

Safe way for using NiTi rotary files

Q How can I use my NiTi rotary files more efficiently and more safely without separation?

A In the clinical practice, it is much more efficient to use NiTi rotary files compared to hand instrumentation. However, misuse of NiTi rotary files can result in procedural errors such as transportation, ledge, perforation, and file separation. Generally, following suggestions could be considered to avoid these errors.

1. Enlarge the coronal half of the root canal before preparing the apical part.¹ This provides a more direct path to the apex of the root canal and reduces coronal resistance.
2. Make a glide path with small size files (sizes 10 - 20). This allows preservation of pathway to the working length and reduces the formation of transportations and ledges.²
3. Use a small file (size 10) to establish and maintain patency. This would be helpful in reducing transportation and respecting the original canal shapes.³
4. Limit the use of NiTi rotary files within the working length. The overzealous use of NiTi rotary files (especially beyond apical foramen) could cause cracks in apical roots.^{4,5}

From **Seok-Woo Chang**
(Kyung Hee University)

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