When it comes to root canal therapy, clinicians strive for reliable results. To achieve this, they need products that are safe, efficient and proven. Although there have been several innovations to support dentists in every phase of endodontic treatment, it is still a challenge to disinfect narrow root canals thoroughly, especially because undetected debris often promotes further infection. Endodontist Dr Katrien Carnotensis, who works in a group practice in Antwerp in Belgium, learnt about VDW’s EDDY irrigation solution at an event in Brussels in Belgium and has been using it in her practice since then. EDDY tips are used for 3-D sonic-powered irrigation. The innovative tips are made of a safe and flexible polymer material and, powered by an air scaler, produce a highly effective oscillation in the irrigant that triggers two cleaning effects: cavitation and acoustic streaming. In the following interview, Dr Carnotensis talks about her experiences with the product.

How important is it to clean the canal thoroughly prior to obturation? How can you be certain that you have cleaned the canal thoroughly?

I have conducted endodontic treatments under a microscope for several years already, but it was always frustrating to see that, even after extensive rinsing, there was a lot of debris visible on the canal walls. The bacteria in the debris are likely to cause short- or long-term failure and can have a negative influence on the endodontic treatment. That is why I was looking for a better system with which to clean the canal, especially in the case of canals with a complex anatomy, resulting in debris adhering to the isthmus and oval or figure eight-shaped canals.

What is your disinfection/irrigation protocol? How did you activate your irrigant before using EDDY?

Actually, I use a 5% sodium hypochlorite and citric acid and I had tested many systems for activation before, such as IRRI S (VDW) and EndoActivator (Dentsply Sirona). Before I had the opportunity to try EDDY, I had problems with breakage of instruments, ledging and insufficient results concerning the cleaning.

Is a flexible tip important?

Yes, I like to take the tip to 2 mm from the apex, so flexibility is very important. Since the EDDY tip is so flexible and soft, I no longer have any trouble with ledges. I can use it safely almost to working length.

How did you learn about EDDY, and what made you want to try these tips?

I learnt about EDDY at an event in Brussels. Nevertheless, I had to wait before I had the opportunity to use it myself because the product was not available in our market yet. After the product launch, I received a few samples, which I tested immediately.

What were your thoughts when you first tried EDDY?

It is so easy and practical to use. I appreciated these qualities from the very first day! The attractive and sterile packaging is an advantage too.

Have you seen a difference on radiographs since using EDDY?

“Since the EDDY tip is so flexible and soft, I no longer have any trouble with ledges.”
Since I have been using EDDY, I assert that there has been a significant improvement concerning the obturation of lateral canals. There has been a difference especially in the results in the front region. In cases of open apices or wide apical foramina, it is still advisable to work very carefully.

Would you recommend EDDY to colleagues?
Of course, I would. The system is eminently user-friendly. Therefore, it is comfortable and reliable to use, even without a microscope. With a minimal investment for EDDY, dentists can achieve higher quality and efficiency in root canal therapy. Actually, I use it to apply the cement too.

Can you describe any clinical cases to demonstrate the advantages of EDDY?
I remember a special case: a 17-year-old male patient came to my dental office suffering from severe pain of tooth #16 (Figs. 1a–c). The last treatment had taken place one year before, conducted by another dentist. The patient complained of constant pain, pain on percussion and swelling. Looking at the radiograph, an infection of the mesiobuccal and distobuccal canals was clearly visible. When I opened the tooth and removed a part of the gutta-percha, I noticed a fourth canal, but I was not able to access it, so I started to clean and shape the other three canals. I rinsed and used EDDY to remove as much of the old gutta-percha as possible. After cleaning with EDDY, it was much easier to gain access to the fourth canal. It seemed that the sonic cleaning had opened the canal. In the final radiograph the lateral canal in the palatal root is precisely visible.

I have another interesting example of the successful application of EDDY: a patient with poor oral hygiene came to the practice with severe pain of tooth #15 (Figs. 2a–c). A radiograph visualised a large old composite restoration. When I opened the tooth, I detected two root canals. They were very long and narrow (25 mm), so I used EDDY to ensure that the sodium hypochlorite reached the tips of the roots. The final radiograph shows the result: a clean apical delta.

Thank you very much for the interview.

Images courtesy of Dr Katrien Carnotensis.