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Advanced Chinese NiTi alloy wire and clinical observations

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ABSTRACT

Chinese NiTi wire was studied on the bench with six other nickel-titanium-alloy wires. Bending and torsional tests were conducted and temperatures of phase transformation compared. The Chinese NiTi wire was found to have a low stiffness, high springback and constant bending and torsional moments on unloading, in a very large deformation region. It can produce a gentle, nearly constant force. These factors make it desirable for clinical application.

Included in this paper are clinical observations of cases selected from over 100 patients in current treatment with Chinese NiTi wires. Chinese NiTi wire reduced the leveling and alignment phase of treatment without discomfort to the patient. Chinese NiTi wire can be used in both children and adults.

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