**Micro-Dentistry**

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Resolution

Resolution plays a most important role. Our naked eye cannot identify, for example, 72 dpi (dots per inch). By looking through a microscope, you can identify more than 350dpi. Unfortunately, dental loupes are not able to give us such a high-resolution view. The working field used in micro-dentistry is not two-dimensional, it is three-dimensional. If used correctly as this would give users more high-quality machines and make the price more attractive for others to adopt the use of microscopes.

Illumination

Illumination can give us a brighter and clearer field view. The more light moves to blue, the higher the resolution is for the human eye. That is the reason why recently a lot of dental microscopes have begun to use a xenon or metal-halide light guidance. It is especially important for those dentists who want to take a nice photo in micro-endodontics. Halogen light, which is darker than xenon or metal-halide, is still used in micro-dentistry because it is soft to the human eye and its yellowish color allows increased concentration for the dentist. There are also a LED (light emitting diode), yet a microscope would not use this light because it spreads, but there are ways to increase the visual enhancing systems because it is bright enough and lasts longer.

Ergonomics

Many dentists have started to retire because of serious backaches. The backache comes from bad posture during dental procedures. Right-handed dentists usually leave their bodies to the right side to see the object directly via their eyes rather than through the reflection of a mirror. Micro-dentistry not only provides dentists excellent ergonomics, but also provides patients excellent ergonomics during the procedure as well. When patients can receive treatment in a comfortable position, their satisfaction for the dental treatment will increase.

Visual guidance

Without visual guidance, dental treatment would be as regular dental procedure with high magnification, high resolution and brighter illumination. Regular treatment is usually performed with one’s tactile guidance (the sense of touch). However, when patients can receive treatment in a comfortable position, their satisfaction for the dental treatment will increase.

Micro-Instruments

Micro-instruments were first developed in the area of micro-endodontics. Nowadays, many kinds of micro-instruments are available in many fields in micro-dentistry. Even though sized instruments are too big for micro-dentistry (Fig. 4).

Conclusion

Some might need more information or scientific articles to begin micro-dentistry on their own. One place to start is to attend an annual or bi-annual meeting of micro-dentistry, which are held all over the world. That might be the best place to begin in order to get more information. The Academy of Microscope Enhanced Dentistry plans to launch an official journal of micro-dentistry, so that would help educate anyone interested in the field.