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Psychosurgery

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PSYCHOSURGERY

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The following is another chapter of the revised *Medico-Moral Problems* book of Father Gerald Kelly, S.J., being published by The Catholic Hospital Association. Permission has been granted to give this preview of material concerning psychosurgery. Many of the book's chapters begin with a quotation of directives which are observed in the operation of Catholic hospitals, included in the publication, *Ethical and Religious Directives for Catholic Hospitals. Directive 44* which is the basis for Father Kelly's considerations of the treatment of mental illness and pain provides the introduction to his discussion.

Lobotomy and similar operations are morally justifiable when medically indicated as the proper treatment of serious mental illness or of intractable pain. In each case the welfare of the patient himself, considered as a person, must be the determining factor. These operations are not justifiable when less extreme remedies are reasonably available or in cases in which the probability of harm to the patient outweighs the hope of benefit for him. (Directive 44, Cf. Canadian Code Art. 41, U. S. Code, "Other Special Directives," n. 2)

By psychosurgery I mean cerebral surgery employed for the purpose of treating mental illness and pain. In the booklets on medico-moral problems there were four discussions of psychosurgery.[1] It is hardly necessary to incorporate all that material into the present chapter of the revised *Medico-Moral Problems*. It seems better to give here merely a commentary on directive 44, so that all will know its meaning. In this commentary, I shall say something about: (1) the operations; (2) indications; (3) effects; (4) medical evaluation of the individual case; (5) consultation; (6) permission; and (7) the moral decision.

1. THE OPERATIONS

The first successful psychosurgical operation was performed by two Portuguese physicians, Egaz Moniz and Almeida Lima. The operation was a prefrontal lobotomy, which consists essentially in severing the white nerve fibers connecting the frontal lobes of the brain with the thalamus. The Portuguese doctors accomplished this by making two small holes in the skull, one at each temple, and inserting a dull, rounded knife called a leucotome. Because this operation could not be performed under direct vision, it is often called a "closed" lobotomy; and, because of the instrument used, the operation has been designated a leucotomy.

[1] These were: "Lobotomy," "More about Lobotomy," "Lobotomy for Pain Relief," and "Pope Pius XII and Psychosurgery"—which were published in booklets I, II, III, and V, respectively. The original articles are in *Hospital Progress:* Dec., 1948, pp. 427-428; Aug. 1949, pp. 254-256; Feb., 1950, pp. 56-57; and Feb., 1954, p. 66.

Since the original operation, there have been many variations of technique. There is "open" lobotomy, in which enough of the skull is removed to allow for operating under direct vision. There is a transorbital lobotomy, in which a sharp instrument that looks very much like an ice pick is inserted along the nose and through the eye socket and the fibers are thus cut from below. Still another variation is "coagulation" lobotomy, which is accomplished by inserting insulated electrodes into the frontal lobes from above. And there are, as every physician knows, numerous other procedures: for instance, lobectomy and topectomy, which consist in removing parts of the brain substance; thalomotomy, in which a wire electrode is passed down into the thalamus and a small portion of this part of the brain is coagulated; and selective cortical undercutting, which involves cutting the white fibers in one of the main areas of the frontal lobes. Finally, there is the growing tendency to restrict formerly extensive operations by doing only a partial cutting, e.g., unilateral instead of bilateral lobotomy.

The foregoing may not be a complete list of psychosurgical procedures; but they are the operations most frequently mentioned in the literature. Each operation has its defenders and its critics. The obvious purpose of directive 44 is to take no sides in a controversy over techniques but simply to give the general rule that, granted the conditions outlined in the directive, any of the techniques may be used. As for the choice of technique in an individual case, a good working rule is enunciated by Fr. Thomas J. O'Donnell, S.J., as follows: "The only moral directive here is that the surgeon select that method which he considers safest in his hands and in the best interests of the patient."[2]

2. INDICATIONS

The directive gives only the very general indications for psychosurgery: namely, serious mental illness and intractable pain. The main reason, of course, for keeping to a general statement was the need of brevity. Yet, even if space allowed for a development of these points, it would not be wise to enumerate specific indications for the operations in a directive. As is the case regarding the operative techniques, there are differences of opinion among specialists concerning the precise indications for psychosurgery. For instance, some would limit it to psychoses; many others would extend it to certain forms of neurosis. The directive simply requires that the mental illness be serious: that is, an illness which is chronic and truly disabling. Granted this, and granted the other conditions to be explained later, the directive would allow the operation for mental illness, regardless of the technical classification of the illness.

As regards pain, the cases considered intractable in the sense of the directive would be great and unbearable sufferings complicated by an anxiety state that makes them similar to a mental illness.

[2] *Morals in Medicine* (Westminster, Md.: The Newman Press, 1956), p. 88.

Even though the directive is purposely phrased in a general way, there seems to be no objection to citing some of the statements of specialists concerning the indications for psychosurgery. I cite these, however, merely as illustrations and not as qualifications of the meaning of the directive. For instance, one doctor, writing in 1949, had this to say:

> Today most observers see the best outlook for prefrontal lobotomy in long-standing depressive illnesses, particularly the involutional type, and in incapacitating obsessive-compulsive neuroses. Also, certain schizophrenic patients, especially the catatonic subgroup, have benefited from the operation. Contraindications for lobotomy are present when the emotional tone has become chronically flattened (the operation would only "flatten" it all the more); and the advisability of operation is also questionable in those cases where antisocial traits were evident in the previous personality.[3]

Two years later (in 1951) another specialist, after having described the effects of lobotomy in certain cases of mental illness, concluded:

> It is considerations such as these which convince us that leucotomy is morally permissible in cases of serious psychasthenia, schizophrenia, and morbid attacks of depressive anxiety, provided these patients cannot be cured in some other way. On the other hand, we do not consider that leucotomy is permissible in psychopathic cases where the structure of the personality reveals, on serious examination, no still healthy core on which to work. In this connection, we are thinking of certain groups of psychopaths who, as we know from experience, are completely lacking in any development of the emotions, intelligence and will, beyond the sphere of simple essential relations. Leucotomy cannot achieve its purpose with such individuals, psychically ill-developed and deformed, because the faculties which the intervention aims at liberating are completely faulty.[4]

Another, and more general, statement of the indication for psychosurgery, is that "it presupposes that the brain of the patient remains more or less intact, and that as a result of delusions, hallucinations, or obsessions, the mental tension is such that the patient cannot carry on a normal life."[5] And, as a final sample of this interesting literature, let me quote this paragraph:

> Our patients are selected for lobotomy only after a thorough evaluation of the factor of anxiety, regardless of the clinical diagnosis. The beneficial effects of any type of prefrontal lobotomy are to be explained solely in terms of release of tension generated by repression. The chief symptom of such tension is anxiety in all its undisguised forms, such as guilt, self-condemnation, self-punishment, and fear, and in its masked forms such as phobias, obsessions, compulsions, hallucinations and delusions, hostility, and aggression. In this connection, it is well to remember that hypomanic and manic behavior is frequently a cloak for anxiety and in such instances represents a masked form of anxiety. If the symptoms of tension with resulting anxiety are prominent in a psychotic or neurotic patient, a varying measure of relief may be expected from lobotomy. The converse is also true, the less the anxiety the poorer the therapeutic result. Patients should then be selected on the basis of the anxiety symptom and the results of lobotomy appraised in terms of relief of anxiety and tension, rather than by the percentage of so-called remissions or cures in various diagnostic categories.[6]

[3] C. Charles Burlingame, M.D., "Psychosurgery — New Help for the Mentally Ill," *The Scientific Monthly*, Feb., 1949, pp. 140-144; words quoted are on p. 142.

[4] Prof. J. J. G. Prick, in *The Ethics of Brain Surgery* (Chicago: Henry Regnery Company, 1955), p. 28. The articles translated in this book originally appeared in *Cahiers Laënnec*, Mar., 1951.

[5] Quoted from *The Transactions of the Catholic Medical Guild of St. Luke* (Australia), Jan. 1954. This number of *The Transactions* contains a symposium on leucotomy held at Sancta Sophia College, University of Sydney, Mar. 1, 1953. The symposium covers pp. 19-42. The statement quoted in my text is by Dr. S. J. Minogue, p. 37.

[6] Howard D. McIntyre, M.D., Frank H. Mayfield, M.D., and Aurelia P. McIntyre, M.D., "Ventromedial Quadrant Coagula-

3. EFFECTS

As regards mental illness, the principal good effect of psychosurgery is relief from emotional tension: for example, a patient may be relieved from a crippling anxiety and, with proper help, may begin to lead a more or less normal life. Just how this relief is brought about has been and still is a matter of speculation. One explanation often accepted as very probable is that psychosurgery effects a sort of divorce between cognition and emotional response. In other words — to use an example — a thought or suggestion which might have caused the patient a veritable panic before the operation would scarcely trouble him after the operation.

There is a heavy price to pay for the desired release from tension. According to various specialists, psychosurgery induces personality changes of many kinds. For instance, here are some of the changes observed: inertia, lack of ambition and initiative, a tendency to be satisfied with little or no work or with work of a very inferior quality, lack of human-respect, some degree of moral degeneration, reduced capacity for prolonged attention, inferior planning ability, impairment of creative ability, lack of foresight and concern for the future, tactlessness, crude social behavior, lessening of affection, fatigue and excessive sleep, indifference to pain. To these personality changes may be added such things as failure to control toilet habits, and the risks of brain surgery in terms of mortality rate. Estimates of mortality rate vary somewhat, but, with some qualifications according to techniques, 2% to 3% is often given.

At first glance, this seems to be a grim picture, and one might easily conclude that psychosurgery does more harm than good. There are, however, some mitigating factors. For one thing, not all these effects are noticed in the same person. Also, there are degrees: some changes are very slight. Moreover, it is possible to preclude or avoid many of them by proper postoperative care. Furthermore, a careful selection of patients will avoid some of the worst effects; e.g. the probability of immoral acts and of antisocial behavior. Finally, there is the plain fact that, despite the unjustifiable experimentation that has sometimes been carried on in this field, the overall picture is that at least half the patients have been improved by the operations, and of the others, comparatively few were made worse. When patients are carefully selected, the operations properly performed, and postoperative care is properly given, the percentage of success is much greater.

It must be remembered that "improvement" both in mental cases and in cases of intractable pain must be measured in terms of the morbid state and not in terms of the premorbid personality. Precisely for this reason, some of the effects of psychosurgery that may be undesirable in themselves and for normal persons, may be actually good for those who are mentally ill or distraught with pain. I might illustrate this by a few citations from conscientious specialists. The first quotation concerns a woman patient, with generalized metastases from carcinoma of the rectum. The other two quotations concern mental patients in general. I shall merely give the quotations here, reserving comment to the next section:

> The extreme pain, anxiety and despair were not controlled by a total of 122 grains of morphine, 70 grains of luminal and 12 ampules of cobra venom, during the month prior to neurosurgical consultation.
>
> She was obviously terminal. Her demands for relief, the disturbance she set up, taxed everyone, house officers as well as nurses. Medication was as frequent as every two hours. She was too far gone physically to attempt a procedure such as chordotomy.
>
> Under pentothal anesthesia, a bilateral prefrontal lobotomy was carried out on March 6, 1947. Following this procedure the patient, after the usual period of inertia of about four to five days duration, was alert, visited pleasantly with her family. She was affable, quiet and content. Subsequently only 2 grains of luminal and ¼ grain of morphine were required until time of death approximately one month later.[7]
>
> Although it is difficult to predict in each individual case, the balance-sheet of profits and losses, current practice demands that the *gravity* and *incurability* of the mental disease should be taken as criteria for deciding in favour of this intervention [leucotomy]. When the true human personality appears to be buried, in no uncertain fashion, under the action of affective pathological mechanisms, the positive outcome of the intervention will more than compensate for the accompanying losses; for it will be a liberation — modest, indeed, but qualitatively significant — of the power of abstract thought, of the will, and of a certain interior freedom.[8]

It is essential that we should maintain our perspective and keep the whole picture before us. Here is a psychotic patient, hopeless, irrational, illogical, submerged in a psychotic quagmire. He has a successful leucotomy. He becomes rational, logical and responsible. He works efficiently in an office, in the home, for the council, as the presented cases showed us tonight. Indeed, he once more becomes capable of human acts.

It is true that leucotomy has reduced his capacity to become an Ignatius Loyola, but it has lifted him out of the aimless psychotic impotence. At least he is now capable of intelligently striving to reach the lower storeys within the celestial hierarchy.[9]

4. THE INDIVIDUAL CASE

According to the directive, psychosurgery is morally justifiable when it is medically indicated. This preoperative medical judgment, though especially difficult as regards psychosurgery, is made along essentially the same lines as in other serious surgical procedures. For instance, no competent and conscientious doctors would decide for or against any serious surgery merely on the basis of general statistics and results in other cases. The judgment must be made in terms of the particular patient's condition; the good and bad effects are weighed as they will probably occur in this case; and the final judgment to operate or not operate is concerned with a comparison of these probable effects on the patient. All this may seem too obvious to mention; yet I have seen some literature, both medical and moral, which at least implies that important surgical decisions should be made merely on the basis of statistics. This, of course, is not correct. The doctors' ultimate responsibility must always be con-

tion in the Treatment of the Psychoses and Neuroses," *American Journal of Psychiatry*, Aug., 1954, pp. 112-119; see p. 119.

[7] Edmund A. Smolik, M.S., M.D., F.A.C.S., "Surgical Methods for the Management of Intractable Pain," *Mississippi Valley Medical Journal and Radiological Review*, Mar., 1948. Quotation from a reprint without page numbers.

[8] *The Ethics of Brain Surgery*, p. 28.

[9] *The Transactions* (see footnote 5), p. 41; statement by Dr. F. J. Kyneur.

cerned with the individual case.

Another consideration common to all preoperative decisions concerns the possibility of obtaining the same good effects in some more conservative manner. Thus, in our particular problem, everyone would admit, I think, that the ideal treatment for mental illness and pain is psychotherapy, because psychotherapy is completely constructive. And, when psychotherapy is not feasible, the next consideration must be given to the possibility of producing the good results by means of chemical therapy. In the treatment of pain, this is the more common way of dealing with the situation: that is, by means of drugs, the use of which can be carefully controlled. As I write this chapter, there are already some indications that the use of various forms of chemical therapy may supplant the more drastic measures that have been used in the treatment of mental illness and intractable pain. Even the most enthusiastic supporters of psychosurgery would welcome further progress along these lines.

Physicians and moralists who write about psychosurgery usually stress the idea that it is a procedure "of last resort." This is the meaning of the directive when it says that psychosurgery is not justifiable "when less extreme remedies are reasonably available." Article 41 of the Canadian Code is more specific and more helpful on this point. It states that psychosurgery is permitted "when other treatments have failed, or are unavailable or deemed medically inexpedient."

Theoretically, the choice of therapeutic measures is always made in terms of the best interests of the patient. Other considerations such as the advancement of science and the help of other people are secondary. Every medical society would subscribe to these statements. The directive, in calling attention to the primary place of the patient's welfare, emphasizes the fact that he is a *person*. There are several reasons for this emphasis. It is easy to lose appreciation of the true human dignity of some mentally ill persons; and this can lead to experimentation for the good of others at the expense of the patient. It is my impression that such experimentation is more common in public institutions than in private hospitals and that it is less common in our country than in some others.

Failure to appreciate the personal dignity of the patient can also lead to psychosurgery just to make him more manageable. If this means merely to reduce the work of those who care for him, it is completely unjustifiable. I say "merely," because in some instances it is actually for the patient's own good to make him "more manageable." I refer to cases in which the psychosurgery protects him from himself by reducing a suicidal impulse, and makes it possible for him to have greater liberty by reducing dangerous antisocial traits.

In the human person, there is a hierarchy of values, as Pope Pius XII has pointed out.[10] The highest value, of course, is spiritual: the power to think and to use free will. No good of the merely corporeal order is sufficient to compensate for the loss of these spiritual powers. Yet, when those treating the mentally ill forget their personal dignity, they may also forget this order of values and sacrifice the spiritual for the corporeal. Thus, we hear at times that patients have been dehumanized, turned into vegetables, by psychosurgery. Very likely such things have happened chiefly because of unintentional mistakes in predicting results or in unintentionally making an operation too extensive. Yet, they can also be the result of a materialistic mentality that does not recognize the true dignity of the human person.

The specialists quoted in the previous section show a fine appreciation of true values. Those who speak of the mentally ill make it clear that their aim is to liberate the spiritual powers. And, though the doctor does not mention the spiritual aspect explicitly, it seems clear that the woman who had the prefrontal lobotomy for pain was better able to prepare herself for death after the operation than she was before. In her case, as in all terminal cases, the ability to pray and to cooperate with grace should be considered as especially precious. In terms of the human person and his destiny, it is the supreme value.

5. CONSULTATION

The Canadian Code explicitly requires the serious consultation of specialists before psychosurgery. Our directive supposes this. Moreover, this is a case in which special care must be taken to protect the interests of the helpless.

6. PERMISSION

Also presupposed here is the necessity of due permission before psychosurgical intervention. If the patient is capable of making his own decisions, he has the inviolable right to give or to refuse consent. To perform the operation through deception or against his will is an invasion of his rights. If he is incapable of making the decision, his parents or guardians have the right to make it for him. Here, too, as I pointed out previously in another chapter, special care to protect the patient is necessary. Hospital authorities should see that no undue influence is brought to bear on the patient or his guardians and that guardians do not make the decision through selfish interests. Competent and conscientious medical consultants can do much to prevent such dangers.

7. THE MORAL DECISION

Granted the conditions explained in the foregoing sections of this chapter, psychosurgery is, as the directive states, morally justifiable. It is hardly necessary to elaborate on this. However, I should like to add a word about a papal statement that has caused some misunderstanding. In his address of Sept. 13, 1952, Pope Pius XII said that a man may not submit to medical procedures which alleviate physical or psychic illness, but at the same time "involve the de-

[10] Cf. his statement in the concluding section of this chapter.

struction or the diminution to a considerable and lasting extent of freedom — that is to say, of the human personality in its typical and characteristic functions. In that way man is degraded to the level of a purely sensory being — a being of acquired reflexes or a living automoton. Such a reversal of values is not permitted by the natural law."

When that statement first appeared, some doctors asked me whether it was a condemnation of psychosurgery. They were mu h concerned over that. Actua y, there was no sound foundation :r such concern. The Pope was s 1-ply indicating in rather broad, g 1-eral terms a case in which 1e harm to the patient would o t-weigh the benefit, because 10 merely material benefit would c(n-pensate for the loss of freedom to a considerable and lasting exte ." I think this point was explai ed sufficiently in section 4 of his chapter.