Coronary stent: ABAQUS simulation study

ABSTRACT

In this study, a 3D finite-element model was developed and used to simulate a coronary stent. The model was validated against experimental data and published results. The stent was subjected to various loads and the resulting strains were analyzed. The simulation results were compared to experimental data and showed good agreement. The study highlights the importance of using computational methods to predict the behavior of medical devices.

Angioscore, Inc., Alameda, CA

The AngioSculpt balloon is a new metallic area coverage tool for endovascular treatment. It is designed to provide enhanced coverage and better apposition to the vessel wall compared to traditional balloons. The balloon is made of nitinol, a shape memory alloy that allows for precise shaping and annealing. The balloon is used in a variety of clinical applications, including vascular stenting and angioplasty.

The AngioSculpt balloon is an example of innovative technology in the field of endovascular treatment. Its unique design and materials make it a valuable tool for healthcare providers, enabling them to deliver more effective and safer treatments to their patients.

The AngioSculpt balloon is a valuable addition to the armamentarium of endovascular tools, offering healthcare providers a new option for enhancing coverage and ensuring better apposition to the vessel wall.
$\begin{align*}
&\text{low cycle fatigue} \\
&\Delta \varepsilon = 0.296 N^{-0.156} \\
&\Delta \varepsilon = \text{Strain change} \\
&N = \text{Cycles to failure}
\end{align*}$

\begin{itemize}
\end{itemize}