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MODERN THERAPEUTICS

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MODERN THERAPEUTICS.*

DR. A. HERZFELD.

NOTWITHSTANDING the enormous progress we have made in medical science, the internal treatment of a great number of diseases is still empirical. Knowing this insufficiency, every scientifically educated medical man ought to endeavor to give the empiricism a scientific basis and to adapt the treatment of a given disease to the latest researches and discoveries in that particular department.

In our modern therapeutics we pay more attention to hygienic and dietetic treatment than in former years, and the medicinal treatment is often only a small measure of our therapeutics in combatting disease. Our older therapeutics consisted largely in big quantities of decoctions, infusions, etc., but to-day we have more accurate dosage, stricter indications in the use of alkaloids, extracts, coal tar preparations, sera and organotherapeutics. Every physician can find in these preparations one of which may assist him in his therapeutic measures.

In view of these facts, is not the modern therapeutic pessimism which we so frequently meet, as much unjustified as a polypragmasia? Although in the medicinal treatment there is a golden rule, "ne quid nimis," I do not by any means agree with one of our great medical professors in therapeutics and materia medica in this city that a half dozen drugs will answer all purposes in the treatment of diseases. Such an assertion tends to increase the ignorance already prevailing about the better and accurate knowledge of drugs, and intensifies this pessimism in our therapeutics.

This I find is the main reason for the enormous multiplication of medicaments going on at the present time. Gigantic is the number of patent medicines ready to come to the assistance of the medical man insufficiently educated in materia medica and therapeutics. Chemists, pharmacists, laymen, even our professional brethren, work so eagerly and invent so rapidly that the ordinary mortal cannot find his way through the chaos, and the ordinary homo sapiens

*Read before the Manhattan Pharmaceutical Association and the German Medical Society.

might waste a lifetime merely in following up the literature of the wonderful inventions.

A large number of these secret preparations are a direct humbug. Still, there are others which have a certain value, based upon the cause mentioned above that is, the insufficient knowledge of the medical man in *materia medica*. Prescribing is simplified, the proprietary preparation is very convenient, the doctor prescribes no physiological or chemical antagonists, the mixture seemingly satisfies all requirements of the patient, is up to date, and, last but not least, the physician is not compelled to overstrain his already seriously overtaxed gray matter. It is apparent, therefore, that the manufacturer of proprietary medicine looks out for the welfare of our patients more than the ever-busy medicus who continues his life in the *dolce far niente* of his pessimism, and does not make the least attempt to perfect himself in this very important branch of medical science, but wastes his time in discussing why the *forande rotundum* is not a perfect circle.

Now, let us see what products the manufacturer of proprietary medicines brings to our attention. Adorned with a more or less scientific or mysterious name the patent medicine begins its career usually with success. Sometimes it finds an early grave, but then it reappears on the surface in a new attire better prepared, restored and strengthened to take up the fight with its competitors and bring its ingenious inventor high respect and a handsome fortune.

What do we understand by the term, proprietary medicine or *nostrum*? All preparations consisting of one or more mixtures of several chemical or pharmaceutical products, brought into trade under a new name, which, when the formula is known, can be made by any pharmacist, and whose composition is unknown to the physician employing them. Name and composition are as a rule protected by law. This definition excludes all chemical and pharmaceutical products, which, even when protected by law, do not represent mechanical mixtures, but products of pharmaceutical and chemical research, as all coal tar products and many iron preparations, and all such chemical and pharmaceutical mixtures as bear their accurate formula on the label. This definition has been made a law for all proprietary articles in all states of the German Empire.

Every preparation is secret or *nostrum* whose contents are not known. The manufacturer of proprietary medicines ostensibly makes us acquainted with the mysterious contents of his mixture, so as to

satisfy inquisitive science. He mentions several or even all ingredients, but without their respective quantities. Some manufacturers are even so ingenious as to give names of chemicals unknown to chemical science.

It is an interesting fact that often the newly-invented name of the mixture has nothing to do with its composition. A favorite method of naming a preparation is the combination of two or more syllables of the combining bodies. In this way are originated very peculiar pseudo scientific names. The formulas of many mixtures are not always the same, the manufacturer finding it necessary to effect a change at times. The combination may be subject to slight chemical changes, the valuable combination may be imitated, or it may be changed on general principles.

Most in favor are fluids and tablets. The former keep better, with a sufficient addition of alcohol or glycerin. The latter owe their popularity to their agreeable and convenient form. In the addition of alcohol the manufacturer is often not over particular; a very frequently prescribed food contains, according to the analysis of Bruns, over twenty-five per cent. of alcohol; it can, therefore, be prescribed conveniently for sick people who are strict anti-alcoholists.

The very convenient tablets, some of them as hard as flint, allow the stamping of initials on the surface, so that the mentally burdened physician may readily see which valuable medicament he is handling, and thus prevent the waste of mental potential energy.

Proprietary medicines in powder form are not in favor, as they undergo decomposition caused by chemical reaction more readily.

Pills in all colors of the spectrum and gelatine capsules are more in favor, as both conceal their age, a fact of the greatest importance to the manufacturer of secret medicines.

The era of patent medicines began with pills, iron or carthartic. Shortly afterward, wines, tinctures, elixirs—nothing but ordinary pharmaceutical products such as any pharmacy apprentice can prepare when the formula is known—were added. The appearance of coal tar products again marked a sudden and considerable increase in the number of proprietary medicines. For this purpose the cheapest and most convenient are selected, and endless is the number of secret preparations whose most important constituent is the cheap and convenient acetanilid. We all know that among others this one cumulative, very often, produces even in very small doses, symptoms of

poisoning, and serious disturbances in the circulation as a cardiac depressant. I will have occasion to speak on the properties of acetanilid at another place in this paper.

Even mixtures of opium and its alkaloids are manufactured and brought into commerce as proprietaries. Some of you will recollect a patent medicine analyzed by Dr. Eccles of Brooklyn, that contained a considerable quantity of morphine, to be used as a remedy for opium, morphine, alcohol and tobacco habits. In Germany, Prof. Levin of the University of Berlin, only a short time ago analyzed a preparation containing a large quantity of morphine that was used constantly in a sanatorium for the morphine habit and by those who had left the institution "perfectly cured."

A frequently prescribed mixture is used for nervousness and contains bromide of potassium, a considerable quantity of chloral, extr. *Cannabis indica*, extr. *hyoscyamus*, alcohol and water. Not thinking or knowing that this preparation contains chloral, the innocent physician adds more of this dangerous drug. Such prescribing may lead to the convenient announcement, "Death due to heart failure." The very latest in the field of secret medicines are the phosphoglycerin food mixtures and organic therapeutics, brought out by the enormous demand which the legitimate product in such therapeutics have created in the last few years.

At this point I would like to state that I do not desire to attack honest and honorable manufacturers, whose good and standard preparations are well known and who publish the contents of their preparations and *modus operandi*, but only those who abuse legitimate pharmacy, chemistry and medicine. It is certainly not difficult to tell the difference.

When did this prescribing, so profitable for the manufacturer and fatal for medical science commence, and what progress have we made in the retrograde metamorphosis? To obtain a positive basis for an answer we have examined a large number of prescription books, collections in various pharmacies in New York, Brooklyn and Newark in totally different localities, going back to 1850. The following are some of the results obtained:

No secret medicine appeared from 1850 to 1873. The prescriptions of those days consisted exclusively of pharmaceutical preparations, made by the pharmacist on the doctor's prescription. As yet the M. D. himself did not dispense machine-made tablets of inaccurate composition. In the year of our Lord, 1874, the first proprietary article put in its appearance, and

in 1,500 prescriptions from 1874 to 1880, the percentage of prescriptions into which patent medicines entered was 2. From 1880 to 1890 it was 5. Up to 1895 it was 12; in 1898, was 15, and in 1902-3, 20.

The high tide of this form of prescribing has not yet been reached, for one of the largest pharmacies of this city, where from 250 to 350 prescriptions are prepared daily, reported to me that from last January to September the percentage of proprietary medicine in prescriptions was 25. The proportions given above are obtained from nearly 50,000 prescriptions. Gentlemen, consider for one moment—of all prescriptions one quarter are proprietary preparations! And only “nostrums” were counted, whose accurate composition was unknown to the physician at the time he prescribed.

I saw some wonderful things among those prescriptions, and one which particularly struck my attention I will not hesitate to save from oblivion. It was prescribed by a well-known colleague, an apparent lumen among those who believe in him, a visiting physician in two hospitals, a professor and teacher in a New York medical school, ergo not a lesser light. The remarkable prescription reads as follows:

R

Remedium spontaneum Radway, one bottle.

Sig.—Use as directed.

This is the way to prescribe Radway's Ready Relief in the language of old Rome. The druggist who called attention to this wonderful and rare prescription told me that he could not understand the use of *la lingua Latin* in this prescription. The capitals, R. R. R., would have been entirely sufficient, and no substitution would have been practiced. Gentlemen, I call your attention to this prescription not merely as a curiosity, but for another and more important reason, and that is to show that medical men who claim to be scientifically educated and often think themselves superior to other humans, are not ashamed of prescribing patent medicines advertised in the daily newspapers.

Let us now consider patent medicines from the commercial standpoint. For that purpose we analyzed some of those most prescribed. The first specimen appears in powder and tablet form, the latter stamped with initials to aid the brain of the medical man. It consists of Sodii bicarbonate, 2; acetalid, 7; caffein citrate, 1. An ounce costs the pharmacist one dollar. The actual value is about three cents an ounce. Another is a similar product of an

inventive mind and greatly enjoys the consideration of medical men. It is sodii bicarbonate, 3; acetanilid, 6; ammon. carbon., 1. Same cost, but worth one cent less than the first. As you see, gentlemen, acetanilid is the main ingredient here as it is in most of the patented headache powders. Acetanilid dissolves only slowly in the stomach and intestines, the succeeding dose finds the first only partially dissolved, and in this way cumulative symptoms of poisoning are produced by the liberated anilin.

The next sample consists of magnesium and epson salts, precipitated in aqueous solution of carbonate of soda the resulting milky fluid contains the magma of carbonate of magnesium in suspension after the washing out of the sulphate of soda. This proprietary medicine is extensively prescribed for acid indigestion. It cost 34 cents a bottle and is actually worth five.

Another specimen is a frequently prescribed and extensively advertised plaster, beneficial in pneumonia, bronchitis, pleurisy, and all other diseases that end in "itis." Contains kaolin (formerly fuller's earth) glycerin and boracic acid. After a sufficient heating of these chemicals to remove the H_2O and to improve the odor, oils of peppermint, wintergreen and eucalyptus are added. The idea of this mixture is based upon the affinity of glycerin for water, and when brought in contact with the skin absorbs the water and thus acts as an irritant. This odoriferous paste cost 68 cents a pound. Actual value about 8 cents.

These specimens of proprietary medicines may prove to you gentlemen that if the ingenious inventors and manufacturers of such products can well afford to supply the medical fraternity with calendars, prescription books, lead pencils, te books, picture books, and pictures for children and adults, they should give you an automobile.

Leaving the commercial standpoint, I want to call your attention in a few words to patented pills, coated with sugar, gelatin or keratin. To tell their age is entirely beyond human power. My friend, Dr. I. Noble of New York, succeeded in shooting a number of sugar coated pills into a board one inch thick without injuring any of the projectiles. Dr. A. Jacobi told us a similar incident; he found a number of gelatin coated pills in the faeces of a patient. Dr. Sidney A. Stein of this city reports a case of a bicarbonate of soda tablet which resisted every attempt to pulverize with the heel, but left a dent in a hard wood floor. These pills remind me of the antimony family pills of our fathers, intended as cathartic for generations, a valuable heirloom in each family.

The "sample" is the keynote which leads and introduces the physician into the mysteries of secret medicaments. This sample is of the utmost importance. The valuable *materia morbi* is demonstrated *ad oculos*, hence the physician will not be liable to prescribe the same in powder form, when such a liquid, and vice versa, not infrequently occurs in legitimate pharmaceutical and chemical preparations.

After the medical man has sufficiently admired and thoroughly digested the sample, if such is possible, a prescription for the same will soon appear. One such prescribed bottle will pay the expenses of a dozen samples and the necessary advertising literature. In this literature we are sure to find a number of names of obscure physicians, but, not infrequently, also that of a so-called medical authority, or well-known specialist, whose services were obtained by the old reliable handshake.

Only a short time ago, a number of physicians in a neighboring town decided to manufacture their own proprietary medicines and to divide the spoils, which, as you have seen, are not small. A number of my colleagues have received their *pharmacopoeia* or formulary, and I intend to subject their products to a nearer inspection. Their foremost and most important discovery is an elixir containing pepsin, trypsin, rennin, amylopsin, and diastase, in an aromatic solution of hydrochloric and distearyl-glycero-phosphoric acid. So reads their introduction to the drama.

I am extremely sorry that I received my sample too late for closer inspection, but by only superficial examination one recognizes at once the therapeutic jewel. The secretions of the stomach, mouth and pancreas are held in solution by hydrochloric acid and in this wonderful, so-called distearyl-glycero-phosphoric acid. The discovery of the latter product is left to the chemistry of the future. Their label reads, "Before eating, in excessive acidity from any cause; after eating, in a deficiency or absence of acid secretion." As you like it! "For infants, five drops with each artificial feeding, in flatulence, colic and green stools. It contains lecithin, is capable of digesting all foods and has a tonic action on the cells of the mucus membrane. As vehicle highly recommended for all drugs and is very good in the making of junket. Vomiting in pregnancy is easily relieved by it, and externally it is splendid in the washing and disinfection of wounds and ulcers." Even the most capricious medical man cannot expect more of a medicament than this!

These wonderful products of our progress in

science are manufactured by physicians. There is now existing a Caesarian firm, that tries to solve the money problem by drawing the medical men into its mysterious circles. The M. D. can take as many ten dollar shares as he feels like. They paid 20 per cent. dividends last year, to the doctors connected with the concern. All the doctor is requested to do is to prescribe their tablets as often as possible, if not oftener. After the medical men are sufficiently interested in this secret preparation, and their attention is called to it by advertisements in medical journals and even in the directories of several medical societies, there will occasionally appear an advertisement in the daily papers, with the notice: "Indorsed by physicians."

Gentlemen, the practice of prescribing medicaments of unknown composition is objectionable. Such practice is an insult to all science, art and progress. The prescriber loses all criticism, all initiative, all therapeutic effort. By this objectionable practice he brings medical science into disrepute, he harms his patients bodily and financially. How can he individualize by working with an unknown quantity? Does not the physician stamp himself as an ignoramus, and does not the prescribing doctor consider for one moment that if the patient finds out what wonderful, ingenious product was prescribed for his good money, the doctor will himself be the loser, as the patient can very often buy such prescriptions in any department store. The physician becomes a walking advertisement of a patent medicine factory.

It not rarely happens that a pharmacist secures the attention of the doctor's patient, and as he is well acquainted with nostrums, tries to sell him something better. In this way the senseless prescribing of secret medicaments leads to swindle and substitution. It seems to me that our present materia medica contains drugs which may be of service in the treatment of disease, even to the worst pessimist and that we do not yet need to have our prescriptions dictated to us by a patent medicine manufacturer. Short and concise are the following words of Dr. A. Eschner of Philadelphia, in the *Journal of the American Medical Association*, No. 18, 1903: "It must be clear that the prescribing of medicines of unknown or concealed composition is unscientific, unprofessional, unfair, if not prejudicial to the sick, unprogressive, unstimulating, and, most of all, unnecessary."

The cure of the plague lies alone with the physician. As soon as he stops prescribing these senseless products, this mysticism in our modern therapeutics will come to an end.