

# Good vibrations

Vibraject is a new approach to local pain-free anaesthesia, suitable for even the most phobic of patients. Henry Cohen BDS (Rand) explains all

The longer I practise, the more value I place on reducing my patients' stress levels. If they flinch, I flinch and so does my nurse. If they sense pain, they will moan, roll their eyes, hyperventilate and at the end of it, one feels totally miserable.

It is a well known fact that over half the patients we see in practice today are afraid of injections. More than 50% of the non-attending public have a phobia of dental pain associated with the dental syringe. 90% have mild anxiety about receiving a dental injection. Those needles have probably been the cause of many lost teeth over the last few decades. 'I don't like needles' is probably the line we hear most. There are many options for reducing needle phobia that have variable and unpredictable results.

## Developments

If we search for dental injections on Google, we will find pages of dentists offering pain-free injections. If we read further into their website, all that they are offering is the placement of topical anaesthetic on the gums and the use of a sharp needle.

EDA (electronic dental anaesthesia) is one option that has been proposed. Stephen Wilson reported that, 'An injection can evoke a very strong physiological and emotional response; even in a sedated child. EDA was somewhat effective in helping these children.' Many of us who have used EDA in the past have found it to be most effective on patients who did not have a dental phobia and found the whole procedure time consuming and frustrating.

## Research

Then we started using topical anaesthetic. J G Meecham concluded that the palatal mucosa was more resistant to the effects of topical anaesthesia than other intra-oral sites investigated. There is no evidence that topical anaesthetic has any value in reducing discomfort of deep regional block administration such as the inferior alveolar nerve block injection. The range of flavours increased but the affectivity was also questionable. In fact, the time in placing the topical, having to deal with the patient then gagging and choking and complaining of the taste and the back of the throat going numb, was rather frustrating.

JG Meecham compared the use of topical anaesthesia and TENS (transcutaneous electronic nerve stimulation) as means of reducing the discomfort of inferior dental block injections. The results showed that there were significant differences in the pain scores for the inferior dental block injections. Injection discomfort following TENS was less than that following no pretreatment and after topical anaesthetic application. The use of topical anaesthesia did not produce a significant change in injection discomfort compared with no pretreatment. It was concluded that the use of TENS reduces injection discomfort during inferior dental block anaesthesia.

## Other options

I began to look for other options to give painless injections – computerised electronic devices. Over four years ago, Milestone Scientific introduced the

Wand (now called Compudent with the wand handpiece). About a year ago, Dentsply Professional introduced the Comfort Control Syringe (CCS). These electronic devices employ micro-processors, which purportedly make the injection more comfortable by controlling the pressure and volume of local anaesthetic. Palm AM 5 concluded that mandibular alveolar block analgesia seems to be less painful when using the Wand than when using a traditional syringe. In most cases, topical anaesthetic needs to be applied. Both of these products are technique sensitive and slow, requiring a longer time to administer injections. These products are also quite expensive and require the purchase of special, disposable cartridge sheaths by the dentist. Both products require electricity, requiring space for control units and electrical outlets. The advantage of both is that it allows for controlled flow of the local anaesthetic, giving a more comfortable injection. It does not look like a typical syringe and the handpiece allows for easy rotation, reducing the force necessary to penetrate the tissues and cancelling needle deflection.

## A needle-free system

The use of needle-free local anaesthesia systems in dentistry can be of help in treating needle phobia patients. L Geenen compared a classical local infiltration anaesthesia with a needle-free system, Injex (ROSCHE AG Germany). He concluded that the Injex system can be a valuable alternative to use in paediatric dentistry, although non needle phobia patients in this study did not prefer the

*Vibraject is a cost-effective way to reduce pain on injection*



needle-free Injex system above the classical local injection. This is a technique that develops with time. Patients need to be warned of the impact that occurs when the local anaesthetic is triggered – more like being shot with a staple gun.

## Wiggle and jiggle

Of course, there are also various injection techniques. Knowing that the brain can only handle one impulse at a time, we have used the wiggle and jiggle technique for injections to distract the patient. We use this to trick the brain to only recognise the wiggle and jiggle vibrations. This should remind you of the Gate Control Theory of pain, which suggests that nerve endings sense vibrations first and then cannot transmit feelings of pain. So the vibrations essentially mask the patient's discomfort, putting them at ease.

## The Vibraject was born

Dental product inventor Ron Coss (patented by oral surgeon Dr Norman Pokras) developed a small, easy-to-use syringe attachment called the Vibraject. It's effective in reducing the discomfort of extremely painful palatal, mandibular block, infiltration and intraligamental injections. Practical and convenient to use, Vibraject saves you time by eliminating the use of topical anaesthetic, allows you to use your normal injection technique (so there's no learning curve) and with no disposable accessories, you don't incur additional costs.

## How effective is it?

In a study assessing the effectiveness of a vibrating dental syringe attachment – by K Terrett et al – they came up with the following conclusion. The results from 329 patients indicated that

100 in 2002 and 2003

- Dr George Freedman, *Dental Products Report*, August 2004
- Dr Allan Deutsch, *Endo-mail*, May-June 2003
- *Kisco Perspective newsletter* Volume #4.

I have now used the Vibraject since September 2004. It is used for every injection, whether the patient has a phobia of needles or not. The response varies from patient to patient and the majority of them are impressed by the reduction or non-existence of pain associated with the injection. Many query whether a needle syringe was used at all. This provides a 'wow' factor in the practice and we have noticed an increase in patient referrals asking about the vibrating injection.

Many new patients arriving in our practice have left their previous dentist because of the painful injections they received, even though the work was of outstanding quality. Then we have seen patients who have arrived with the most disgusting dentistry, but the dentist was the best dentist in the world according to the

Vibraject is a cost-effective way to reduce pain on injection. This assisted dentist-patient rapport. The greatest effect was noted in the most painful areas.



*Over half the patients seen in practice today are afraid of injections*

## Evaluations

Vibraject can boast the following achievements:

- Listed in *CRA's Buying Guide* to outstanding products tested in 2004
- Rated by *Reality Now* in February 2003 issue
- Published as one of Dr Joseph Blaes's Pearls in *Dental Economics*
- *Dentistry Today* Top 100 for 2002, 2003 and 2004
- *Dental Products Report* Top

patients. This was because the injections were painless. Use the Vibraject and you will become the best dentist in the world to your patients.

In conclusion, the dental Vibraject syringe attachment provides an option for reducing pain and anxiety during local anaesthesia administration. It can relieve the stress of painful injections and painful visits to the dentist. ■

## Vibraject®

### Blocks Pain from Injections

INJECTION IS THE #1 FEAR OF DENTAL PATIENTS

Pain associated with the administration of anesthesia can be greatly reduced or eliminated

EVIDENCE OBTAINED BY MULTICENTRE STUDY\*

Effective for all types of injections including intraligamental, palatal and blocks

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\*Copy of study available upon request