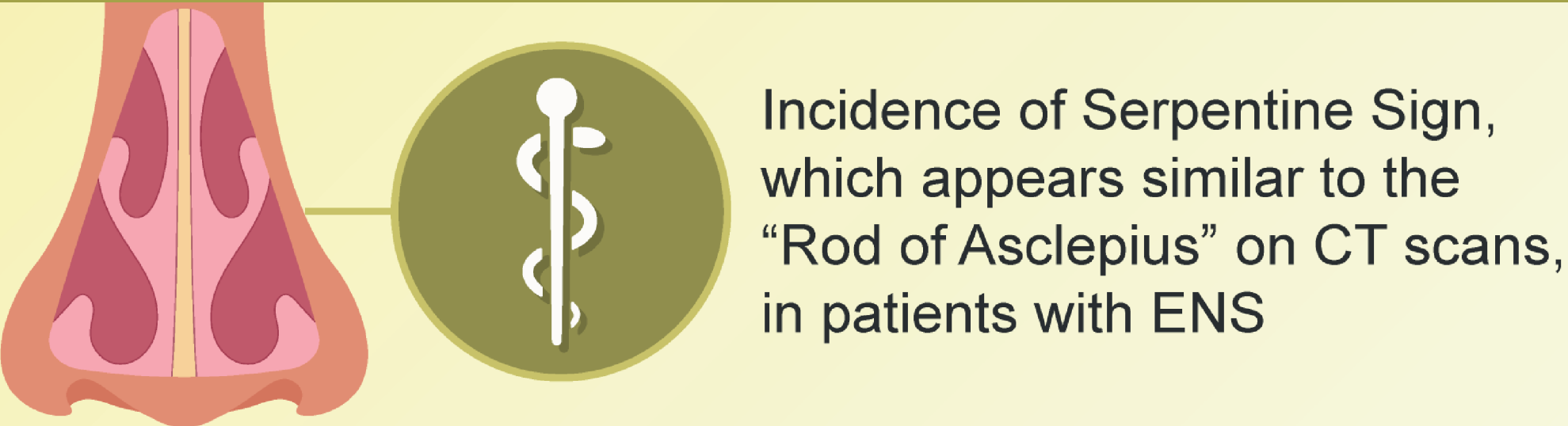
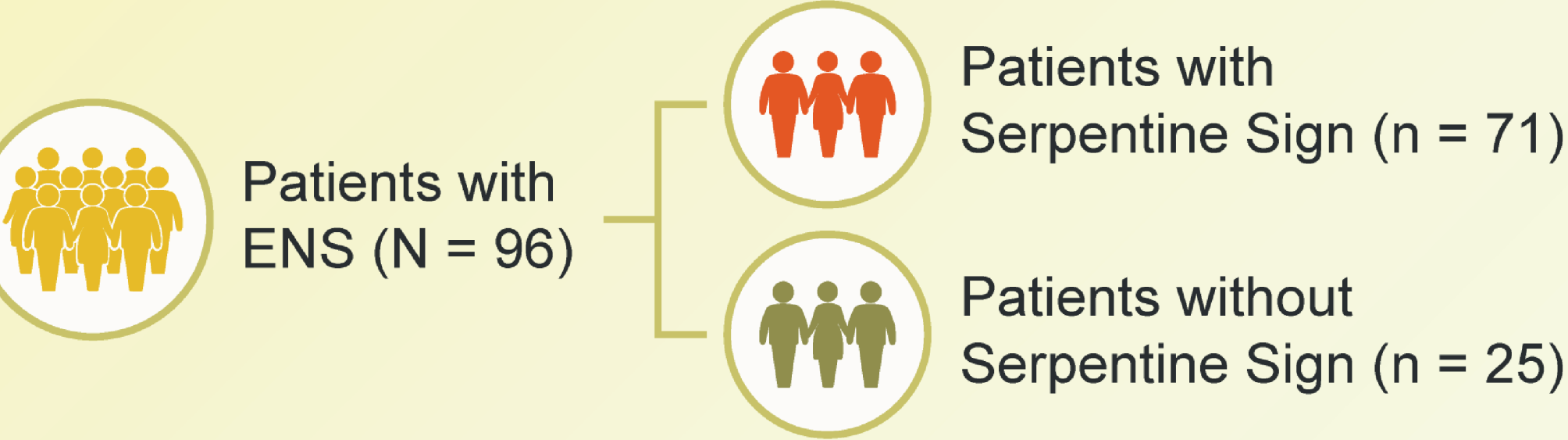


Serpentine Sign: evidence of airway compensation in patients with empty nose syndrome

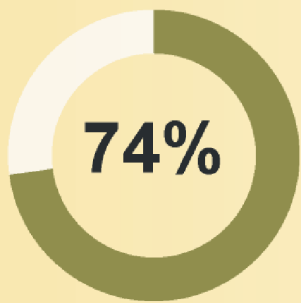


Retrospective analysis of Serpentine Sign incidence



Outcomes analyzed

- ENS6Q score
- SNOT-25 score
- Correlation factors for Serpentine Sign
- Post-surgery M/m ratio of septal thickness



Proportion of patients with ENS exhibiting Serpentine Sign

ENS6Q total scores	12.5 ± 3.9	<	16.4 ± 3.5		$p = 0.008$
SNOT-25 total scores	61.8 ± 22.1	<	74.8 ± 23.5		$p = 0.026$

Factors correlated with Serpentine Sign incidence

 ENS6Q scores (OR = 0.90; 95% CI: 0.83–0.98; $p = 0.011$)	 SNOT-25 scores (OR = 0.97; 95% CI: 0.95–0.99; $p = 0.018$)	 Psychological dysfunction (OR = 0.93; 95% CI: 0.88–0.98; $p = 0.013$)	 Empty nose symptoms (OR = 0.85; 95% CI: 0.77–0.94; $p = 0.001$)	 Sleep dysfunction (OR = 0.93; 95% CI: 0.86–0.99; $p = 0.049$)
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Clinical outcomes of nasal reconstruction surgery

- 39 patients with postoperative CT at 6 months
- ↓ M/m septal mucosa thickness ratio
- ↓ ENS6Q scores
- ↓ SNOT-25 scores

ENS: Empty nose syndrome; CT: Computed tomography; ENS6Q: Empty Nose Syndrome 6-Item Questionnaire; SNOT-25: 25-Item Sino-Nasal Outcome Test; OR: Odds ratio; CI: Confidence interval; M/m: Maximal to minimal

Patients with Serpentine Sign exhibited decreased ENS symptoms that can be further alleviated with nasal reconstruction surgery