

## ***New instrument for treatment of furcations***

### ***Furcator KS LM 259-260 XSi***

***The cleaning of furcation areas in the treatment of periodontal diseases is often a headache for the dentist. The root surfaces are concave and standard instruments cannot usually reach the area. In order to solve this problem, LM-Instruments joined forces with Kimmo Suomalainen, Adjunct Professor in Periodontology, University of Helsinki, Finland, to develop a new instrument, the LM-Furcator, which is a delicate excavator designed to mimic furcation probes LM 20B-21B. Below, the father of this invention, Dr. Kimmo Suomalainen\*, talks about applications of the new instrument.***



*The developer of the LM-Furcator, Dr. Kimmo Suomalainen, recommends the new instrument to all dental professionals.*

### **How did you come up with the idea for a new type of furcation instrument?**

The degradation of periodontal tissue leads to the loss of multirooted teeth much more often than single-rooted teeth. The reason for this lies in the variety of surfaces in the furcation area, which is where the roots diverge from the tooth crown, and root surfaces, which makes cleaning extremely difficult.

Periodontal infections resulting in tissue destruction are easier to treat in their initial phase and the treatment has a better prognosis for success than the treatment of more advanced periodontal tissue degradation.

Although there are good instruments for working in the furcation area, they cannot reach all points. A small, delicate instrument, which can even reach concave root surfaces, was needed for the cleaning of furcations. The inspiration for development of the LM-Furcator came from triple-angled excavators, which are somewhat too round for the effective cleaning of furcation areas. The idea was developed in co-operation with LM-Instruments – LM provided a variety of models, from which two different angles were eventually chosen for testing and the better of the two was used on the new instrument.



*The LM-Furcator is suitable for cleaning of the furcation roof and inner surfaces, particularly concavities and grooves in them.*

**What other instruments are available for working in the furcation area and how does the LM-Furcator differ from them?**

When looking at a tooth only above the gum line, it's easy to forget just how complex its anatomy is. The furcation area is especially difficult to treat due to poor visibility and the concave surfaces of the roots. This is why instruments specifically designed for this purpose are needed.

Furcation files are outstanding instruments, because they work in all directions and can be used with a rotating or back-and-forth motion. And the file won't leave the tooth surface uneven, even though this is sometimes claimed to occur. The file could be equated with a rasp, wood file or sandpaper, which are used, for example, in finishing wood surfaces. These give the wood surface a truly smooth, even finish.

The interproximal root surfaces of multi-rooted teeth are often concave on the inside, making it difficult for the furcation file to reach the base of the concave form. This is where the LM-Furcator comes into its own as a complementary instrument – it is small and delicate, and, thanks to the long, angled shank, is extremely effective at getting to even the most difficult to reach grooves and spaces, which the file cannot always reach. When using a file in tight, difficult spaces, the tooth usually has to be carved out extensively. With the LM-Furcator, it is possible to clean the roof and insides of the furcation area, while keeping as much healthy tissue intact as possible.

**What other applications do you think the LM-Furcator would be suitable for?**

The LM-Furcator is particularly well suited to cleaning furcations in class I lesions. This is where the instrument's delicate form and design allows for the cleaning of the furcation surface in the early stages of a class I lesion, thus preventing the lesion from progressing into a more difficult to treat class II lesion. The instrument is very effective in approximal grooves and concave surfaces in the lower incisive area. The furcation areas of lingual roots on lower molars can be easily accessed by the LM-Furcator.

No surgical instrument tray should be without the LM-Furcator, as the instrument is also effective for use in periodontal surgical procedures. The delicate instrument, with its excellent reach, serves to complete such instruments as the triple-angled excavator or Apexcavator. The LM-Furcator is a versatile instrument, as it can also be used effectively in the excavation of caries in the gingival margin.

**Is the LM-Furcator only a tool for periodontists or would you also recommend its use to all dentists?**

The LM-Furcator is an extremely versatile instrument and a handy addition in the treatment of early-stage furcation lesions. That's why I wholeheartedly recommend the instrument for any dental practice!

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