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WINTER ON THE DEVELOPMENT
OF EXODONTIA

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THE INFLUENCE OF GEORGE B. WINTER ON THE DEVELOPMENT OF EXODONTIA

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NEARLY every text dealing with the historical background of dentistry starts with a caption such as, "The extraction of teeth undoubtedly is the oldest branch of surgery." We have learned that the statement is well founded; that dental caries is the oldest and most prevalent disease to which man is heir; that its ravages have been universal in all ages; that ancient philosophers and soothsayers, medieval medicine men and charlatans as well as modern empiricists have endeavored in diverse ways to combat the devastation wrought by the aching tooth. As we scanned the scripts, we have found that their activities culminated in the same result. They applied medicaments to render the surrounding parts gangrenous; they offered incantations to their gods; they employed various mechanical devices and were unaided by pain-relieving adjuncts except soporific drugs, yet dental torment throughout the ages has been a constant source of travail and the removal of the offending member a "consummation devoutly to be wished."

It is interesting to note that aside from the contributions of Fauchard, scarcely any progress toward the solution of the problem was made from the dawn of history until the middle of the last century. The first real technical advance was contributed by Tomes, an English dentist, who devised the "anatomical forceps"; the key had been the instrument of choice up to this time. These forceps, each with a working point adaptable to the tooth in question, made tooth pulling, "So simple by comparison with earlier methods that an Augustan age of extraction was ushered in."

Our immediate predecessors were pseudo-operators, such as peddlers, blacksmiths, and barbers; the physician also participated as necessity arose. So time passed, and the beneficent aid of gaseous anesthetics came into the picture. Nitrous oxide, ether, and chloroform brought surcease from the torture of the unfortunate victims. In 1884 cocaine was introduced. Often marketed under various trade names and its employment accompanied by frequent disasters ranging from syncope to death, it became the forerunner of our present highly developed local anesthetic procedure.

These pain-relieving agents necessarily brought about more refinements in the technique of tooth extraction, and the period produced operators of exceptional manual dexterity. With anesthesia in its infancy and with only limited experience in its administration many dentists became extremely adept with forceps. Coincidentally and logically a literature began to develop, for it has always been significant that technical improvement has found its way into print and has thereby been perpetuated. Dentists have never been niggardly in hoarding their knowledge.

Thus we arrive at the turn of the century. The last fifty years had brought out the only real advances made in our science and art since the history of man began to unfold itself. It is to be noted, however, that this progress was mainly empirical in character and scarcely any scientific research connected with tooth extraction had ever been attempted.

A few years more drifted by and we reached the decades with which many of us are familiar. Dentists were performing extractions in the same general way their predecessors had performed them. Cocaine was driven under pressure into gums which blanched under the impact. Although the value of oxygen in combination with nitrous oxide had long been recognized as a useful adjunct in prolonging anesthesia, from a practical point of view the old method of saturation was in vogue. Oxygen deprivation to the point of asphyxia was the common technique and recognized as good and proper. With the patient blue from cyanosis, eyeballs staring, tongue swollen, legs and arms sprawled to all points of the compass, backs arched to opisthotonos, the resistant victim was then considered ready for operation and the extractionist did his best—sometimes his worst. Under the conditions his worst was oftentimes good. The specialists throughout the country could be counted on the fingers. Their specialty was usually designated by clumsy and ambiguous terms, such as, "Extraction Specialist," "I Extract Teeth Only," "I'm a Specialist," "I Limit My Practice to the Extraction of Teeth," "I Do Extraction Only." Many of these men were our revered pioneers—all honor to them. They blazed the way for the scientific investigations of today. By individual aptitude, by interchange of ideas, and by the hard road of trial and failure they achieved local fame and proved that above the mean of ordinary performance there is always the better way which may be attained only by individualistic and painstaking experimentation. Necessarily, however, their results were limited because there was lacking a background of scientific training in research or a reliable literature. They reached their objective in eliminating the aching tooth. Beyond their horizon were knowledge in pathology and the safeguards of sterility. The disastrous results of trauma were common sequelae.

The previous paragraphs have briefly summarized the march of time. "The oldest dental operation" was born in antiquity. Its adolescence consumed centuries. Only twenty-five years ago did it approach maturity. But this quarter of a century has brought about more progress in this branch of practice than all the preceding years put together.

The development of any art or science as in discovery and invention invites a corresponding growth of language. Words which will convey a proper conception of whatever has been unfolded and brought to light must be supplied or much that is gained is subsequently lost. Dentistry has from time to time made a similar demand. For many years now there have been dentists who limited their practice to the extraction of teeth. That this specialty has progressed until it also requires adequate descriptive terms few will question and none can deny.

Twenty-five years ago an unknown author completed a textbook on the extraction of teeth. Since that time, the name of George B. Winter has be-

come an international synonym for those things that pertain to our present concept of the principles and practice of tooth extraction.

Only his oldest and closest friends are aware of the intimate circumstances which influenced the development of his career and molded his professional progress. Geographical frontiers have long ago been conquered. The frontiers of science are ever before us, ever expanding, and ever reaching out ahead to new unexplored vistas. Let us summarize briefly the accomplishments of this pioneer in dental science. To us who know him well his career is a source of pride, to the youthful aspirant to professional fame it should serve as a stimulus.

George Ben Wade Winter was born in Brooklyn in 1878. His father, a newspaper man, whose work took him to various cities, finally settled in St. Louis. Eventually he left the financially precarious field of newspaper work, entered business and achieved moderate success until the panic of 1897 engulfed him. At the age of sixteen George was dependent upon his own resources for further education and livelihood. By his own endeavors he worked his way through elementary and high schools and carried on to obtain his professional education.

Then came a few years of general dental practice. He gives great credit to the influence of such leaders as Edward Angle and A. Bromley Allen in shaping his destiny. Endowed with a restless spirit which impels one to go on from one accomplishment to another he never was satisfied with a merely creditable showing. He decided to specialize in the field that he liked best and for which he had shown the greatest aptitude. In this phase of practice he became a leader but once more his innate desire to progress became insistent. He had become convinced that methods of tooth extraction could be improved upon. His experience as a teacher in St. Louis University led him to realize that means of instruction were decidedly limited and far less efficient than one could wish. The literature in this special field was meager. The crude methods of the day made clinical demonstration unsatisfactory to the exacting scientist. Asked to conduct a course of several lectures he found the sum of published knowledge on this subject could be told in a very limited time and that the material was a hodgepodge of random information.

The next four years were spent in intensive research during which he evolved a scientific basic principle upon which tooth movement during extraction was established. In 1913 he was ready to publish his findings and so twenty-five years ago he produced his textbook on the extraction of teeth. This book was the first comprehensive work on this subject that had ever been brought to professional attention. He captioned it with a title that has not only become standard in the science of tooth extraction but which also designated the individual who specializes in the removal of teeth. The thought and study given to this manifested the same thoroughness with which he has undertaken every other task or assignment.

Before a single word was put on paper and before even one of the many illustrations was planned, he was first obliged to do the thing he was to write about; not once but thousands of times so that the technique might be perfected. He must be absolutely certain he was right. As a result of this original research the word he coined was "exodontia," and he dignified

the specialist with the name "exodontist." In short he created a new specialty. Most research is based on and is a development of an extensive literature left by earlier workers. He had no such background for he was investigating a new scientific frontier. In fact it was lack of earlier scientific investigation which led him originally to inaugurate his studies.

This text on exodontia created an enormous interest among dental men. The small edition of only five thousand copies was soon exhausted. It is now listed among rare works, and a large premium must be paid to obtain a copy today. The last chapters were devoted to the removal of impacted teeth. No sooner was it published than the author, impelled by the "divine discontent" which has always characterized his activities, became dissatisfied with this section. He was convinced that his initial effort had not solved the problem; he was sure that there must be a better way. At that time the x-ray was new, and radiographs were often-inadequate. Once more he started research. Many cases of impacted teeth were being presented which clinical examination had failed to reveal. He felt the need of a definite operative procedure to eliminate the brutality and trauma which then accompanied their removal. The revelations made by improved x-ray technique which he mastered, combined with the knowledge and experience gained by his investigations, convinced him that such methods were unnecessary. For twelve years he labored. Thousands of impacted teeth were studied preoperatively, operatively, and postoperatively. The world was searched for mandibles of man from prehistoric times to the present. All findings were painstakingly tabulated and classified. As a result he had, in 1926, completed a text of eight hundred and nineteen pages devoted to the mandibular third molar when impacted. It was amplified with hundreds of illustrations which alone rendered the classifications visible to the student and exemplified the operative procedure in detail.

This edition also was soon exhausted. Doctor Winter's former students, hundreds in number, and others interested in this phase of practice quickly consumed the product. Even operators who did not wish to master the technique for their practice were thoroughly convinced that the comprehensive classification was correct. It was felt that the last word had been said and written on this subject. In the author's mind, however, there still remained further work to be done. He felt that there must be some superior method of making clear the technical procedure; a method that would go beyond the limitations of the printed word and even of the clinic. At the International Congress in Paris in 1932, he felt that he had found the medium he needed. Upon his return he immediately investigated the possibilities for producing scientific motion pictures to illustrate his work. After long experimentation he completed his first production; a silent movie which was shown all over the United States and abroad with such success that again he was stimulated to further efforts.

It was a short but logical step from the silent to the talking picture. His new sound movie was first presented at the Second District Dental Society of Brooklyn, N. Y., in 1936. The results of all his years of research and investigation were so clearly demonstrated by this means that they were easily available to all. This method of propagating scientific investigation has attracted uni-

versal attention. Boldly and convincingly it has put before the dental profession the fascinating probability that much constructive dental teaching of the future will be based upon this new type of visual education.

During this period, of which this occasion represented the silver anniversary, many men have offered extensive research findings in this field for our mutual benefit and profit. This sketch is intended not at all to minimize their contributions. It is only presented to give just due to the genius whose insatiable thirst for investigation based on accurate scientific data as opposed to guesswork has served as a stimulus for present and future workers. He is truly "The father of modern exodontia."

Like all men who are creators, he has met in the past vigorous opposition to his ideas from many quarters. After all these years, however, the results speak for themselves.

I close this résumé of great achievement with one more significant fact as expressed by Doctor Oliver at a testimonial given Doctor Winter in Memphis: "These long years of labor, of time and energy freely expended are his personal contribution to humanity. He has never received one dollar in research grants but has carried his work through on his own responsibility. I note this fact not merely by way of offering tribute to a devoted scientist but in order to call attention to the disconcerting fact that in the past dental research has not received the same recognition or been given the same financial support as has been so bountifully supplied to medical and other interests.

"May we not hope that the day of such neglect is drawing to a close and that we are coming to a time when, through such examples of devoted service, the consciousness of the importance of dental research will be further awakened and made to count for human benefit."

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