

# Keep Looking Don't Settle —Rethinking The Microscope—

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## Education & Work Experience

1989 DDS from Niigata Univ.

Mitsuhashi Dental Clinic in Niigata

1998 Araki Dental Clinic in Tokyo

2000 Private Practice "Dental Mitsuhashi" in Tokyo

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The spread of microscopy in dentistry has been spectacular over the past decade. In particular, its widespread use in the Asian region is noteworthy from a global perspective. However, the number of microscopes sold is only a few percent of the total number of dental clinics, and the reality is that root canal treatment without the use of a microscope is still commonplace.

What about the medical field, which is the predecessor of microscopic treatment? For the last century, we have not been able to perform any of these surgeries without the use of a microscope, such as tympanoplasty, cataract surgery, and cerebral aneurysm clipping.

Why has dentistry lagged so far behind in terms of the widespread use of microscopy? One of the reasons is that the microscopes used in dentistry are unique.

In 1953, the world's first commercially available operating microscope, the OPMI 1, was released by Zeiss, and it was equipped with a rotary magnification changer called a Galilean changer, coaxial illumination, and a suspension system. This was the foundation on which the development of operating microscopes began.

In 1967, 14 years after the launch of the OPMI1, a revolutionary improvement in the history of operating microscopes was made with the appearance of the Motorized Microscope, a motorized version of the Stepless zoom system that enabled foot control of magnification and focus to keep looking during treatment.

The motorized microscope gained overwhelming support in the surgical field, and became a standard feature of surgical microscopes from then on. The manual microscope is now used for outpatient examinations, suture extractions, cleaning, and other medical examinations.

Currently, most dentists around the world use manual microscopes, and the appearances of motorized microscopes has not progressed. This is one of the reasons why the use of microscopes in dentistry has not spread.

In this lecture, the merits of using a motorized microscope in dentistry will be explained, and the future of microscopic dentistry will be discussed through demonstrations of the microscope in practice.