

使用微切口式手機及文丘里幫浦施行微切口白內障晶 體乳化術之臨床經驗

Phacoemulsification with Microincisional Handpiece and Venturi Pumping System-Clinical Experience

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摘要

兩組病人各30隻眼睛接受白內障晶體乳化術，一組經由2.5mm微切口使用Microincisional手機與Venturi幫浦晶體乳化儀，另一組則經由3.2mm傳統切口使用一般手機與隔膜式幫浦晶體乳化儀，所有手術均由同一位醫師執行，我們比較兩組手術中BSS灌流液自切口漏出的量及手術前後角膜內皮細胞數目的變化，微切口組較傳統切口組有較少BSS輸液自切口漏出($38.2 \pm 10.7\text{ml}$ VS $124.2 \pm 34.6\text{ml}$)以及較少的乳化儀廢水瓶液量($67.6 \pm 14.2\text{ml}$ VS $162.7 \pm 41.3\text{ml}$)，角膜內皮細胞數目的減少也較少($4.75 \pm 0.61\%$ VS $7.38 \pm 0.74\%$)均達統計上之差異($P < 0.05$)，晶體乳化時間在兩組則未達統計上的差異，手術中並發現Microincisional晶體乳化儀系統具較穩定之前房，較少的眼內渦流，及晶核較穩定易於操作之優點，此系統提供較接近密閉系統的手術環境，配合Venturi幫浦可使手術之安全性及可控性提高，對於可折疊式人工晶體也提供未來發展的方向。

Abstract

Microincisional handpiece for phacoemulsification was developed for prevention of incisional leakage which might jeopardize the maintenance of close system during operation and increase the possibility of intraocular complication. We report our experience of phacoemulsification cataract extraction with posterior chamber IOL implantation on 30 eyes with Microincisional handpiece and venturi pumping system via a 2.5mm incision. The other group of 30 eyes received the same procedure using standard handpiece and diaphragmatic pumping system via a 3.2mm incision. Significantly less intraoperative incisional fluid leakage ($38.2 \pm 10.7\text{ml}$ vs $124.2 \pm 34.6\text{ml}$) and less fluid volume in the collection bottle of phacoemulsifier ($67.6 \pm 14.2\text{ml}$ vs $162.7 \pm 41.3\text{ml}$) were noted in microincisional group. Surgery-induced corneal endothelial cell loss was also

significantly less in microincisional group ($4.75 \pm 0.61\%$ vs $7.38 \pm 0.74\%$).

Phacoemulsification time has no significant difference between these two groups.

Intraoperativ observation of more stable anterior chamber, less turbulence flow and increased nucleus followability were noted with microincisional group. Our results suggest that microincisional system is helpful in reducing incisional leakage, decreasing corneal endothelial damage and providing more intraoperative control. This smaller incision also arouses the need for the development of smaller foldable intraocular lens.