COÖPERATION BETWEEN DENTISTS AND PHARMACISTS.*

BY SAMUEL M. GORDON.[1]

Dentistry and pharmacy have a common purpose in caring for the public health. This may have been overlooked, probably because of the emphasis that has been given in the past to the restorative aspects of dentistry and because of certain trends in pharmacy, notably the stocking of many shelves with diverse nostrums. The present trend in dentistry is toward prevention, just as we are aware that there is a return to the professional prescription pharmacy, where the nostrum is not permitted to enter. To be sure, the operative and prosthetic aspects of dentistry will continue to absorb a large part of dental effort, even as orthopedic surgery, to choose but one example from the field of medicine, has not been entirely displaced by the new knowledge of nutrition.

The dental curriculum of to-day emphasizes the relationships of physiology, bacteriology, pathology, biochemistry and other basic sciences to the prevention and treatment of dental disease. The study of the action and uses of drugs occupies a fair proportion of the dental curriculum.

Drugs have been used for correcting and alleviating dental disorders from earliest times. Reference to the use of drugs for the relief of toothache is found in the earliest manuscripts. Drugs were used in the attempt to control dental caries in the earliest practice of dentistry. Large amounts of plant and mineral astringents were used in the treatment of diseases of the gums. The dental profession is associated with the discovery of the anesthetic properties of ether and nitrous oxide, through Morton and Wells. Dentists were instrumental in large measure for examining clinically the local anesthetic properties of cocaine and the numerous synthetics related to it. It is estimated that the greater part of all the procaine, and a large amount of epinephrine, manufactured, is now used by dentists.

Dental surgeons treat pathological conditions of the soft and hard tissues of the oral cavity and closely adjacent areas. In the practice of oral surgery and in the routine practice of dentistry, large amounts of general and local anesthetic agents, germicides, analgesics, hypnotics, hemostatics and other classes of drugs are used.

With the appreciation that dental caries is related in some way to the problem of calcium supply and deposition, the dentist prescribes and is being urged to recommend preparations containing calcium and phosphorus, as well as various vitamin-containing preparations.[2] One cannot speak of calcification or the laying down of bone, dentine or enamel, without at least mentioning the endocrine system, and particularly the parathyroid and its function in calcium deposition. Investigations on record, confirmed and unconfirmed, point to an interplay of other glandular secretions.[3]

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* Section on Education and Legislation, A. PH. A., Washington meeting, 1934.

[1] Secretary, Council on Dental Therapeutics of the American Dental Association.

[2] "Diet and the Teeth," Report of the Council on Dental Therapeutics, *J. A. D. A.*, 19, 1843 (October 1932).

[3] "Endocrines and Teeth," Report of the Council on Dental Therapeutics, *Ibid.*, 21, 322 (February 1934).

These points are cited to illustrate the classes of drugs that dentists may be called upon to prescribe, recommend or to advise upon. As far as I am aware from the various state dental practice acts, there are no restrictions on the prescribing or uses of drugs by dentists, other than those that apply to physicians of the regular schools.

Many *clinical* samples are sent to dentists by manufacturers of all kinds, good and bad. The purpose behind the generosity is palpable. The senders do not expect a clinical test in the fine sense of that term. Is it not reasonable to expect that they hope the package will be used and displayed in such a way that the patient remembers the name after he leaves the office, so that it may be purchased without the immediate advice of his medical adviser for similar or other conditions that may arise after his office visit? Here the drug stores also assume part of the blame for counter prescribing.

Contrary, undoubtedly, to the desire of the manufacturers of some pernicious proprietary articles, who would have the dentist serve as his advertising agent, it is gratifying to know that since the inception of the Bureau of Chemistry and the Council on Dental Therapeutics of the American Dental Association, the dental profession by far and large, are protesting these evil practices and supporting the interests of legitimate therapy, as exposed in the reports of the Council which have been appearing in the *Journal of the American Dental Association* in the past five years.

The Council on Dental Therapeutics has been pointing out to dentists the imposition practiced on them and on their patients by patent medicine exploiters parading in the more respectable guise of medicine manufacturers. It need surprise no one acquainted with the work of the Council on Pharmacy and Chemistry that similar conditions exist in the dental profession. Here are just a few of the findings. Two-thirds of a fluidounce of a pyorrhea cure, which sold for ten dollars, was found to be forty per cent sulphuric acid. Another guaranteed cure for pyorrhea, bleeding gums and all the other indefinite expressions linked in the exploiter's literature, under the term pyorrhea, sold for ten dollars for a half pound. This contained pumice, 90 per cent, and alum, 10 per cent. A tablet under the name of Anacin, which, on the whole was a variation of the well-known A. P. C. mixture, was sold through the unwitting advertising of dentists who accepted and passed out the "clinical" samples. The "newest local anesthetic" was found to be a mixture of benzyl alcohol and chloroform. Neu-Ora claimed to be a non-toxic topical anesthetic was found to contain 15 per cent of cocaine. Vleminck's solution was redressed in a therapeutically suggestive name and sold to dentists at an exorbitant price as a pyorrhea cure. These cases can be multiplied endlessly; and their use defeats the aims both of dentistry and pharmacy.

HOW THE DENTAL ASSOCIATION IS MEETING THE PROBLEM.

The work of the Council alluded to briefly has made dentists appreciate that the interests of their patients in this respect can be fully served only by prescribing drugs not on the alluring appeals framed in some advertising office but on an intelligent understanding and use of such drugs, as the individual needs of the patient require. This connotes an understanding of the composition, actions and claims of the drugs. It is gratifying to note that dentists are beginning to ap-

preciate the importance of a wide usage of official drugs and preparations made therefrom as against non-acceptable unofficial drugs.

The term "official drug" is well understood but neither the interests of dentistry or pharmacists are advanced if one puts out a mixture of several official drugs and puts them out under a non-informing name. This is a practice that deserves to be discouraged. This is being discouraged on our part by encouraging the dentist to make greater use of the official drugs, and to avail himself of the service of competent pharmacists. Progress depends on an understanding of the problem at hand. To accelerate this progress, the Council's work has, of necessity, fallen into several categories. It accepts those articles that conform to a printed set of rules. These rules relate to composition, tests for identity and purity, advertising to the public and advertising to the profession, therapeutic claims, naming of articles and rationality of mixtures. It will be at once recognized that these rules are essentially those of the Council on Pharmacy and Chemistry of the American Medical Association. Their value to the medical profession and to the public have been amply demonstrated in the past twenty-five years. Inasmuch as dentifrices present a somewhat different problem, the Council has published a separate set of provisions. Dentifrices are acceptable if, among other things, they are advertised solely as an aid to the tooth brush in cleansing the teeth. The list *Accepted Dental Remedies* now carries reference to 166 proprietary articles and many official articles, but more of this later.

With the aid of the A. D. A. Bureau of Chemistry, the Council examines proprietary articles on the market for their compliance with the rules. Many of the articles already examined are those of secret composition and advertised with claims which are palpably false or unwarranted. This constitutes a large part of the work. Reports discussing the unacceptability of these products appear in the *Journal of the American Dental Association* from time to time.

A further appreciation of wider problems in dental therapeutics is given readers of the *Journal* through a series of reports on the general subject of pharmacology and therapeutics. These general articles are prepared by members of the Council or by outsiders who are invited by the Council for their special knowledge in separate fields. By way of illustration, some of the titles of articles which have already appeared are: "Causes and Treatment of Systemic Reactions in Local Anesthesia," "Endocrines and Teeth," "Glycerin in Toothpastes," "Mouth Washes," "Pre-Medication and Post-Medication for Dentists and Oral Surgeons," "Scientific and Rational Therapeutics—Its Effect on Dental Progress," "Stock Solutions and Mixtures for Local Anesthesia," "Uses and Abuses of Barbitals," "Uses of Pain Relievers in Fixed Proportions by Dentists."

In addition thousands of inquiries from dentists are answered every year on various official and nonofficial products.

ACCEPTED DENTAL REMEDIES.

It is sometimes amusing, if not tragic, to meet pharmacists of all shades who have the impression that dentists do not prescribe beyond mouth washes and dentifrices. Let it be said at the outset that dentifrices and mouth washes are an extremely negligible part of the dentist's interest in materia medica. As a matter

of fact, the Council considers the ordinary run of mouth washes as no more useful than the use of talcum powder after shaving.

It was suggested above that the Council includes acceptable proprietary drugs in a list designated as *Accepted Dental Remedies.* The list, which will soon appear in book form, includes not only these acceptable proprietary articles but also information on useful official drugs and preparations.[1] The inspiration for this little volume has come from "New and Nonofficial Remedies" of the Council on Pharmacy and Chemistry and "Useful Drugs" of the American Medical Association. The information, however, is devised for the members of the dental profession. Preliminary estimates indicate that this little volume will be required or recommended in almost all of the dental schools of the country. It should also have an interest for pharmacists as a point of contact with the dental profession.

In addition to the drugs listed therein, there will be appendices on metrology, solubility of drugs, symptoms and treatment of poisoning, therapeutic indices, and so forth. As an indication of the character of the drugs included, the following selected classes, taken from one of the indices of the book, may be useful:

General Anesthetics.—Nitrous oxide, ether, chloroform, ethylene, ethyl chloride, etc.

Local Anesthetics.—Cocaine, procaine, butyn, apothesine, tutocaine and their various recipes.

Drugs Acting on the Central Nervous System.—Strychnine, atropine, morphine, caffein and a wide variety of hypnotics and anodynes or analgesics, such as barbitals, acetanilid, acetphenetidin, acetylsalicylic acid, codeine, etc.

Drugs Acting on the Circulation.—Epinephrine, nitrites, etc.

Drugs acting on the alimentary canal, and a large class of drugs of purely local action, such as astringents, styptics, antiseptics, germicides, etc.

The extent of the list should surprise no one when consideration is given to the relatively wide field in which the dentist works and the appreciation that has come in the last decades of the relation between the mouth and cognate apparatus and the rest of the human body.

It is not my intention to bore you with formulas or recipes. They may be obtained from many textbooks and other sources.[2] The important point is for pharmacists to acquaint themselves with the demands of the dentists and supply them. These products will range from such simple and innocuous products like dentifrices and non-medicated mouth washes to such agents as are used for the treatment of pyorrhea, trench mouth and the more involved surgical manipulations of dentistry.

HOW PHARMACY CAN MEET THE PROBLEM.

Millions are spent yearly to advertise proprietary products to the dental profession. The advertising manager of one of the better pharmaceutical houses has pointed out that recommendations by dentists have started many an unknown proprietary on the road to fortune. Those worthy of the dentist's attention will

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[1] Now available from American Dental Association. All dental schools with few exceptions make use of the book.

[2] Recent articles of interest in this connection are: Blass, J. Lewis, Ph.G., D.D.S., "Medicinal Aids in General Dentistry," *Dental Cosmos,* 76, 239 (February 1934).

Aiguier, James E., Ph.G., D.D.S., "Dental Medicines: Modern Pharmacologic and Therapeutic Principles Applied to Their Use in General Practice," *Dental Cosmos,* 75, 1184 (December 1933).

be in *Accepted Dental Remedies*, and no doubt will be available from pharmacies. No dental journal which goes to dentists engaged in the general practice of dentistry censors its advertising on a published basis except the *Journal of the American Dental Association*. Some of these journals are sent gratis to dentists. The circulation cost is defrayed by dental supply houses. In these journals may be found advertised the old well-known mixtures, clothed in fancy and appealing names, foreign to the nomenclature of the Pharmacopœia. *Apropos* of this, the late Professor Puckner of the Council on Pharmacy and Chemistry has aptly pointed out that if a law were enacted to oblige manufacturers to sell medicinal products under a properly descriptive name or make it illegal for a dentist or physician to use or prescribe them, the use of most proprietary remedies would be discontinued and successful newcomers might each year be counted on the fingers of one hand.

This multiplication of trade names for well-known preparations is used to disparage the well-known and useful preparations, and the assumed advantages of the new mixtures are extolled. For example, procaine base has been known to chemists, physicians and dentists for many years. Its pharmacologic properties were well worked out by Gros in 1910, and confirmed by Sollmann and others since then. Recently there has come on the market, primarily to dentists, the same procaine base in lanolin, and other non-essential ingredients, and heralded to the dentist with the following statements:

> "There has been a continuous search, since Koller's use of cocaine in 1884, for a drug to be used as a topical anesthetic, possessing the ability to penetrate mucous membranes, yet having low toxicity."

There are available in the Pharmacopœia, several drugs of proven usefulness for topical anesthesia, even considering the limitations of this form of anesthesia, such as benzocain, ethyl chloride, cocaine and others.

In the treatment of trench mouth, besides his operative technique, the dentist uses a wide variety of drugs, ranging from escharotics, such as chromic acid, to milder drugs like sodium perborate, and even salt solutions. In between these two extremes are found occasionally the use of mercuric chloride, hydrogen peroxide, bismuth compounds and the organic arsenicals. It is desirable that arsenicals and other unstable preparations be freshly prepared. Hence there is no rational reason why the pharmacist should not acquaint the dentist how he can furnish these preparations at a greatly reduced cost and moreover on a basis that more fully benefits both.

An incident will illustrate the benefits of intelligent coöperation. Sometime ago a dentist who had been having post-operative difficulty with the stock solution of a local anesthetic that he had been using invited my assistance. The matter was discussed with the result that a method was worked out whereby he could prepare his own solutions of procaine and epinephrine in an alkaline medium. This has been a little over a year ago. This particular dentist is highly pleased not alone with the fact that he has been able to affect a considerable saving; but more importantly, the feeling that his patients are more comfortable. Furthermore there is a sense of accomplishment and prestige that comes from knowing in detail the preparation of the material he was injecting into his patient, rather than depending on semi-secret preparations as he had been in the custom of using. This is not an isolated case. Such examples may be cited over and over again.

In the course of his practice, a dentist uses many hypnotics and analgesics. Unfortunately in the past he has been an unwitting salesman for the shot-gun mixtures so long disparaged by students of the problem. The extent of his prescribing was reached when he handed out a package with two or three tablets, but the package bore the name, in large type, and directions that invited self-medication for real or imaginary ills foreign to the purpose of the case. There is a legitimate field of interest between pharmacy and dentistry in this respect, since many dentists write prescriptions for drugs for the relief of pre- and post-operative pain. But the system is not as general as it should be. Some dentists are reluctant to write prescriptions, because of the economic aspect. If they wish their patients to have a limited number of doses, let us say of an hypnotic, they find the cost unnecessarily high. Hence they carry in their own medicine cabinets a stock for dispensing. This should by no means be discouraging to pharmacists, but should rather be seized as an opportunity. It is well known that the mode of administration is an important factor in drug action. Sometimes a cachet or a capsule may be preferable to the compressed or the triturated tablet. The situation is somewhat analogous to the use of drugs by ophthalmologists and other medical specialists. The oculist does not write a prescription for each dose of atropine he uses for mydriasis. Yet the filling of this class of prescription is a point of pride with many professional pharmacies.

Despite the successful operation of many pharmacies, meeting the highest requirements of scientific despensing, the dentist still obtains his drugs from other sources, and to his economic disparagement and sometimes as already indicated to the unwitting abuse of his patient. For example, Eugenol sold under another name sells for ten times its real cost. Preparations essentially zinc oxide, used by dentists for so-called pulp capping, are purchased by dentists at the rate of seventy-two dollars for a pound. The pharmacist can sell C.P. zinc oxide at one dollar a pound and yet make more than a fair profit.

The Council has pointed out that mouth washes are of little or no value in the treatment of dental disease. Yet their limited usefulness is recognized because of the pleasant feeling they leave after operative procedures. Without becoming involved in details, Dean Schicks has rendered a useful service by placing on record certain mouth washes of open composition. These can be detailed by pharmacists to dentists at a reasonable cost.

Aside from personal solicitation which should always be employed wherever possible, the pharmacist may acquaint himself with the needs of dentists by following regularly the reports of the Council on Dental Therapeutics which appear in the *Journal of the American Dental Association*, and particularly to acquaint themselves with the material in the little book, "Accepted Dental Remedies," about to be published. The descriptions in this volume will, on the whole, be free of recipes and here the pharmacist can assist the dentist by acquainting him with the most advantageous pharmaceutic use of the various useful drugs.

Professor Schicks of Rutgers University School of Pharmacy must be regarded as a pioneer among pharmacists in bringing together both groups. The circumstance that several meetings of the American Association of Colleges of Pharmacy have been devoted to the prescription requirements of dentists is an omen for success. Further it is a source of encouragement to know of the meetings of local

dentists with members of Professor Schicks' school. This is a phase of the work that should be fostered by more schools of pharmacy, pharmacy associations and dentists. Professor Schicks' experience indicates that dentists will welcome such efforts. It appears that the schools of pharmacy and dentistry of the same university can find common meeting ground.

Just as advertisers find it profitable to spend millions in the attempt to make dentists proprietary-minded conscious, pharmacists can work to make dentists pharmacopœial conscious. Any effort of this kind that draws its inspiration from the ideals of both professions cannot help but benefit the public for whom both professions aim to serve.

THE PLACE OF A FIELD REPRESENTATIVE IN COÖPERATIVE PROFESSIONAL ADVERTISING.*

BY L. WAIT RISING.

This era of economic decadence is witnessing the rebirth of professional pharmacy. There was a time, not so many years ago, when such a movement could only be predicted, and that with some hesitancy. But the competitive scramble in low-priced drug sundries brought on by the period of depression has changed prediction to actuality. Pharmacy is going professional. Even now a sufficiently large percentage of the existing drug stores are being made over, or will be shortly, into pharmacies with true professional ideals and methods of doing business which warrant the setting up of a new classification to take care of them. While they were the exception rather than the rule, their very minority made apparent the uselessness of dealing with them as a group.

However, this has changed. When speaking of pharmacies to-day we must differentiate between two kinds: The merchandising establishment of the "corner drug store" variety, and the prescription pharmacy, which, while no less a merchandising unit in its way, is not considered as a true retail store by the laity.

This amounts to a division of trade, and brings with it not a division but a whole new set of merchandising principles and problems that apply only to the prescription pharmacy. One of the latter is advertising. It is trite to say that a professional pharmacy cannot advertise in the same manner as the ordinary retail store. Its appeal must be both dignified and restricted and it must be directed at the physician as much or more than at the general public. Many drug stores conduct a profitable business without physician coöperation, the lack of which would quickly throttle the prescription pharmacies.

What then are the best advertising methods for securing this necessary professional friendship? Indirect contact through the mails is good and is a means of reaching the doctor periodically which is open to every pharmacist. There is no limit to the number of physicians one pharmacist can reach in this way nor to the number of times such contact can be made. A mail campaign will serve to focus some attention on the organization conducting it.

A second and perhaps the ideal way to attract professional patronage, especially if it be combined with a mail campaign, is by frequent personal contact with the

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* Section on Practical Pharmacy and Dispensing, A. Ph. A., Washington meeting, 1934.