

**Early Clinical Outcomes Endothelial Cell Count
Following Microincision Under 1 Mm
Femtosecond Laser-assisted Cataract Surgery
Compared To Conventional Phacoemulsification**

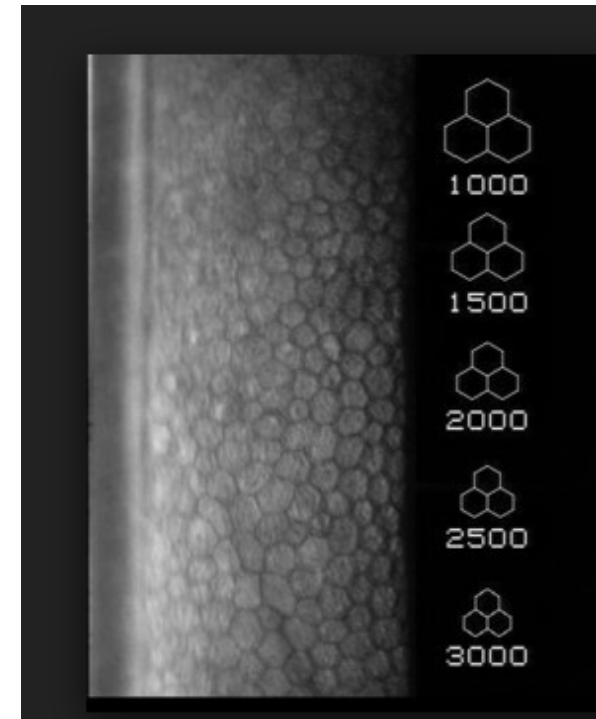
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PURPOSE

- The latest advances in cataract surgery as femtosecond-laser cataract requires evaluation and comparison with traditional techniques.
- We propose to compare corneal endothelial cell loss during cataract extraction with posterior chamber intraocular lens implantation (PC IOL) with two different techniques: microincision under 1mm femtosecond laser-assisted cataract surgery and conventional phacoemulsification.



METHODS

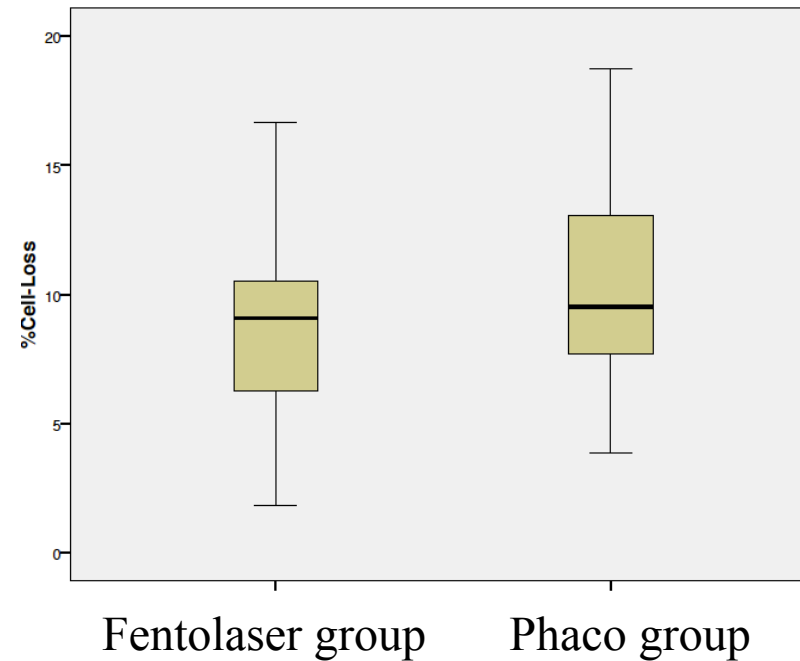
- Prospective and randomised study.
- In each group, 20 eyes of 16 patients with a mean age of 70.52 ± 10.45 years (range 40-85 years), underwent cataract surgery using either femtosecond laser-assisted (Victus-technolas / Bausch & Lomb) (femtolasers group) or conventional phacoemulsification (phaco group).
- Patients were evaluated preoperatively:
 - Lens Opacities Classification System III (LOCS III).
 - Endothelial cell density by non-contact specular microscope preoperatively and 1 month postoperatively.
 - The loss of endothelial cells was calculated: Loss of endothelial cells (%) = $(\text{pre-op count} - \text{post-op count}) \times 100 / \text{pre-op count}$.

RESULTS

Prueba de muestras Independientes

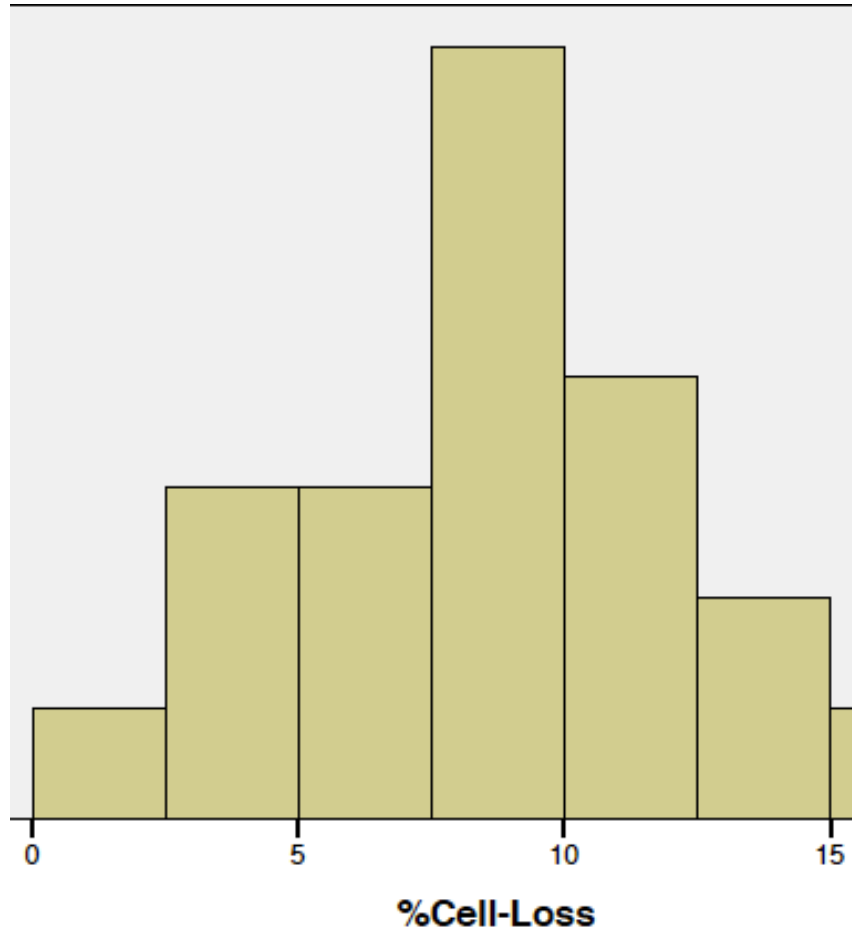
		Prueba T para la igualdad de medias		
		Sig. (bilateral)	Diferencia de medias	Error ttp. de la diferencia
%Cell-Loss	Se han asumido varianzas iguales	0,183	-1,554	1,147
	No se han asumido varianzas iguales	,183	-1,554	1,147

The variations between pre- and postoperative parameters showed no statistically significant differences between the two surgical procedures ($p > 0.05$).

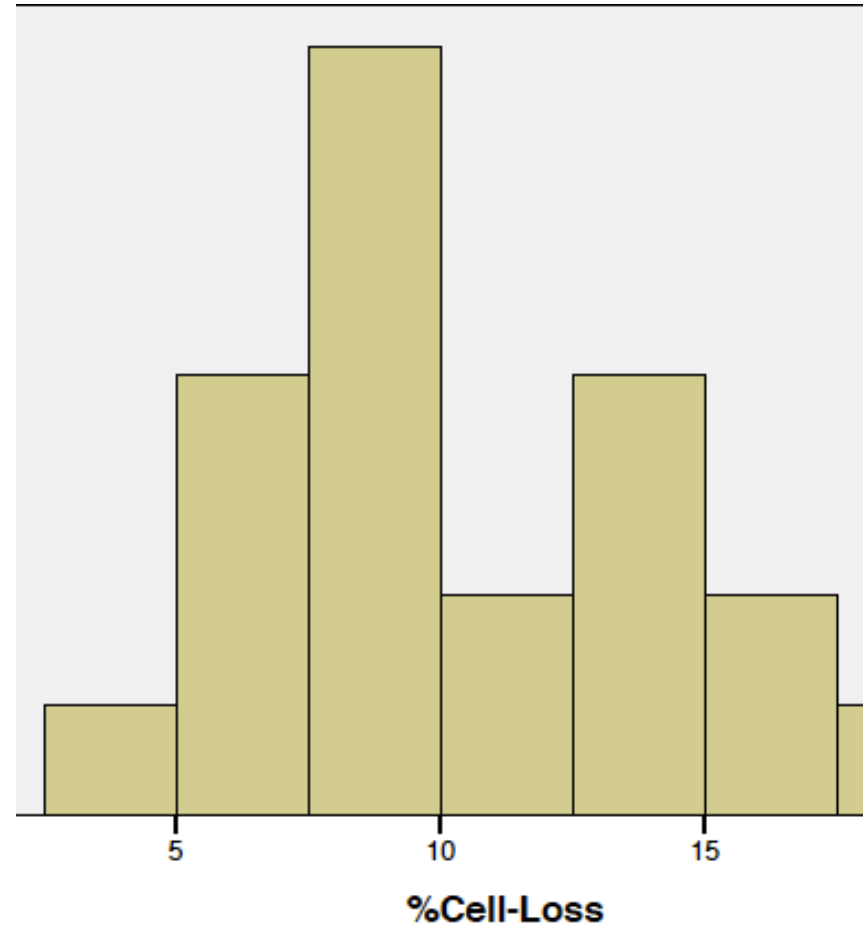


RESULTS

Fentolaser group



Phaco group



CONCLUSIONS

- Femtosecond laser-assisted cataract surgery is an effective and safe technique that offers an excellent alternative for cataract surgery, with a smaller incision under 1mm and postoperative outcomes comparable to the standard technique.
- Femtosecond laser-assisted cataract surgery causes less corneal swelling in the early postoperative period and may cause less trauma to corneal endothelial cells than manual phacoemulsification.
- Prospective studies with more patients and longer follow-ups are needed to establish if there really are statistically significant and clinically relevant differences between both techniques.