

SOME IATROGENIC DISEASES OF MANKIND

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"The cure is often worse than the disease." "The operation was a success but the patient died." "You physicians are fortunate because you can always bury your mistakes."

These and countless other quips of a similar nature have doubtless been thrown up to the medical profession since it first emerged as some type of organized activity and became recognized as a sector of human society. That this has been so is ample proof that the public at large has long been aware of the frequency of what we now call iatrogenic diseases, or physician-produced ones.

The thoughtful student of medicine soon comes to the realization that the practice of medicine is in a very true sense a big gamble with the life of the patient as the stake at hand. It soon become apparent that almost every treatment is a calculated risk with the possible dangers attributable to the treatment prescribed or perhaps of its omission are balanced against the dangers of the disease itself as far as is known.

Despite the fact that physicians have long known of this problem in medical life, there have been very few who have publicly called attention to this difficulty. Foremost among these Samuel Christian Hahnemann who earned the title "medical rebel" because of his disenchantment and subsequent bitter revolt against the prevailing methods of treatment of his time. Blood-letting, vigorous purges, polypharmacy, and very strong medications undoubtedly produced numerous iatrogenic diseases and Samuel Hahnemann's announced plea for the "minimum dose," "single remedy" and attention to the "totality of symptoms" can certainly be acclaimed in the light of history as laying the groundwork for scientific medicine as it is practiced today.

There have been others since then. We recall among others many therapeutic nihilists but with all honesty one wonders whether their decision to do nothing to treat the patient might

not be just as capable of producing the undesirable effects as medications and treatments which might have been prescribed. I recall with considerable interest an outstanding professor of obstetrics and gynecology whose favorite watchword was "intelligent neglect." The qualifying adjective, however, renders this a by no means simple method of therapy.

More recently one has noticed a number of articles on medical diseases under the title of iatrogenic diseases and most recently an article by Dr. Basil Walman of the University of Manchester in Manchester, England, published in *The Practitioner*, called my attention to this condition and prompted this present review.

If we look carefully at our methods of treatment, we find that iatrogenic diseases in mankind may start even before birth. In certain circles it became routine for physicians to request roentgen ray studies of the female pelvis shortly after pregnancy was confirmed to make certain that the pelvic outlet was adequate to produce the product of conception. It is now, of course, generally recognized that x-ray exposure to a pregnant woman in the early months of pregnancy may cause congenital defects in the fetus, particularly if the fetus itself is not carefully protected by proper screening and, of course, this applies equally well to the possibility of the irradiation hazard in infancy. Some of us recall the time when x-rays of the chest of newborn infants for the possibility of an hypertrophied thymus gland were routine and that when the gland was found to be enlarged, x-ray therapy was given. It is now claimed by some that cancer of the thyroid gland has resulted in many cases so irradiated and although we personally have not been able to confirm this influence, certainly all of us are becoming more cautious of radiation in pregnant women and young children and roentgenologists in general are using more efficient machines and better screening to eliminate this hazard.

Next we think of the immunization procedures. Here perhaps we have one of the best examples of iatrogenic diseases in man, for certainly, taking the first of the generally accepted immunization procedures, we know that smallpox vaccination is really an excellent example of a true iatrogenic disease. Here

the patient is deliberately given a dose of cowpox to protect against the similar disease smallpox. Fortunately, in few if any cases is the cowpox itself fatal and this turns out to be a truly benign iatrogenic disease because of the immunity which is created against the much more serious smallpox. However, a word of caution must be given even here for it is now well known that infants who have eczema and who are exposed to an active vaccination lesion, either accidentally or deliberately, are quite likely to spread this and have a very severe generalized reaction. There are some other infants who seem to have a very severe generalized reaction. There are some other infants who seem to have a total lack of immunity to the disease and may develop a generalized severe disease, frequently associated with gangrene. These fortunately are quite rare but this must always be borne in mind. Our other methods of immunization with toxoids, vaccines, antitoxins, etc., must also be kept under constant surveillance. All of us are all too well aware of the terrific set-back which the Salk poliomyelitis vaccine received when a small proportion of one manufacturer's product apparently was found to contain live virus and induced the disease in a certain number of patients. Many will recall that fatal hepatitis occasionally accompanied the early use of yellow fever vaccine and almost inevitably there are some in whom the effects of any new method of immunization may be worse than the disease itself. Despite this, I think most of us will agree that the beneficial results outweigh the dangers, provided every possible precautionary measure is taken in both the preparation and the administration of the immunizing agent.

Continuing through the period of infancy, we can think of a very prominent disease of years gone by which is now fortunately quite rare, viz. acrodynia or "pink" disease. It seems quite well authenticated now that this disease was the result of the susceptibility of certain individuals to the mercury in calomel or similar mercurial medications which were so prevalent in the nineteenth century. Particularly did teething powders contain mercurv which seemed to produce this entity. Now it is a clinical rarity but it serves to illustrate to us the evident danger of certain medications.

Again in the field of infancy, it has become well established that excessive doses of certain forms of vitamin K containing products, notably the naphthaquinone derivatives, are potential hemolytic agents and in excessive doses can destroy red cells and increase neonatal jaundice. Thus, while we are attempting to protect the infant from hemorrhagic disease of the newborn, we serve only to produce hyperbilirubinemia with its attendant dangers. Somewhat similarly, it has been demonstrated in this country that where gantrisin was used routinely in premature infants, there seemed to be a marked increase in the bilirubin in the blood with a strong chance of crippling or fatal kernicterus.

Once again remaining in the period of infancy we have, of course, the many recent advances in vitamin therapy. These also are not without accompanying risks, particularly should vitamin pills or tablets be left where younger children can get them and take an excessive amount if some of the more palatable television-advertised products are used. Here we note, and this is particularly true abroad, that hypervitaminosis due to vitamin D has been noted many times: we also know that hypervitaminosis due to vitamin A is another fairly common entity, and that these two diseases can readily be avoided by careful administration of the normal prophylactic dose. Excessive doses of both of these have, of course, been used therapeutically and it is usually products of this type which result in hypervitaminosis rather than the less concentrated forms currently used for prophylaxis.

Just as we were about to congratulate ourselves upon our improvement in the care of prematures, particularly the smaller ones, it became evident that among those under 3 pounds at birth the incidence of retrolental fibroplasia was increasing rapidly so that this disease became one of the leading causes of blindness in children. For many years the true cause of this disease was unknown and it took a rather remarkable bit of medical detective work plus cooperative testing in a number of large hospitals working together to show that not only did excessive doses of oxygen, i.e. oxygen concentration in excess of 40% for periods of 48 hours or longer, seem to be the pre-

disposing factors but also that alternate cases taken at random who were not given the presumed benefit of this oxygen survived with about the same frequency as those who received what we believed at that time to be life-giving oxygen. Once again, then, that which was intended to help in many cases was found to hinder.

Still another scourge of the newborn period is the fairly recently recognized disease we call "erythroblastosis fetalis." Since the understanding of the Rh Factor, and its sub-groups in human blood we have come to realize that this condition is most often the result of the development of antibodies to these factors either through their presence in the blood of an infant born at an earlier date to that mother, or to the previous administration of whole blood containing these factors to the same individual—either intravenously or intramuscularly. With this knowledge comes the realization that here again we may have a truly iatrogenic disease—either from erroneous blood typing or from ignorance of or failure to appreciate this danger.

Along a similar line we find that all too many cases of serum hepatitis have followed the administration of blood, plasma or even through the use of needles contaminated with the virus of this disease—once again a physician-induced entity!

As we get beyond the period of infancy into childhood and then, of course, on into adult life and then geriatrics, the problems of drug therapy become more pronounced.

It is generally well known that accidents are becoming one of the leading causes of death in all children over 2 years of age and that poisoning through the over-dosage or accidental ingestion of medications leads the list in this category. Were this the only danger to drugs, however, we might have relatively little cause for alarm but there is almost no drug category which does not account for serious disease or death in some individuals. Even that most widely used of all medications, aspirin, has been responsible for a number of fatalities and aspirin poisoning heads the list of drug poisoning cases. In the group of sedatives, the dangers and side-effects of the barbiturates are, of course, well known to all of you, and when we get into the

realm of the antibiotics there are few among us who have not seen dangerous or drugs." Where these occur in an individual for whom the drug seemed indicated as a life-saving measure, the medical profession can at least feel that a calculated risk was taken, but when these antibiotics and chemotherapeutic agents are used, as they are so often, without adequate indication the harm resulting certainly falls into the category of an iatrogenic disease. Serious toxic effects have been reported from such apparently innocent medications as a certain type of nosedrop reported as being safe for children and those of us who have had much experience with any of the tranquilizers know that with what a generally considered a normal dose for a child, the children will not infrequently show incoordination, staggering and stupor from this same dosage.

Turning to another type of drug therapy, at the present time, it is probably that more harm is done in the abuse of endocrine products than in any other form of medication. Even the comparatively innocuous thyroid substance not infrequently produces serious side effects and the abuse of pituitary extracts, gonadal hormones and other similar products is, of course, known to all. Finally, in the realm of drug therapy we must call attention to the ever increasing use of the adrenal steroids. Pain alleviating and life-saving though these drugs may be, one cannot help but wonder how many patients would have lived longer and better lives without the use of these drugs. In fact it is probably safe to say that there are none of the many potent drugs available to the medical profession today which do not, at one time or another, cause more harm than good. This is not to say that these should not be used but that they should be used only when very well indicated indeed.

"Modern chemistry and technology have made available countless agents of proved or potential therapeutic usefulness. The availability of these medicaments imposes increased responsibility on the physician, who must provide his patient with every possible relief from suffering and disease and at the same time must administer nothing deleterious or destructive. This is a difficult situation because potentialities for evil reside in even the most benign drug."

"He must always bear in mind the fact that even good medicine is at best the lesser of two evils."

I am sure there is not a one of us who could not add to this list ad infinitum if we were to review all of the chemotherapeutic or antibiotic agents which we now have at our command. Similarly, I am sure that other methods of medical approach besides drugs are also capable of producing iatrogenic diseases. Certainly, poorly applied psychotherapy has been known to do much more harm than good and the dangers of inept or improperly indicated surgery are known to all.

At this stage in our medical introspection it might well behove the medical profession to give some thought to the possible end results of our continued efforts to reverse the old Spartan philosophy of "the survival of the most fit"—for are our efforts not truly leading to "the survival of the unfit" and the perpetuation of a race plagued by congenital malformations and inheritable weaknesses? Should not this problem—for which I confess I know no answer, be classed among the iatrogenic conditions of the human race?

Might it not be well, then, if periodically the medical profession were to stop and consider the warnings of Samuel Hahnemann and his followers and review for ourselves the conditions we have produced in the healthy individual which might have been avoided by some less dangerous therapy of perhaps by the application of "intelligent neglect." Had this emphasis upon the iatrogenic diseases of mankind which Samuel Hahnemann promulgated been his sole contribution to the history of medicine, I cannot help but feel he would have rendered a service which would have earned him a permanent niche in the medical Hall of Fame. The irony of it is that such a lesson is all too soon forgotten.

—*The Hahnemannian*, Oct.-Dec., '58.