

Long-Term Retrospective Study Finds No Implant Fractures in More Than 2500 Thommen Medical Implants

Yu H, Qiu L, Int. J. Oral Maxillofac. Surg. 2022;51:1355-61



Background

Implant body fractures are a potential mechanical complication that may be caused by ...

- ... implant or prosthetic design issues
- ... wrong planning of implant diameter or position
- ... parafunctional patient habits (e.g., bruxism or inadequate occlusion)



Aim

Analyze the incidence of implant body fractures from different brands and identify possible fracture risk factors



Study Design



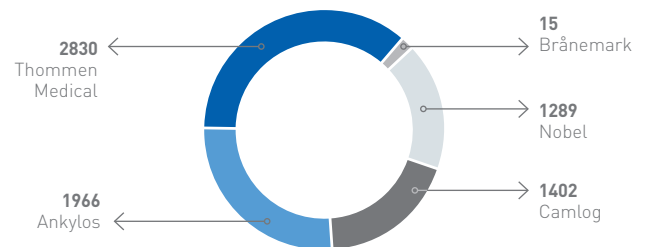
2810 patients



6.9 years average follow-up

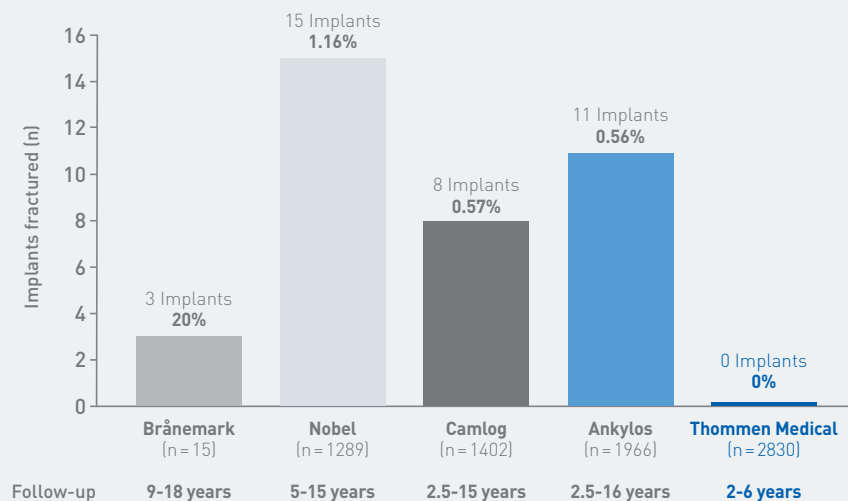


7502 implants from 5 implant brands*



Results

Zero implant fractures in 2830 Thommen Medical implants over 2–6 years of follow-up*



Identified risk factors based on fractures reported with other brands:

Narrow implant diameter**

Unsplinted restorations[†]



Key Takeaways

This large, long-term retrospective study ...

- ✓ ... confirms the favorable implant design and stability of Thommen Medical implants^{††}
- ✓ ... identifies a narrow implant diameter and unsplinted restorations as potential risk factors for fractures

*The study sample included 8 patients with 15 Brånemark implants and 9–18 years of follow-up [Brånemark implants were originally not designed for crown restorations], 591 patients with 1402 Camlog implants and 2.5–15 years of follow-up, 450 patients with 1289 Nobel Replace implants and 5–15 years of follow-up, 601 patients with 1966 Ankylos implants and 2.5–16 years of follow-up, and 1160 patients with 2830 Thommen implants and 2–6 years of follow-up. Patients were only excluded if they did not return to the hospital and could not be followed up by telephone for at least 2 years. No other exclusion criteria were defined. **Narrow versus regular, $p = 0.009$ †Splinted versus unsplinted, $p = 0.005$ ††Authors mention that Thommen Medical implants had a relatively short follow-up time of 2–6 years, while it reached up to 18 years for other implant systems. Hence, longer follow-up times will be necessary to confirm these reported results.