A new kind of glide path creation?

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How can dentists create glide paths more easily and efficiently? In the past, dentists used hand instruments, which is often a laborious and unsafe task and requires multiple stages, particularly when it comes to curved and calcified canals. During the International Dental Show in Cologne this year, German-based endodontic expert VDW introduced R-PILOT, the first and only motor-driven glide path instrument with reciprocating motion available. Since its launch, endodontists have called it a major advancement in glide path creation and the first step towards full working length in more difficult cases.

R-PILOT is made of nickel-titanium M-wire, which is also used in VDW’s established RECIPROC system. The material has a higher resistance to cyclic fatigue, while being more flexible. For dentists who require additional safety in the formation of a glide path in certain cases, R-PILOT seems to set a new standard in reciprocating glide path management.

Dental Tribune International talked to Dr Bogdan Moldoveanu, an endodontic specialist based in Cluj-Napoca, Romania. Besides owning a practice specialising in endodontics and leading the educational platform “Endodontie cu pasiune”, he also lectures extensively on microscopic endodontics and surgical endodontics at the universities of Cluj-Napoca, Romania, and Turin, Italy, the latter from which he graduated with excellence. Dr Moldoveanu is an expert in mechanical glide path management and has consistently been using R-PILOT since March 2017. In the interview, he gives recommendations on the use of reciprocating motion, explains the benefits of mechanical glide path techniques and explains the beauty of endodontics.

Dental Tribune: Over 90 per cent of root canal preparations are still conducted with manual glide path management. What are some of the uncertainties that occur when using hand files for glide path creation?

Dr Bogdan Moldoveanu: From my perspective, using manual files for the glide path procedure is something that should be done only by an expert and under very specific conditions—mostly retreatments. The mechanical glide path procedure has opened up a new dimension, especially for general practitioners, who are now able to perform a difficult procedure in a matter of seconds.

Most of the mistakes that occur during the shaping phase of the root canal treatment take place during the initial stages of the therapy, namely, when one is managing the glide path. One of the most common mistakes encountered is the improper use of instruments and the main causes of
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this problem are a lack of knowledge and a lack of patience. The mechanical glide path technique solves these issues by reducing human error. Therefore, the knowledge required to perform an adequate mechanical glide path is reduced to a minimum and the time it takes to do it correctly is dramatically reduced. With a procedure that only presents benefits, I cannot understand why anyone would not want to switch from manual to mechanical glide path management.

Glide path management and reciprocating motion—do they work well together?

I believe so. We now have huge amounts of literature regarding the benefits of reciprocating motion, so it was just a matter of time until the first reciprocating instrument, designed exclusively for glide path, was introduced. If you think about the mechanics of the reciprocating motion, then you can understand why a glide path instrument that uses reciprocating motion is very effective for the task at hand, making the ‘taper lock’ issue a thing of the past.

When would you use files such as R-PILOT for glide path creation?

I will always choose mechanical glide path for any necrotic or vital tooth. On the other hand, I think a manual glide path is particularly necessary for retreatment cases, where you have to battle huge ledges, false paths, perforations and so on. So, I would not say it is a matter of middle or coronal third, but more a matter of adequate case selection. If we want to talk about the proper tools (instruments) for the proper job, I believe we should keep in mind that endodontics is a beautiful field because it is very diverse. Every case must be analysed and the procedure planned only afterwards. I rarely mix things up when it comes to the glide path procedure, so either I am doing everything manually or everything mechanically.

Thank you very much for the interview.