorable outcome of the suggested operation. The mortality is apt to be placed as low as has been obtained by the most skilful and experienced of the world's surgeons, although it may be far the reverse in the practice of the surgeon concerned. The degree of relief obtainable is likely to be exemplified by the exceptional instances, not by the rule, for the surgeon is more likely to recall the few successful cases seen at more or less frequent intervals, than the numerous fatal cases of whose history after recovery from the operation he may know nothing. Assuming that the diagnosis of the conditions suggesting surgical treatment is clear, it is often found that complications exist rendering any treatment useless. The resection of ribs and drainage of the pleural cavity in pyopneumothorax seem of but little value when there is extensive tubercular infiltration of the lung on the side opposite the diseased pleura. The operation must be regarded as worse than useless if at the same time there is evidence of amyloid disease of the abdominal viscera. What avails the extirpation of a renal tumor if at the time of the operation secondary nodules are present in the brain or lungs? The more learned in pathological anatomy the adviser is, the more cautious will his prognosis be. Unfortunately it is the tendency of the day for the surgeon in general to neglect this branch of knowledge. He is inclined to devote himself rather to the bacteriopathology which makes his operation succeed than to the post-mortem examination which usually gives ample evidence of the cause of the patient's death.

It may be unwise for the sick man to be placed in any other than a hopeful position before the operation, but the latter should not be decided upon until those nearest the patient are as thoroughly informed upon all points as possible. It is especially for the physician on such occasions to realize his responsibilities and to prepare himself to meet them, since it is he who eventually is the less likely to be relieved of them. He cannot discharge this obligation by transferring his trust to the care of the surgeon, but should endeavor to aid the latter to the utmost possible extent. The patient then will be in a better position to decide whether he will prefer the known to the unknown; for with the best intentions of the surgeon the future of his patient is only to be forecast by past experience, and fateful as this may be, it not infrequently is rather to be welcomed than the alternative offered.

Such statements receive their strongest illustration in malignant disease of the alimentary canal. Both surgeon and physician are agreed upon the usual fatal outcome of this affection and the uncertainty as to its duration. They are fully aware that in many cases death is likely to be pre-

ceded by great suffering from mechanical obstruction. Nevertheless, the surgeon is ready to operate because there is a possibility of error in the diagnosis and the symptoms may prove to be due to a remediable cause, or the obstacle may be removed or overcome for the time being. The abdomen, therefore, is explored, first to make clear the diagnosis. Should this prove correct, even if there is evidence of extensive incurable disease, the inclination then is strong to attempt some sort of relief by resection, gastrostomy, anastomosis or colostomy. The surgeon may urge resection on the ground that it has successfully been performed by himself or by others, and if the patient survives the operation pain is likely to be relieved and a life of usefulness may be prolonged for a number of years. He may present as an alternative anastomosis, with its somewhat lower mortality and less favorable outlook as to the duration of life. With the discovery of conditions unfavorable to the former operation and mindful of the high mortality-rate of anastomosis, recourse may be had to colostomy, with its customary disagreeable and annoying after-effects, producing at the best only a kind of relief for an uncertain period of time. The physician knows that without any operation apparently insuperable obstructions have yielded and indefinite periods of active life have subsequently been enjoyed. He knows that if the symptoms of obstruction persist the patient's suffering may be lessened by medicinal treatment, and that such treatment often is necessary even after temporary comfort only is obtained from an operation. He may know also that the surgeon himself, when asked what he would desire if in the place of the patient, has replied that he should prefer to die during the operation or to live the least possible time after it, than to prolong life at the probable cost of health and happiness. The higher its mortality the warmer would be his welcome of the operation.

In order to obtain the experience of patients after such operations upon the alimentary canal, an inquiry has been addressed to the friends of a considerable number of those who have been operated upon at the Massachusetts General Hospital, during the period between 1890 and 1900, for diagnosticated and demonstrated cancer of the stomach and intestines. Information was sought as to the degree and duration of any relief which may have resulted from the operation. The replies which have been received, including the information derived from the hospital records, pertain to nearly three-fourths of the cases thus investigated and show clearly what has been the melancholy outcome in many of the cases of this class of gastro-intestinal disease so generally cared for at the present time by surgeons. The pathos of some of these replies make them all the more convincing.

It should be stated that it is probable that all the patients operated upon during this period are not included, that successes may have been overlooked, and that few or many of those from whom no replies were received are likely to have under-

gone the more favorable experience, if such it may be called, of prolongation of life, perhaps even of relief from suffering. Regarding the mortality and duration of life as relative, and the percentage of suffering as inexact, the evidence presented nevertheless must be considered as offering grave doubts as to any considerable benefit from this class of operations as a whole. It may be that the coming ten years will prove more encouraging, but the enthusiasm of the operator should not permit a warping of the judgment based upon so recent an experience.

In the series collected there were 14 operations for cancer of the stomach. These included 4 gastrotomies, all the patients with the exception of 1 not heard from, dying within 2 months, and 4 pylorotomies, 1 of which was not heard from, 2 died within the first month after the operation, and the fourth was relieved for several months. At the end of 6 or 8 months, however, the last patient began to fail and died at the end of a year and a half. Of the 6 gastro-enterostomies, 4 died within 17 days, 1 "received no relief whatsoever and after 12 years of terrible suffering passed away." The sixth felt quite well for about 2 months after the operation. He was then confined to the bed the greater part of the time and "suffered untold agony" till his death 9 months later.

There were 10 cases of intestinal resection of which 8 died within a month after the operation. The ninth patient was found to have a girdling ulcer without gross evidence of malignant disease, although from microscopical examination regarded as an adeno-carcinoma. He was at work as janitor and enjoying fair health two and a half years after he was operated upon. The tenth patient was not heard from. Of the 5 cases of intestinal anastomosis 2 died within the fortnight following the operation, 1 lived 6 months and 2 have not been heard from.

There were 49 inguinal colostomies, and the subsequent history of 37 of these has been ascertained. Twenty-eight of the latter died within the half-year following the operation. Two lived between 6 and 12 months, 5 lived from 1 to 2 years, and 2 lived 27 and 30 months respectively after the operation had taken place. Thus only a few more than one-fifth of the cases heard from were alive one year after the operation.

When the question of relief to suffering is considered it appears that among 16 patients who fully recovered from the immediate effects of the operation and lived 4 months or more after it there was some or much relief in 8 and no relief also in 8.

The operation was regarded as "decidedly unsuccessful" in a patient who died a month later and in 10 days after leaving the hospital. A patient who lived for 2 months was afforded "only temporary relief." Another living 3 months received "very little relief." One who lived 4 months was relieved "of the intense agony she was almost constantly suffering previously. After the operation the pain occurred occasionally."

Her last 4 months of life, however, were spent in the hospital. Of a patient who lived 5 months it is stated, "the operation was no relief. The pain from the running sore continued. Only for the pellets you prescribed in the hospital he would be screaming all the time. They had the effect of deadening it." Another who lived 5 months "derived no benefit from the operation. . . . She suffered intensely except when under the influence of opiates. . . . No doubt the operation prolonged the suffering." A patient who lived 6 months after the operation had "slight temporary relief from acute suffering, but she never regained strength." Another patient also lived 6 months "free from pain that was severe until the end, and the chills were less. An ugly growth formed on the outside which caused him much uneasiness." The patient who lived 16 months died "after a painful illness which lasted till death. Excepting a few days at a time he was continually in pain and under doctor's care." For one who lived 21 months "the relief did not last only about 3 months. Then he was a great sufferer the rest of the time." The life of one patient was prolonged "for 2 years, during which time he suffered continually. The relief afforded lasted about 3 weeks, and from that time on his suffering steadily increased." Of another patient, who lived also 2 years, it was learned that "he never was so he could sit up, but he thought it must have been a great relief to him to have the discharge come the way it did. He thought that he lived longer by having the operation, although he would have been glad to go long before he did he suffered so much. He suffered a great deal but he had a medicine . . . that took away the pain in a measure. . . . He said if it was to do again he should have the operation as before."

The two patients who lived 27 and 30 months respectively were relieved for a year. Each was then operated upon for a second time, after which the condition was one of invalidism.

There were 8 cases of anal excision of rectal cancer, 3 of whom were not heard from. Of the others 1 died within a week, 2 lived 14 and 18 months respectively, the fourth was living and well at the end of 2 years, but in this case the nature of the growth does not form a part of the record of the case. The fifth patient is now alive and well nearly 12 years after the operation. The microscopical examination of the specimen showed "a fibrous tissue stroma, the spaces of which were filled with epithelial cells." Nevertheless, the result in this case is so exceptional that a legitimate doubt must be raised as to the cancerous nature of the tumor. The evidence recorded is not sufficient to remove this doubt except from the mind of the sanguine surgeon. The patient who lived 14 months became "an intense sufferer. He had to take morphine for relief. When he died he was a mere skeleton. When he got home he had not control of himself and used 1 pound of cotton a week; at the time of his death he used 7 pounds." Concerning the patient who lived 18 months it was stated that she "was relieved for

only 2 months and then it began to trouble her and she lived until March 19, 1892, and some of the time suffered intensely. The last 6 months was under the influence of opiates most of the time."

Of the 17 Kraske operations 7 were not heard from. Of the 10 remaining 7 died within the year following the operation. Three lived 22, 29 and 32 months respectively. One patient remained in the hospital for two months after the operation, then returned to her home, "lived 4 weeks, and was a great sufferer during that time." A patient who lived 8 months after the operation "was a constant sufferer from the time he was operated on until the time of his death." Another who lived 22 months "never worked at all, as he was not able. He did not suffer very much until he was home about a year, and after that he suffered something terrible; could not get any relief at all; he was just as helpless as any infant." Of the patient who lived 29 months it was stated "that no relief followed operation. It was no doubt a success, but the cancer grew within a year, and although the operation prolonged my father's life, complications arose resulting from the new rectum, and it was worse, much worse than cancer. My mother died 6 months after my father. She passed through a serious operation, died also of carcinoma. If ever I have the dreadful disease I shall insist to be filled with morphine and die sooner, although I believe in operations, but not for that disease." The patient who lived 32 months "enjoyed fairly good health for 6 months, but after that she never saw a well day."

Of the 77 cases of cancer of the alimentary canal, whose history subsequent to the operation for the relief of this affection was learned, it appears that death took place within one week in 28, or 36%; between 1 and 4 weeks in 15, or 19%; between 1 and 6 months in 14, or 18%; between 6 and 12 months in 4, or 5%; between 1 and 2 years in 9, or 11%; between 2 and 3 years in 4, or 5%; living as above stated, 3%.

Thus 54% of these cases died within a month after the operation and 72% within 6 months. Any considerable prolongation of life applied, therefore, to less than 30%, and to many of these the life was one of suffering and sorrow, necessitating the frequent or constant use of opiates to obtain any measure of relief.

Intracranial tumors form another series of growths which have been operated upon for a sufficient number of years to permit a medical opinion to be formed of the value of this operation. Of the 15 cases included in the decade under consideration the subsequent history is known in 10. Of these, 4 died on the day of the operation. One died at the end of 3 days, a fourth at the end of 11 days, another at the end of 3 weeks, and 1 at the end of a month. Thus, within the month following the operation, 8 out of 10 cases died. The ninth patient died in the hospital at the end of 10 weeks. Of the tenth patient it is stated "that previous to the operation he suffered most intensely from headache and vomiting, with

attending weakness. After the operation (the immediate effects having passed away) he was comparatively free from pain, and there was some gain in his speech and paralysis.

"The second operation was more successful and he was much better, being able to drive and go about in the cars, etc. The improvement lasted until 2 or 3 weeks before his death, when he began to show signs of failing." He died 7 months after the second operation, which followed the first by a month.

The treatment of tumors of the kidney also occupies the debatable ground between medicine and surgery, and the experience at the hospital during the decade mentioned again offers but slight encouragement to the surgical treatment of this affection. There were 11 nephrectomies for malignant disease of the kidney, and replies were obtained relative to the fate of 8 of these patients. Four died within a fortnight of the operation, another at the end of two months, a sixth at the end of 3 months, and another at the end of 5 months. The eighth patient was living and practically well 8 years after his operation. The examination of the tumor after removal showed that the growth, stated to be a sarcoma, proceeded from the suprarenal capsule, the kidney being but little altered.

Physicians will readily admit that the surgical treatment of external malignant tumors frequently offers a source of relief to pain, deformity and incapacity, with but little immediate risk to the life of the patient. With the recognition that the disease probably will recur, the hope is maintained that recurrence may long be delayed, that it may take place within internal organs and prove relatively painless, or that death may result from some intercurrent affection wholly independent of the original disease. External tumors thus seem to fall wholly within the region of surgery. The physician, however, should stand ready to reclaim from the knife what may otherwise be satisfactorily treated. The surgeon is quite willing to transfer for medical treatment after operation the case of disease which may recur, with the hope of avoiding or postponing recurrence, but in certain instances it is apparent that medicinal or non-operative measures are to be tried before an operation is undertaken. No more satisfactory instances of the value of such treatment have been reported than those of W. B. Coley, from the use of mixed toxins, and those of F. H. Williams and others, from the use of the Röntgen rays. Certain tumors of the neck in particular may be said to lie in this borderland of medicine and surgery. Long regarded as demanding surgical treatment in the first instance, the repeated unsatisfactory result of such treatment inevitably leads to the conclusion that surgical methods are to be employed only as a last resort after other measures have failed. The patient seeks medical advice for enlargement of the thyroid gland. The physician, perhaps not well informed, sends the patient to the surgeon, who frequently takes the shortest way of ridding the patient of the

deformity, unmindful that thyroids are not to be removed simply because they are enlarged. Indeed the deleterious effects of this treatment are only too well known by those who have seen the patient subsequently suffer from cachexia strumipriva to obviate the effects of which various modifications in operative treatment have been introduced and medicinal treatment has become necessary. It is always to be remembered, however, that we are mainly indebted to a surgeon, Kocher, for our knowledge of the curative effects of iodine in 90% of the cases, to say nothing of his more recent recommendation of phosphorus, thus rendering operative surgery unnecessary if not injurious in this proportion of the patients.

The wise surgeon realizes that the operative treatment of goitre is demanded only for such varieties as have undergone secondary changes. The colloid and cystic, the fibrous and calcified portions alone are those primarily demanding the use of the knife, provided the deformity is sufficient, while the parenchymatous enlargements usually rapidly subside when submitted to the treatment with iodine. If a part of the thyroid gland presents the characteristics of these secondary degenerations, it does not follow that the entire gland is disorganized. It is for the surgeon so to familiarize himself with the pathology of this structure as to treat what demands surgical measures, but to refrain from his treatment of such goitres, entire or in part, as can more successfully otherwise be cared for.

Even if the limitations of the medical and surgical treatment of goitre are well understood it would seem that the relation of enlargement of the thyroid to Graves' disease is frequently misunderstood. The surgical treatment of the latter affection finds new advocates from time to time, and the value of this treatment is supported by columns of most encouraging figures. It must be remembered, however, that the term goitre means merely enlargement of the thyroid gland, and that such enlargement differs in etiology, structure and in associated disturbances of function. Admitting that the removal of a considerable part of the diseased thyroid from a case of sporadic goitre produces a cure by relief to the deformity and to the immediate mechanical and remote constitutional disturbances, it by no means follows that this operation is to afford a like relief in Graves' disease. In the former affection the goitre is a cause of the disturbances; in the latter it is one of the disturbances the cause of which is unknown. Removal of this deformity, so often a vascular goitre, merely takes away one feature of the disease and has repeatedly led to the sudden and unexpected death of the patient, either on the operating table or while apparently in a state of normal convalescence from the operation. It would seem as if the reported successes of the surgical treatment of Graves' disease were attributable rather to a lack of agreement as to what should thus be designated than to the especial skill or good fortune of the operator. Buschan's conclusions from his analysis of such reports are

so suggestive, that in genuine Graves' disease extreme or threatening deformity alone is to be regarded as a satisfactory indication for the removal or obliteration of considerable portions of the diseased thyroid.

In like manner the surgical treatment of malignant lymphoma is to be disputed. Here again we have to deal with a progressive disease tending to produce extreme deformity of the neck often before other parts of the body are invaded. It is only after many years, even centuries, of observation and experience that the glandular deformities of the neck have become more and more sharply defined, grouped and classified. Even now there is apparent uncertainty and lack of agreement as to the significance of the term malignant lymphoma and the relation of this alteration of the lymph glands to other changes in the structure of these glands. That certain of the regional enlargements of lymph glands, with or without any considerable increase in the leucocytes of the blood, pursue the course of a malignant disease and eventually prove fatal, is universally known. The resulting deformity is so annoying that the patient hopes to find speedy relief in the extirpation of the tumors. The uselessness of this treatment of leukemic lymphomata seems almost universally recognized. In a leukemic malignant lymphoma, however, despite failure after failure on the part of the surgeon to afford anything but the briefest possible relief to deformity, case after case continues to be operated upon before any sufficient trial of medicinal treatment has been made. Finally the discouraged patient returns to his physician with equal, if not greater, deformity than before from the enlarged glands, and in addition bearing the scars of repeated operations. The inutility of the treatment is sufficiently indicated by the combination of the lesions. Despite the limited value of the arsenical treatment of this disease, it is likely to be advised after the operation, and if of value then, as it sometimes is, although perhaps temporarily, it is likely to have been equally useful before operative treatment was undertaken. Despite such experiences operations are so frequent upon this class of patients that it would seem as if ignorance of the progress of this disease prevailed, that its nature was unrecognized, or that the patient had not been fully informed of the inevitable outcome.

The illustrations here presented are but a few drawn from the borderland of medicine and surgery, and it is unnecessary and perhaps undesirable to extend them indefinitely. They are not intended to oppose the surgeon in his persistent efforts to relieve suffering humanity, but to emphasize the importance of the careful study and selection of suitable cases. It is not to be expected that the practice of the healing art is to be based solely on hygiene and surgery, the former to prevent, the latter to relieve or cure disease, although this assertion so frequently has been the shibboleth of the last quarter of a century. The value of remedies in common use is sufficiently well established to permit their limitation to

be recognized, and progress in the future is likely to depend much more upon the discoveries which shall make surgery less necessary than to open new fields for surgical treatment. Fully recognizing the marvelous benefits to humanity which anesthesia and asepsis have brought about, it must be admitted also that these benefits are not wholly unalloyed. Operations are undertaken which are followed by the immediate death of the patient; others prove to be wholly unnecessary; and still others leave the patient in a condition of helpless invalidism, often making life worse than death. Any operation which does not better the condition of the patient must be regarded as a therapeutic error, since the knowledge thus obtained shows that the operation should not have been performed.

The advance of knowledge in the future should be in the direction of limiting these unnecessary and harmful operations; for the wisdom of the surgeon should serve as well to restrain him from operating as to enable him to operate successfully. Especially to be cultivated for these purposes are greater accuracy in diagnosis and prognosis, and a more widely spread knowledge of pathology and pathological anatomy. The surgeon thus will become a better adviser, although the number and variety of his operations thereby may materially be lessened.

Original Articles.

SUCCESSFUL OPERATION UPON A CASE OF BRAIN ABSCESS FOLLOWING SUPPURATIVE MIDDLE EAR DISEASE.¹

BY FREDERICK L. JACK, M.D., BOSTON,

Aural Surgeon to Massachusetts Charitable Eye and Ear Infirmary.

PRIOR to the appearance of Macewen's² treatise, the subject of suppurative infection of the meninges and brain, resulting from disease of the middle ear, had not received the systematic attention it deserved, though many cases had been reported, and the subject of brain abscess had been by no means neglected in the literature. This is not surprising in view of the universally hopeless prognosis of these conditions, both with and without operation.

A new impetus to the study and a fresh incentive to operation were aroused in 1893 by the work of this author, whose elaborate presentation of the subject from the pathological, symptomological and operative point of view, placed it for the first time on its proper plane, whether regarded from the scientific or from the purely practical standpoint.

The increasing interest in this subject as well as the improvement in prognosis appears from the statistics gathered by various writers. Up to

1889 von Bergmann³ found only 8 successful operations on brain abscess of otitic origin; up to 1894 Körner⁴ had collected only 55 cases of operation both successful and unsuccessful; in the following year he had increased this number to 92. In 1898 Marsch found reports of 60 successful operations upon temporal and 12 upon cerebellar abscess.

The prominent symptoms of brain abscess are headache and vomiting, with normal or subnormal temperature in uncomplicated cases, slow pulse, progressive mental deterioration, mental dulness passing into apathy and eventually into coma, preceded or accompanied by convulsion. Pupillary changes, ocular paralysis and optic neuritis may appear, the latter less frequently than in tumor. Hemiplegia sometimes completes the picture, and generally denotes extension from the temporal lobe inwards upon the internal capsule.

The usual seat of abscess is in the temporo-sphenoidal lobe over the tegmen tympani, and in this direction the exploratory operation proceeds unless definite symptoms of cerebellar disturbance point to invasion of that organ. Such symptoms following ear disease demand prompt surgical interference. It is true that in rare instances a small abscess may be absorbed, or a large one near the surface may discharge spontaneously, but this chance is too remote to justify expectant treatment.

The case which forms the basis of this communication is sufficiently important to place on record as showing the possibilities of operation even upon a moribund patient. It further shows that trephining over the squamous portion of the temporal bone is not always necessary for the evacuation and complete discharge of the abscess and removal of all symptoms. This point is of practical interest in view of the following conclusion of Macewen⁵ with regard to the operation through the tegmen tympani. "Such an opening into the cerebrum suffices for temporary purposes, but though it always ought to be made in order to eradicate the source of the infection, it is not safe to trust to it alone, as in many cerebral abscesses there are sloughs of brain tissue which cannot be easily removed in this way, but require a larger opening in the skull for their evacuation."

From the symptomological point of view it is hoped that the detailed examination of the speech defect in this case will be of interest, since Macewen states that careful reports are lacking of the variety of aphasia accompanying this disease, though its occurrence has been noted.

J. W., newspaper reporter, married, 25 years old, of Boston, presented himself at the clinic of the Massachusetts Charitable Eye and Ear Infirmary July 31, 1901.

History.—The left ear had troubled him for 3 years. There was a discharge last winter which ceased up to 6 months ago, when it reappeared. During the last 6 weeks he suffered with frontal

¹ Read before the Boston Society for Medical Improvement Dec. 2, 1901.

² Pyogenic Infective Diseases of the Brain and Spinal Cord, by William Macewen, M.D., Glasgow. New York: Macmillan & Co., 1893.

³ Die Chir. Behand. v. Hirnkrank.

⁴ Cited by Miller, *Deutsch. Med. Woch.*, 1897, vol. xxiii, S. 842.

⁵ *Deutsch. Med. Woch.*, 1897, vol. xxiii, S. 333.