



## Newsletter, April 2000

### Adam Cubie's Contribution to Clinical Instruction at Glasgow Dental Hospital and School

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FOR the first twenty years or so after formal education in dentistry commenced at Glasgow in 1879, the manner of learning technical and clinical procedures was little different from what it had been since time immemorial. In other words dental students learned by watching others until it was felt that they could be trusted to perform the procedures themselves. This was the way in which not only mechanical methods were taught but also clinical procedures involving operations on the patient. There were no practical courses of instruction in dental mechanics since the Dental Hospital did not have a laboratory in which this subject could be taught until the 1920s. Instead, students were accepted as apprentices or enrolled as pupils of dental practitioners in the environment of a busy practice laboratory. In the Dental Hospital there were no practical courses of instruction in surgical or extraction techniques nor in operative dental surgery procedures.

The junior student was expected to watch and 'look-on' for the first month of his attendance as the more senior students carried out the clinical procedures. When a more senior student got into difficulty help was at hand in the form of a House Surgeon who was generally and registered practitioner at the start of his career. Visiting Surgeons were appointed from the most public spirited and successful of the city's dental surgeons but these were honorary unpaid appointments and it was a long time before service in this capacity was paid and organised in a reliable manner. Lectures were in only three subjects, Dental Anatomy and Physiology, Dental Mechanics and Dental Surgery, a lecturer being appointed in each subject. Even here however the posts were not salaried and the lecturer recompensed himself from the fees paid by students. The fees for the examinations for the dental diplomas were paid to the Faculty of Physicians and Surgeons of Glasgow who had been nominated as an examining authority in the 1878 Dentists Act; the examiners for the Diploma were surgical Fellows of the Faculty who practised dentistry.

In October 1899 Adam Cubie entered Glasgow Dental Hospital and School as a student. The opening hours of the Hospital at that time were from 5pm to 7pm, Monday to Friday. The attendance of a patient on entering would be recorded by the wife of the janitor. The House Surgeon would allocate the patient to a student who would then carry out the necessary treatment under the supervision of a Visiting Surgeon. All students novices and seniors spent one evening per week in the extraction rooms of which there were two; one being reserved for general anaesthesia and special cases as they occurred.

It was not unusual for the allocation of patients to be in the hands of the senior student on extractions for the evening when the House Surgeon was not available and in these circumstances a junior student might be landed with a difficult case.

There were two conservation rooms, the larger of which was provided with a long table and some chairs and was used as a lecture room – it also served as a rest or meeting place for the visiting surgeons. On the table were a few dental journals including a foreign one – *La Revue de Stomatologie*. The Dental Students' Society was by now twenty years old and despite many handicaps was very active in promoting the interests of its members. It inspired the students with a lively interest in their profession.

Most dental operations at this time were carried out without any local anaesthetic mainly because of the unpredictable and dangerous effects of cocaine. Ethyl chloride spray was occasionally used

When cocaine was used it was in strengths from ½% to 2% solution combined with adrenaline chloride. Towards the end of Cubie's period as a student a new local anaesthetic was brought to the notice of the profession under the name of Alpha-Eucaine which contained no cocaine. Shortly afterwards an improved form was prepared called Beta-Eucaine. The anaesthesia produced by these solutions was however very evanescent and in some cases they were totally ineffective. It was not until Novocaine was introduced in 1909 that real progress in local anaesthesia would be made.

The general anaesthetics then in use at the Hospital were nitrous oxide, nitrous oxide and ether in sequence and ethyl chloride. Cubie remembers being sent by the House Surgeon to fetch the anaesthetist whose consulting rooms were in Bath Street since a patient who required a general anaesthetic had arrived. During such operations a junior student would be called in to do the 'sponging.' During Cubie's period as a student each new student was required to provide a cabinet for their dental instruments, hitherto students kept their instruments in a handbag which they brought with them each evening.

Adam Cubie Qualified LDS FPS (Glas.) in 1903 and served a few years in general practice as an assistant conscientiously endeavouring to keep abreast of the latest advances in dentistry. It became obvious as he completed the dental course that there was a great need for practical tuition in clinical dental techniques and that passive instruction by merely affording an opportunity for the student to 'look-on' as a senior student or member of staff performed the operation was not an adequate form of instruction. In June 1907 he set up on his own in practice. He had been aware that the post of Tutor in Operative Technique which had been established in 1905 had become vacant. He immediately applied for it and was delighted when his application was accepted.

This teaching position carried with it a junior teaching post and for guidance he was issued with *A Scheme of Teaching Tutorial Classes*. Cubie found that this scheme could be greatly improved and re-arranged so that from the teaching point of view it would be more acceptable to the students. He also wished to incorporate ideas and methods gained through experience of study and practice. He explained these to the Dean, Dr MacMillan who thereupon invited Cubie to draw up a plan for a suitable tutorial course. This new plan was accepted and for the first time included exhibitions of specimens and the use of lantern slides to help illustrate the course. To begin with "Weekes System" of cavity preparation was taught but this was soon replaced Black's which necessitated the addition of a modified selection of Black's hand instruments to the student kit.

The final important innovation of this tutorial course was the setting of a practical examination which the student sat at the completion of the course, success in this examination permitted the student to commence clinical work on patients.

A great difficulty emerged at the outset as this course in Operative Dental Surgery was put into operation. Many students lacked sufficient knowledge of anatomy and physiology and other basic science subjects. It was discovered that some students were being accepted for the course without having attended the classes in basic science or anatomy and physiology. It also became apparent that many students never intended to complete the course but that they merely planned to take the two year practical course in clinical dental techniques for which they would receive a ticket of attendance and having obtained this they would thereupon set up in practice. This procedure although completely outwith the spirit of the 1878 Dentists Act was not in fact illegal until the 1921 Dentists Act was passed. Adam Cubie reported this state of affairs to the Dean who arranged for the matter to be discussed by a meeting of the Hospital staff. The Faculty of Physicians and Surgeons was then notified and this unfortunate loophole was closed from the beginning of the term in October 1910.

Adam Cubie was appointed convener of the hospital staff and was responsible for the introduction of half-yearly practical clinical examinations in the Dental Hospital which raised the whole tone of clinical teaching and was of great benefit to the students.

At staff meetings prior to the First World War the Dean, Dr W D Anderson encouraged discussion of possible affiliation of the Dental Hospital and School with the University of Glasgow. In 1913 a meeting of certain of the smaller Glasgow hospitals was convened at the University by the Principal, Sir Donald MacAlister; Adam Cubie and Dr J Douglas Brownlie (the latter a graduate of the University) were nominated to represent the Dental Hospital and School. The possibility of affiliation was however considered inopportune at that time since the Dental Hospital lacked the necessary accommodation and facilities for teaching as well as financial resources.

However the staff of the Dental Hospital was encouraged by the sympathetic way in which the matter had been considered by the Principal and looked forward towards the fulfilment of a proposal which promised such benefits for the profession and public alike. With the outbreak of the First World War in August of the following year the whole matter had to be shelved for many years to come.

Adam Cubie continued to be in the forefront of efforts to improve the facilities and the ways in which the expanding diversity of clinical dental subjects were taught. In 1916, a conference of maxillo-facial surgeons in the Allied Forces (British, French and Belgian) was held at Croydon Hospital under Dr Frank Colyer. As an oral surgeon at Glasgow Dental Hospital and also in practice, Cubie received an invitation and gained invaluable experience of the development of this speciality in a hospital environment. He was also deeply interested in regional or block anaesthesia and was responsible for instructing senior students at Glasgow and gave demonstrations at other dental hospitals.

The post-war years witnessed the scope of clinical dentistry widen rapidly and the establishment of the new departments of Orthodontics, Dental Radiology, Dental Prosthetics and Operative Dental Surgery. Adam Cubie was appointed to the post of Lecturer in Operative Dental Surgery and held this position for many years.

Meanwhile, increasing difficulties arose through lack of facilities and accommodation and in 1926 plans were drawn up for a new purpose built school and dental hospital in Glasgow. The Dean, Dr J Forbes Webster called for those in charge of teaching and instruction to submit their requirements. Cubie had visited most of the dental hospitals of importance in this country and the USA and strongly advocated that a new department of Oral Surgery in which a fully-equipped operating theatre with pre and post operative accommodation for patients would be established. It was a matter of great regret to him that his advice in this respect was not heeded and he felt that the new Dental Hospital and School which opened in 1932 was deficient in this increasingly important department with greatly inhibiting effects upon the development of this speciality in Glasgow.

Adam Cubie resigned as Lecturer in Operative Dental Surgery in 1936 and as Senior Visiting Surgeon in February 1937. He had represented the staff upon the Board of Governors of the Hospital for many years and following his retirement was elected to represent the Subscribers until the Board was wound up and replaced by a Board of Management under the Western Regional Hospital Board. He was elected an Honorary Fellow in Dental Surgery by the Royal College of Surgeons, Edinburgh in 1951.

Adam Cubie was quiet spoken and painstakingly precise in the presentation of his thoughts and ideas. He was an outstanding clinical instructor and played a most important role in placing clinical dental instruction in Glasgow on a firm basis accompanied by methods of assessment and examination. He was universally respected by his colleagues on the staff and regarded with devotion by those who had the good fortune to be instructed by him in clinical dental techniques.

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