

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo PIBIC

Last Name - Mejia
First Name - Eileen
Middle - Dias Granados

Service (sector)
Cataract

Nº CEP

Facoemulsification's cirurgic training, with cataract induced in pig eye

Authors: Mejia, E..B.; Lobato, M.G.; Reina, J.; Alves, A.; Cunha, M.; Soriano, E. S.

Purpose. To induce a cataract in pig eyes, resulting in similar characteristics of the human cataract, which could then be employed in phacoemulsification training.

Methods. Fifteen pig eyes were divided into 3 groups. 0.2 ml of 2% methylcellulose was injected into their anterior chamber through a paracentesis. A mixture of methanol-formaldehyde (0.2ml) in different dilutions, 2:1, 1:1, 1:2, was used. The studied variables were corneal transparency, anterior capsule texture, hardness of nucleus, and nucleus fracture. The surgeon then graded the parameters at the end of the procedure.

Results. All three mixtures induced cataract. The solution of methanol-formaldehyde 1:2 induced a $\frac{3}{4}$ + cataract, which was considered the best mixture to perform nucleus fracture and fragment manipulation. Using this dilution, the anterior capsule condition also became more similar to the capsulorhexis. The 2:1 and 1:1 dilutions induced softer cataracts with some elasticity in the anterior capsules. There was no difference concerning corneal transparency between the groups.

Conclusion. This technique has good reability and induces cataracts with similar characteristics of the human cataract. The mixture of Methanol: formaldehyde 1:2 was the best to provide harder nuclei and stiffer capsules in the evaluation, which is useful to practice modern phaco emulsification techniques, like "phaco-chop" and "divide and conquer".