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DENTISTRY AND MEDICINE.*

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Adequately to understand the interrelationship between physicians and dentists we must first have a correct idea regarding the relationship existing between the subjects that these two groups of professional men represent, namely, medicine and dentistry. Medicine, as a science and an art, has as its special province the recognition and treatment of disease. It acquires a knowledge of the laws and principles that hold and it finds out how to apply these principles for the good of patients by inventing useful methods and by seeing to it that its representatives acquire skill and experience in the employment of these inventions in practice. Dentistry has a precisely similar function as regards the teeth and gums; it is to these structures in the mouth what medicine in general is to the whole organism with all its parts. Obviously, then, dentistry is only one of the special divisions of medicine, and the relation of the dentist to the general practitioner of medicine should be much the same as that of any other specialist in a circumscribed domain. In other words, the dentist is comparable to the ophthalmologist, the laryngologist or the otologist, who studies, respectively, diseases of the eye, diseases of the nose and throat, or diseases of the ear.

The layman's idea of the dental specialist is, as a matter of fact, very much like his idea of any medical or surgical specialist. I asked a friend of mine the other day what she thought of dentists as a whole. "Well," she said, "they seem to be people

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into whose hands you have to put yourself and let them do what they like to you, and half the time you don't know what they're up to." Well, the layman has a similar idea of the medical specialist, say the rhinologist or the gynecologist. "A dentist," my friend went on to say, "looks in your mouth and says, 'How long since you had that work done?' You tell him and he remarks, 'Humph; well, they used to do in that way.'" That reminds one of the nose and throat specialist who looks in your mouth, sees an infected stump of tonsil and remarks, "Yes, they used to take them out that way." Dental specialists sometimes disagree as do other medical specialists. The same friend to whom I have referred has a winter dentist and a summer dentist who have diametrically opposite views on certain dental matters. She tells me that she goes to the one in the summer and to the other in the winter, and that "between the two, things work out very well." This is an attitude toward dentists that also has its counterpart perhaps in the behavior of the layman towards other medical specialists.

If the view that dentistry should be a medical surgical specialty is correct, why is it that the dentist is more sharply marked off from the rest of the medical profession than is the ophthalmologist, the laryngologist or the otologist? To answer this question one must consult the history of the origins of dentistry and of medicine and must consider also the way that medical and dental education respectively have developed. Only so can we reach an understanding of the relative isolation of dentistry from general medicine and from the other medical specialties.

Dentistry as a specialty had a long history before it tended to become separated from medicine. It is recorded that as far back as five hundred years before the Christian era, some medical men devoted themselves especially to dentistry. Dentistry and medicine were, as a matter of fact, closely associated until long after the period of the revival of learning.

It was only after surgery and the other medical and surgical specialists had begun to develop more conspicuously that dentistry began to follow an independent path.

This relative independence of the course of dentistry can, I think, be easily explained. In the first place, as operative and prosthetic dentistry gradually developed, the technical complexity of the mechanical manipulations found to be necessary came to require so much attention and devotion on the part of those practising them that no time or energy of the practitioners remained for other kinds of medical work. In the second place, men who worked intensively in general medicine or surgery, or in surgical or medical specialties, could not master their own subjects and also find time to acquire the technic of dentistry and to make themselves skillful in applying it. Hence physicians and surgeons for the most part neglected dentistry. As a result two groups of dental practitioners began to appear. A smaller group consisted of men who, though trained in general medicine and surgery, finally specialized in dentistry, ultimately restricting their medical and surgical work largely to the dental field; such dental practitioners were true medical specialists, just as are the ophthalmologists, the otologists and the laryngologists of today. The other larger group of dental practitioners of the time of which I speak were not trained in medicine at all; they were mere artisans without theoretical knowledge and without any thorough mechanical training; they practised dentistry crudely, by rule of thumb, in much the same way as the primitive optometrists fitted spectacles, without knowledge of the anatomy, physiology or pathology of the organs upon which they operated. This was the state of affairs that existed some two hundred years ago, when Fauchard, the "father of modern dentistry," published his important treatise entitled *Le chirurgien dentiste ou traité des dents.* From the time of Fauchard on, the practice of dentistry grew ever more specialized and its practitioners became

ever more sharply separated from those of general medicine and surgery. A "profession of dentistry" came to be recognized as something separate from the "profession of medicine," the "dentist" belonging to one profession, the "physician" and the surgeon" to another. This divorce of dentistry from medicine, due, as we have seen, partly to the neglect of dentistry by medicine, partly to the rapid technical development of dentistry itself, though in some respects harmful, proved, in reality, to be advantageous, at least in some ways, for the further development of dentistry on its mechanical side. Men to whom dentistry appealed devoted themselves exclusively and wholeheartedly to the development of dental technic and rapidly improved the dental art.

The evolution of dental education has been similar to, and in many respects as interesting as, that of medical education in general. Up to 1840, it was the custom for dental practitioners of ability to pass on their knowledge and skill and their secrets by means of the apprenticeship system. As the methods of modern science, however, came to be applied to the study of the dental tissues, researches on their anatomy, physiology and pathology soon led to the accumulation of a body of knowledge that made it necessary and desirable that dentistry should be systematically, rather than desultorily, taught. The dentist of the newer time needed, in addition to mechanical and manipulative skill, a thorough acquaintance with the anatomy, physiology and pathology of the mouth, and at least some knowledge of the structure, functions and diseases of the rest of the body. The better representatives of dentistry recognized that the apprenticeship system of dental education would no longer suffice; if a narrow artisanry were to be avoided, provision had to be made for a thorough professional education either in medical schools with special departments of dentistry or schools organized especially for instrucion and research in dentistry.

Here in the United States the establishment of

dental associations for the advance of dental science "by free communication and interchange of sentiment," and the publication of dental periodicals, helped to force the movement toward the establishment of dental colleges for the systematic education of dentists. The first dental society of the world was, I believe, organized in the city of New York in 1837. Three years later a national association of dentists was formed. In 1839 the *American Journal of Dental Science* appeared, as the first of dental periodicals. And, in 1840, in my own city, the Baltimore College of Dental Surgery had its start, the first of the institutions for the systematic teaching of the science and art of dentistry.

Since 1840 dental associations, dental publications and dental schools have rapidly multiplied, not only in this country but all over the world, and the science and art of dentistry have progressed as rapidly as, if not more rapidly than, many of the other special divisions of medicine. The quality of men entering the dental profession has steadily improved; original researches upon dental problems have attracted many clever minds; and the application of physics, chemistry and mechanics to practical dentistry has resulted in achievements that have astounded the world.

During the past few decades we have been witnessing a revival of the closer relationship between medicine and dentistry. That relationship ought not to remain clandestine or irregular. It has now reached an intimacy that justifies remarriage. The better dentistry of today demands qualities of mind and heart, a thoroughness of general and special education, a knowledge of facts and principles, and a training in practical technical methods, that are in no way inferior to the requirements in any other medical specialty. Moreover, workers in every branch of medicine must today know how to make use of diagnostic facts in dental domains and should be aware of the possibilities of therapy that dentists control. Furthermore, the dentist who desires to give to his

clientele the best results of our present day medical science must have some knowledge of the relation of anomalies and diseases of the teeth to pathological processes elsewhere in the body; he should know, on the one hand, how these processes can affect the teeth and the gums, and, on the other, how diseases of the teeth and the gums may affect the other organs. Practitioners of medicine should know when to ask for a dental consultation and practitioners of dentistry should know when to ask for a medical consultation, and whether a general practitioner, an expert röntgenologist, or some other medical or surgical specialist, can be most helpful to him. Medicine, as regards the various specialties, is advantageously polygamous, and the time has come when dentistry, like other specialties, should again share medicine's "bed and board." For medicine needs dentistry as one of its favorite helpmates. It desires the aid and comfort, not only of the consulting dental diagnostician, but also the advantages derivable from the activities of the dental therapeutic subspecialists, namely, the pyorrhea specialist, the orthodontia specialist, the extracting specialist and the specialist in prosthetic dentistry.

As a working internist, I have been greatly helped by the consultant dental diagnostician, especially when searching for foci of infection that could account for metastatic infections elsewhere in the body (antritis, arthritis, myositis, osteomyelitis, endocarditis, nephritis, neuritis, or iritis), or when seeking the source of an intoxication that might account for a grave anemia, a gastric catarrh, an obscure neuralgia or a general rundown state.

Dental caries, with its sequelæ, is responsible for many human ills, and physicians owe much to dentists for the education of the public regarding its prevention and regarding the necessity for its early treatment where preventive measures have been neglected. You have shown us that its immediate cause lies in acid fermentation in the mouth, the lactic acid produced dissolving out the calcium phos-

phate and allowing peptonizing and putrefactive bacteria to destroy the decalcified tissue exposed. We believe from our experience that the teeth of certain persons are especially predisposed to caries through faulty inheritance, through the existence of certain physiological states, like pregnancy, and through the occurrence of such diseases as diabetes and anemia.

Physicians, as well as dentists, are also interested in the anomalies of dental development, especially in the hypoplasias of the enamel that are met with in rickets and in tetany, with their peculiar distribution on certain of the teeth; in the delayed eruption of the teeth met with in children suffering from hypothyroidism; in the concave defects of the cutting surface of the permanent incisor teeth in congenital lues; in the erosive caries that attacks the necks of the deciduous teeth in children of feeble constitution; in the occurrence of huge medial and small lateral incisors in status thymicolymphaticus; in the spacing of the medial incisors and, sometimes, of the other teeth in persons in whom the pituitary gland is overactive; as well as in the changes in the gums that are met with in scurvy, in mercurial poisoning, and in lead poisoning. These are only a few of the conditions in the teeth and gums in which the internist and the dentist have a common interest.

If dentists and medical men are to be reciprocally helpful, there must be a greater frankness between them and a greater willingness for cooperation than has hitherto existed. Disagreements regarding facts and principles must be fully discussed in order that right methods of practice may be reached. In this connection I should like to give definite expression to my own ideas regarding the recognition and treatment of oral sepsis. Though I deprecate as much as anyone the unnecessary extracting of teeth, I feel that a grave responsibility is assumed by anyone who advises the retention of diseased teeth when they are a menace to the health of the patient. And in the decision as to whether a tooth dare be retained, the dentist should not be the sole arbiter; nor should the

röntgenologist or the physician be the sole arbiter; the opinion of the dentist, the expert röntgenologist and the physician should all carry weight; the responsibility for diagnosis and treatment in dental domains should, today, be shared. There are still too many dentists who seem to be unaware of the diseases and fatalities for which their inadequate treatment of infected teeth and gums have been responsible, still too many who defend modes of dental practice that those better capable of judging unhesitatingly condemn. There are still too many physicians who ignore the dangers of oral sepsis, or who show too much compliance with the foolish whims of patients who beg to retain the infected teeth that injure them. Our better dentists and our better physicians and röntgenologists should arouse public opinion to a degree that will result in the protection of patients from the ignorant and the incompetent.

Let us welcome, then, an ever greater cooperation between the dental specialist, the general practitioner, the röntgenologist, and the other medical and surgical specialists. Whatever will contribute to the advance of dentistry will help medicine as a whole, and medicine in turn must do everything possible to supply facts from the larger domain that may be useful to the dentist in his special branch.

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