Considering risk assessment when planning treatment

Dental Protection looks at assessing facets of case preparation

Every treatment plan, from the simplest to the most complicated, employs a dual process of data collection. The initial input from the patient is enriched with information from the clinical examination and any relevant investigations, so that a suitably informed diagnosis can then be made before a treatment plan is formulated for discussion with the patient as part of the prudent foundation for the consent process. All these stages raise questions that have to be correctly answered to ensure a correct assessment. Sometimes the ‘stations’ on this journey are passed through at a brisk pace. When the diagnosis is self-evident, and the patient’s wishes are clear, there is usually no great problem if the investigations are not exhaustive. For example, it is clearly not appropriate to take radiographs of every tooth when dealing with a chipped filling, or a biopsy of every mouth ulcer, or a sample for bacteriological investigation for every infected root canal.

Unfortunately, dento-legal cases are invariably viewed with the benefit of hindsight, through that most wonderful of instruments – the retrospectoscope. The most treacherous cases that arise tend to be those where there is some doubt over the logic or appropriateness of the original diagnosis and treatment plan, or perhaps when a diagnosis may have been ‘missed’. There are the occasions when third parties – often experts in the field instructed by the patient’s solicitors – will look very closely at each stage of the events leading up to an incident, and ask whether or not all the necessary and appropriate histories were taken, or whether all proper investigations relevant to the clinical situation were carried out, and if so, whether the dentist in question had acted upon and interpreted the results with the proper skill and care that could reasonably be expected of someone in that position.

As a corollary, other questions could then arise:

- Why was some crucial aspect of the patient’s history or risk profile not recognised?
- Why were certain investigations not carried out?
- Could the harm subsequently have been avoided, had the correct questions been asked?
- Had the correct investigation(s) been undertaken and acted upon.

**Key questions**

Patient input can be elicited by:

- What’s the problem? How can I help you?
- Investigations

Investigations and tests can take many forms, and the questions of **Which? When? and For Whom?** are highly relevant.

- Diagnostic phase

What? (eg what is causing the patient’s pain?) Why? (eg why does this filling keep fracturing?)

- Treatment planning phase

How? Is a question that is added at this stage along with considerations of **What? And When?** The prudent clinician will also be asking: Why not? When not? How not? Who? Etc.

In most clinical situations – including diagnosis and treatment planning – the clinician is faced with choices. As in any decision-making process, the quality of the decision tends to improve in direct proportion to the quality and accuracy of the available information.

- Radiographs

It is prudent, from a risk management perspective, to take pre-operative radiographs for extractions, in situations where the patient has reported previous difficulties with extractions, or where there is a risk of damage to other structures, (for example, in the tuberosity area, or when contemplating extractions in elderly patients) where the bone quality and quantity may be compromised and the risk of root or jaw fracture may be high. Third molars are another obvious area where knowledge of the root configuration, the overlying bone, and the relationship of the tooth to adjacent teeth, the inferior dental nerve bundle, and the lower border of the mandible, is essential. If radiographs are not taken, and a serious problem occurs, the dentist will be under pressure to demonstrate that the absence of the radiograph(s) could not have contributed to the problem in any way.

Radiographs are similarly an important investigation in cases where orthodontic extractions are contemplated (to confirm any congenitally absent teeth or other pathology), as well as serving as an aid to orthodontic diagnosis, treatment planning and case management. Similarly, in association with the diagnosis and treatment of periodontal disease, and endodontic problems, the absence of radiographs leaves a dentist highly vulnerable to the allegation that he/she had failed to carry out a relevant and material investigation. If a delayed diagnosis and treatment results from this lack of radiographs and has led to any further problems for the patient, the dento-legal problems for the dentist are compounded.

In endodontic cases, relatively common problems such as fractured instruments and under and over-root fillings, have all been attributed on occasions to the absence of relevant X-rays – perhaps no pre-operative X-ray was available to forewarn of a root curvature or sclerosis, or an exceptionally fine canal, or perhaps no working length X-ray was taken to assist in controlling the length of the filling (although in the latter situation, electronic apex locators are an alternative investigation which can be fended successfully).

Cases where it is alleged that the ‘wrong tooth’ has been extracted or filled, or its pulp tissue has been unnecessarily extirpated, often hinge upon the evidence of proper investigations. In situations where the diagnosis is initially equivocal or inconclusive, cases may hinge...
Occlusal investigations can take many forms, ranging from the use of articulating paper, wax, indicator spray or other occlusal ‘marking’ devices, through articulated study models, to a more detailed face bow registration, pantograph tracing or devices which measure and record muscle activity. The use of a stethoscope also has its place in TMJ auscultation. The skill lies in knowing which investigations are appropriate, for which patients, and under what circumstances. The danger lies in erring on the side of too few, or too superficial, investigations.

**Recording investigations**

The key to the investigation process is to record what investigations are being carried out, and the findings so that, if necessary, one can demonstrate at a later date, a logical and carefully followed process leading to a diagnosis and treatment plan. It is much easier to defend a practitioner’s actions if supported by and consistent with a meticulously-recorded series of relevant investigations, (even if subsequently proved to be misleading or incorrect), than the commonly-encountered responses such as:

“I would probably have checked the tooth vitality and looked for any tenderness to percussion; I wouldn’t always write it down”.

or perhaps:

“I presume the periodontal condition must have looked better that day, or I would have done some further treatment and made a note in the patient’s records.”

The clinical records should make it possible to follow the clinician’s logical thought process through the stages leading to any particular course of treatment. All the relevant components of the case assessment process on whether the investigations carried out were sufficient to support a given diagnosis and treatment. On the other hand, there is little point in carrying out full and proper investigations, and then failing to act upon the results.

In the case of some infections, taking the patient’s temperature can indicate the presence or absence of systemic involvement, and other specific measurements of the site, size and appearance of oral lesions (ulcers, swellings, white patches, and other dysplasia) - perhaps with the help of an intra-oral photograph - can make it much easier to monitor the development of resolution of oral pathology. The increasing frequency of cases involving missed diagnosis or oral carcinoma, stresses how important this can be.

Similarly, periodontal probing depth measurements are a valuable investigation whether in the form of a BPE screening, or a more extensive chart either around specific teeth, or all standing teeth.

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(consultation, medical history, dental history, clinical examination, investigations, diagnosis and treatment plan) should be in evidence.

Reviewing the diagnosis
Correct diagnosis is the outcome of successful and appropriate investigation including history taking, visual and radiographic examination and any other clinical and pathological examination relevant to the patient's condition. Sometimes only a provisional diagnosis can be reached which leads to further investigation. Each subsequent step/investigation/diagnosis leads to a definitive diagnosis which in turn will lead to a definite treatment plan. There are occasions when treatment itself forms part of the investigation. The outcome of such treatment is then fed into the diagnostic process.

Dental care is not static, it affects and is affected by the changing continuum in the patient's general health and therefore consideration must always be given to the possibility of having to change the diagnosis and treatment plan as the patient's condition alters.

Consent
When one or more treatment options have been identified, or a provisional treatment plan has been reached, it is necessary to involve the patient fully in a consent process which explains the nature, and likely outcome of each of the possible alternatives, compares their relative advantages and disadvantages, benefits, risks and limitations (and costs, where applicable). The consent process is only as good, however, as the quality of the information and treatment choices that the clinician invites the patient to consider. Consent may not be valid at all if one or more important and relevant treatment options have not been discussed with or offered to the patient (by referral, if necessary). Similarly, it is unwise to steer a patient too forcibly towards a particular treatment option without explaining its risks and limitations.

Simple audit
It is a useful exercise to take any ten record cards for patients who have had a significant amount of treatment, or an unusual treatment episode, and to ‘audit’ these cards just as a third party might do, were a problem to arise today;

- Are there any questions left unanswered by your records?
- Can you demonstrate the investigations you carried out?
- Do they now appear to have been sufficient or might it have been helpful to carry out and record additional investigations?
- Are you omitting to record investigations you do carry out (percussion/mobility testing is a familiar example of this), perhaps because you see them as a routine part of a clinical investigation? Many dentists tend to record only ‘positive’ or ‘abnormal’ findings, whereas ‘negative’ and ‘normal’ findings can be equally (or sometimes more) valuable - such as ‘no tender ness in sulcus’, or ‘normal response to ethyl chloride’.
- Is it clear from the records how and why the diagnosis and treatment plan reflected the patient's history, the findings from the clinical examination and any discussions with the patient?
- Was more than one treatment option recorded?

The more experienced a clinician becomes, the greater the danger that their histories, discussions and investigations will be viewed by them in this light, with diagnoses made and treatment plans decided upon apparently by ‘instinct’. There is even greater room for criticism when the records create the impression that the clinician was determined to carry out the chosen treatment (whether or not it was justified in the light of the specific clinical circumstances of the individual patient concerned) and that no other treatment option was really considered at all. It is helpful, therefore, to carry out a periodic audit of one’s clinical records as described above, not only as a valuable self-assessment process, but also as a useful platform for constructive peer review discussions.