

Editorial

Green Production of Dental Materials and the Needs for a Least-Toxic Dentistry

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Editorial

Why another impressive journal?

A PROPOSAL to add to the torrent of Austin Journal of Dentistry demands an explanation. It is best provided by considering a suggested touchstone of justification for the appearance of a journal in a new shape:

The rapid advances in dentistry are continually blurring old boundaries and creating new disciplines [1-5]. The test of an impressive journal is whether it will enable work lying across the boundaries of former traditional fields in dentistry [6] to come to the attention of workers on both sides of the division, whereas its publication in existing journals might bring it to the attention of one or the other only.

Today there is perhaps no better example of the blurring of old boundaries between dental sciences than in the field of oral chemistry [1-3] and dental materials [6,7]. The disciplines involved range from the basic sciences to technology on the one hand and to human and could be for veterinary clinical medicine on the other [8]. Of several weekly or monthly periodicals taken by the Electronic Library of the Royal Society of Medicine in London, almost any one may at some time or other contain information of importance to those concerned with the differences in dental materials used in clinics. Several hundred more medical periodicals are taken by other libraries. In addition, there are perhaps five hundred chemical, technical, scholar, and trade journals in which may be published widely scattered facts of considerable value not only to the dentists, but also to the dental material manufacturers, and to the government official as ministries of health and the legislator [6,9].

Moreover, what is available in these journals merely represents the projecting part of an iceberg. A high proportion of toxicological-dental work never sees the light in published form. At the present time a considerable amount of investigation of this type is in progress, which duplicates unwittingly, what has already been done. This constitutes a sad misdirection of effort when one considers on the one hand the world-wide shortage of men and facilities for work of this kind, and on the other the magnitude and multiplicity of the problems which beset us in the field of dental toxic material [6,7].

Finally, many parts of the world do not have access to this wealth of periodicals. Yet the toxicology of dental material [7] is a matter of truly vital concern to every country, no matter how remote.

Some countries have enacted legislation on dental materials and no two of these are identical. In fact, there is not even one colour dental material composite common to all the permitted lists! What this means to exporters and importers, what its implications are with regard to changes in regulations, can well be imagined. One essential step towards breaking this deadlock is the wider dissemination to all countries of up-to-date and authoritative information on toxicological matters used in dental clinics; and, in the reverse direction, early announcements to manufacturers of new and impending revisions of existing regulations. All concerned will appreciate the value of a publication which fulfils the tasks of collection, collation and dissemination of information on the legislative, chemical, biochemical, pharmacological, toxicological, medical and veterinary aspects of additives used in several dental practices for humans and animals.

For years manufacturers of various dental materials have had toxicological tests carried out on their products [7]. Once the work is done and paid for, the results tend to go into the office safe, to emerge only for the benefit of government authorities, where again they are buried in confidential files. All this secrecy acts to the detriment of science. It is a major obstacle to the harmonization of international regulations. It inevitably produces wasteful duplication of testing effort. Does it really benefit the owner of this precious information to keep it under lock and key?

We would submit what we in our innocence think is a sensible idea: bring all these testing results out into the open! We realise that in many instances the results are there for anyone who wishes to see them, but their preparation in acceptable form for publication in scientific journals presents formidable difficulties, and requires much time, effort and expense which a commercial firm and dental service organisations consolidated to dental industry cannot often justify [6]. May we offer the services of this (at present) humble medium?

The scheme as we envisage it consists of the following phases

- (1) Submission of the results to us for review. All such data will be regarded as strictly confidential;
- (2) if it is considered worthwhile to publish a summary of the information in a scientific good shape, a draft article will be prepared and submitted to our journal for approval; (3) if the article is approved, it will appear in the periodic.

Austin Journal of Dentistry is an independent journal, and we shall pull no punches in our review of data submitted to us: if the information available is weak, or deficient, or needs amplification in any direction, we shall not hesitate to say so. On the other hand, we

would hope by this means to let the world (or that part of it reached by us) know that the data exist and, in outline, what the tests and results consist of.

Nevertheless, we remain hopeful. It has been argued that data presented in this way cannot be subjected to the same assessment and scrutiny as that retested out to a formal paper. We are in agreement with this view but are ready to do our level best to set adequate standards. In any case, we would point out that this form of publication is merely an announcement of the existence of such results without in any way accepting responsibility for them. Anyone who is interested to go into the matter further is free to communicate with any trade firm concerned by our side. It is to be hoped that anyone planning to carry out identical or related experiments will at least take cognisance of this work. If so, our object will have been achieved. In order to carry forward the same objective, we make provision for announcements of 'Work in Progress'. A brief word here can avoid needless duplication of effort and bring together researchers interested in the same subject.

It is the privilege of the young to be daring. May we therefore offer to publish in the same manner, negative results which are of exceptional interest or significance. There are many other novel features, which our more conservative readers may consider inappropriate or even lacking in dignity. In particular, it is the object of this publication to be read. We do not feel that a scientific journal suffers by being lively, interesting and controversial. There is much that is controversial in the world of dental material toxicology, and we invite readers to air their views on questions of general interest.

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