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 - facies, medical 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 dealing with a chipped filling, or radiographs of every tooth 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 suffered by the patient have been avoided, had the correct questions been asked?
- Had the correct investigation(s) been undertaken and acted upon.

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 tooth 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 funded 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 facebow 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 are documented, and the patient’s understanding of the diagnostic procedure is ensured.

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(consultation, medical history, dental history, social 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 one particular treatment option without explaining its risks and limitations.

**Summary**
A typical scenario is the situation where a tooth becomes pulpitic very soon after a crown, bridge or veneer is placed and then needs to be root filled. In such a situation it is invariably difficult to persuade the patient that he/she should pay for a root filling, or for a new replacement restoration (if necessary). The clinician may well be asked whether:

- Was more than one treatment option recorded?
- Is it clear from the records how and why the diagnosis and treatment plan reflected the patient’s condition, the findings from the clinical examination and any discussions with the patient?
- 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 tenderness in sulcus”, or “normal response to ethyl chloride”.
- Have you reviewed your records?
- Is there any value in carrying out a periodic audit of one’s clinical records, as described above?

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 clinician becomes less familiar with the patient’s history, the findings from the clinical examination and any discussions with the patient.

**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 tenderness 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 condition, 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.

A preoperative radiograph to check for any periapical involvement had been taken before placing the restoration.

Vitality test(s) to confirm pulpal health had been performed before proceeding.

Any percussion testing of the tooth had been carried out.

A sufficient period for review/evaluation had been allowed if, for example, an extensive pinned core had been placed to support the crown.