What does the Dentists Act say about orthodontic treatment choice?

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Key points

The principle that no one theory of dentistry should predominate is traced through the various Dentists Acts.

A practical example is illustrated in the case of expansion in non-extraction functional jaw orthopaedics.

The principle applies universally through all fields of dental practice.

Abstract

Should one theory of dentistry be allowed to predominate over another in a profession that has a monopoly? This question is traced to the original Dentists Act of 1878, which was set up as a result of the dental reform movement which sought to prevent unqualified dentists from practising. A report into the 'extent and gravity of the evils connected with the practice of dentistry and dental surgery by persons not qualified under the Dentists Act' published in 1919 showed that the original Act had been unsuccessful in this respect, which led to the 1921 Act. The 1919 Report and the current Dentists Act of 1981 both refer to and support this contention. Can a licensed monopoly be justified in excluding the practice of expansion in non-extraction functional jaw orthopaedics while accepting conventional extraction orthodontics? This is especially so, as there is an expanding evidence base to support expansion in functional jaw orthopaedics.

Introduction

In 1921, when the Dentists Act was being prepared, there was concern among leading dentists of the period that certain types of orthodontic treatment might be allowed to predominate at the expense of other forms of treatment which were equally effective. This was not long after the 'great extraction debate' in the USA between Martin Dewey and Calvin Case and may have been influenced by this. The debate occupied the pages of the *Dental Cosmos* from 1912–1913. Case strongly criticised the non-extraction dogma of Angle, of whom Dewey was a student.

Angle[1] developed his E-arch appliance to expand the arches and thus avoid extraction of teeth. He used torque in his appliances to move the roots, as well as the crowns of the teeth.

Angle[2] had many critics of his inflexible attitude on the extraction of teeth, who felt that he did not take into account the effect of incisor protrusion on facial aesthetics. However, in 1907, he stated: 'we are just beginning to recognise how universal and varied the harmful habits of the tongue and lips are, how powerful and persistent their influence is in the production and maintenance of occlusal anomalies, how difficult they are to cope with, and how little prospect for success a treatment has as long as these habits are not eliminated'. However, at that time, few clinicians were interested in the correction of oral posture.

Pro-extraction clinicians such as Case[3] appear equally inflexible, in saying that: 'when the whole question of extraction in orthodontia is summed up and the full truth is grasped, it seems a most senseless thing for men to fight over, when the truth is so self-evident; and then to quibble and cast untruthful slurs – among men whose main object in life should be for the development of truth, true principles, and true methods of practice for the advancement of their profession, and the relief of suffering humanity!'. Thus, a division appeared within the speciality, which has never been fully resolved.

The Dentists Act of 1878

The 1878 Dentists Act resulted from the dental reform movement, the history of which has been covered by Gelbier[4] and others.[5,6,7,8,9] The Licence in Dental Surgery (LDS) of the Royal College of Surgeons of England was established in 1860 and made possible by the 1858 Medical Act.[4] This provided for the efficient training and examination of dental students, resulting in the LDS qualification being extended to the Royal Colleges of Edinburgh, Glasgow and Ireland. The Act sought to preclude untaught and unqualified people from practising dentistry and resulted in the Dentists Register in 1879.

An extensive scrutiny of the complete Act of 1878,[10] as published in the Dentists Register of 1922, revealed that Section 26 covers the equality of different methods of treatment:

- 'Privy Council may prohibit attempts to impose restrictions as to any theory of dentistry by bodies entitled to grant certificates. If it appears to the General Council that an attempt has been made by any medical authority to impose on any candidate offering himself for examination an obligation to adopt of refrain from adopting the practice of any particular theory of dentistry or dental surgery as a test or condition of admitting him

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to examination, or granting a certificate of fitness under this Act, the General Council may represent the same to the Privy Council, and the Privy Council may there upon issue an injunction to the authority so acting directing them to desist from such practice, and in the event of their not complying therewith, then to order that such authority shall cease to have power to confer any right to be registered under this Act so long as they continue such practice'.

The Dentists Act of 1921

There were two Acts of Parliament – one in 1878 and the other in 1921 – which in turn established a voluntary and then a compulsory Dentists Register.[4]

The Dentists Act of 1921[11] was to amend the original Act of 1878[10] with regard to prohibition of the practice of dentistry by unregistered persons and the establishment and constitution of the Dental Board of the General Medical Council to implement this objective.

However, an extensive scrutiny of the complete Act as published in the Dentists Register of 1922 does not elucidate any reference to the equality of various methods of dental treatment.

The original Dentists Act of 1878 provided for the efficient training and examination of dental students. It also sought to preclude the possibility of the untaught and unqualified practising as dentists but failed in this objective. As a result, a committee was set up in 1917, chaired by Rt Hon. Francis Dyke Acland, to examine the 'extent and gravity of the evils connected with the practice of dentistry and dental surgery by persons not qualified under the Dentists Act'. The report published two years later in 1919[12] recommended that unregistered people should not be allowed to practise dentistry. It also contains a passage relevant to this study viz. 178 p45:

- 'Mr Sidney Webb expressed very strongly the opinion that a profession enjoying a legal monopoly must, in the public interest, give up any aspirations to completeness of professional self-government. In a memorandum submitted to us he stated: "if it is proposed actually to give a legal monopoly to the registered practitioners, it is plain that these practitioners cannot possibly be entrusted with the fixing of the conditions of entry into their own monopoly – cannot therefore be allowed to dictate the educational requirements or the length and expense of the professional training – cannot even be permitted to decide what is or is not within the etiquette of the profession, still less what unprofessional conduct shall condemn one of their number to be removed from the register"'.

The Dentists Act 1984

It seems significant that the same section appears in the current Dentists Act of 1984,[13] although in an extended and updated form:

- '12. 1) If it appears to the Council that a dental authority have attempted to impose on any candidate offering himself for examination an obligation to adopt, or to refrain from adopting, the practice of any particular theory of dentistry as a test or condition of admitting him to examination or of granting a degree or licence in dentistry, the Council may make a representation to that effect to the Privy Council. 2) On any such representation, the Privy Council may direct the authority to desist from attempting to impose any such obligation, and if the authority do not comply with the direction, the Privy Council may order that the authority shall cease to have power to grant degrees or licences in dentistry so long as they continue to attempt to impose any such obligation. 3) Any order of the Privy Council under this section may be made conditionally or unconditionally, and may contain such terms and directions as appear to the Privy Council to be just'.

The Act applied to orthodontic treatment

Most orthodontists in 1921 were self-taught and opinions varied widely. Several schools of thought existed, mostly following opinions developed in America. At that time, Harold Chapman (Figure 1)[14] taught orthodontic treatment at Guys Hospital London and was considered to be one of the first British orthodontists.[15] He was especially interested in early treatment and used to teach his students that if at the age of five there was not room for a 'half crown' between the deciduous upper incisors, then the palate should be expanded.

Chapman[16] published an article in 1927 based on a paper he read the year before at the First International Orthodontic Congress in New York. He commented on an American paper written by J. Lowe Young in 1923:[17] 'I have met orthodontists who do not take patients over 12 years of age; I have met others who will treat adults; but what is more remarkable is that dental schools in which patients over 12 are not treated and others where treatment is not undertaken until that age is passed. I can conceive circumstances in which practitioners in private practice may be right in treating adults but when different dental schools lay down exactly the opposite conditions as regards age for treatment, is it not time that the question is ventilated in the most thorough manner possible?'.

However, by the time the British National Health Service (NHS) was introduced in 1948, views had changed, and expansion was considered by many to be 'a waste of time' as it relapsed. This was expressed by Townend[18] as 'the comedy of expansion and tragedy of relapse'.

In 1948, the Eastman Dental Hospital in London was training the majority of orthodontists in the UK. Their training was based largely on the teachings of Raymond Begg and Charles Tweed, both of whom recommended premolar extractions in preference to expansion, despite their both having been taught to treat without extractions by Edward Angle.[19] Many of these extraction-based students subsequently became consultants in the new health service.

However, an unpublished survey by Mew in 1955 of his father's expansion cases found that while most relapsed between half and one-third, some relapsed very little, and surprisingly, a few continued to widen. This led to a further study of 25 consecutive cases, published in 1983.[20] In 1981, Mew[21] wrote a paper suggesting that tongue posture was significantly responsible for maintaining maxillary width as indeed had Angle. This led to the concept of the postural basis of malocclusion.[22,23]

To ensure appropriate treatment, dentists who wished to treat patients under the NHS were required to apply to the Dental Estimates Board (DEB) for approval before some treatments commenced. In line with the teaching of the time, it was very difficult to gain approval for expansion. John Mew was refused funding by

Fig. 1 Harold Chapman. Image reproduced with permission from the British Orthodontic Society, 2014[14]

the DEB on numerous occasions. Faced with this difficulty in 1987, John Mew took the Minister of Health to the High Court. His protection society refused to help him, so he decided 'to go it alone' and asked John Toulmin, one of the top appointed Queen's Counsel, to take on the case at John Mew's own expense.

The judge demanded to see the confidential files of the committee that had dismissed his appeal. It turned out that instead of considering the evidence, they had spent much of the time discussing how best to prevent John Mew from being a nuisance. As John Toulmin said: 'they had set up a kangaroo court'. The judge was highly condemning of both the committee and the Minister himself and Dr Mew won with substantial costs.

However, this had little impact on orthodontic opinion in the UK, and it is only within the last few years that some American orthodontists have started to recommend expansion. In fact, there have been a number of systematic reviews performed recently that show expansion to be widely practised with successful outcomes.[24,25,26,27,28,29,30,31,32,33]

Interestingly, towards the end of his career, Charles Tweed[34] suggested that: 'knowledge will gradually replace harsh mechanics, and in the not-too-distant future, the vast majority of orthodontic treatment will be carried out during the mixed dentition period of growth'.

One must wonder what Sidney Webb would have said about those dentists enjoying a legal monopoly who insist their opinion is the only one acceptable.

Discussion

While the Dentists Act applies to examining bodies, it could be argued, on the other hand, that the DEB had a different responsibility, which was to dispense NHS money for treatments that they considered cost-effective. However, a cephalometric evaluation of treated Biobloc cases showed that they corrected Class II skeletal discrepancy to a statistically significant degree.[35] Only functional appliance therapy can treat both the skeletal and the dentoalveolar component of Class II malocclusion,[36] unlike conventional fixed and removable therapy.[37,38] The only real alternative is orthognathic surgery, which is clearly less cost-effective. There is an increasing weight of evidence that Mew's Biobloc system[39] and other functional orthopaedic treatments, most notably Twin Block,[40,41] increase the oropharyngeal airway and thus reduce the patient's susceptibility to sleep-disordered breathing and sleep apnoea.

Conclusions

For a profession to advance, it is necessary to adopt and evaluate new ideas and techniques. The principle that alternative forms of treatment should have an equivalent value and consideration is therefore of paramount importance. There is a tendency to assume that non-mainstream or fringe treatments are less than ideal simply because the majority of operators are not using them. The value of any clinical technique should be based on its scientific evaluation and clinical merits.

Ethics declaration

The authors declare no conflicts of interest.

Author contributions

John Mew was largely responsible for the section on the Dentists Act applied to orthodontic treatment and for originating the study. Michael Trenouth was primarily responsible for the sections on the Dentists Acts of 1878, 1921 and 1984, together with revising the manuscript and collating the references. Both authors contributed to the discussion and conclusions.

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