PRONE POSITIONING AFTER VITRECTOMY FOR MACULAR HOLE: IS IT REALLY NECESSARY - PRO:
PRONE POSITIONING OF AT LEAST 5 DAYS IS CRITICAL FOR HOLE CLOSURE
J. Nawrocki
Klinika Okulistyczna “Jasne Blonia”, Poland

Prone positioning (‘face down positioning’, ‘posturing’) of at least 5 days is cited for hole closure. The majority of authors in the last 10 years use 5 days or more prone positioning.

This paper will discuss the mechanism of macular hole closure examined with SD OCT. It must be emphasized that the hole closure begins at the inner surface of the retina. Scarification by ILM peeling allows glial cells to proliferate. Literature suggests that a scaffold or template is needed for glial cells to migrate along and this can be provided by the interface between the endotamponade agent and the retina. It seems logical therefore that a longer lasting or more thorough tamponade would produce the required results.

We must distinguish prone position from tamponade effect as both have their roles to play in MH closure. Authors have argued that an air/gas tamponade ‘bubble’ produces a ‘waterproofing’ effect, preventing the newly formed post-vitrectomy aqueous humor from contacting the macular and interfering with the bridging of the MH. Furthermore it has been suggested that an air/gas bubble may apply a directional force to the macula producing a mechanical effect against any tractional vectors and holding the MH edges against the RPE. This is perhaps a reason why air/gas tamponades are more successful than silicone oil as SO is less buoyant and conforms poorly to the foveal depression as it makes a smaller angle of contact with the retina.

Some authors use gas/air mixture to fill the eye and which remains in the eye much longer and produces a longer lasting tamponade effect even without prone positioning.

We can produce another tamponade-like effect as we presented recently with the Inverted ILM Flap Technique we do however, still need prone positioning to keep the flap in place.

An SD OCT study of Eckardt showed that the majority of MH closed in the first 24-48 hours. (Not all eyes could be examined at these times.) However, some closed late and the number of patients was relatively small (33). Eckardt also points out that the follow-up time was too short to say whether late re-opening of successfully closed holes can be associated with short-term tamponading. Thus we might also question the use of short-term prone positioning in these cases.

It has been shown in literature that the majority of 1-day posturing cases seem to lead to simple type closure. Should we not reflect upon the facts that for a surgeon, the anatomical aim of MH surgery is to close the macular hole and that successful small MH closures are reported as occurring on day 1. The patient however, may be equally, if not more delighted, by a post-operative improvement in visual acuity. Macular recovery may take much longer (up to one year) and longer term prone positioning may assist with the patients’ future macular recovery and VA improvement.

I believe we should also consider the fact that in the modern era, patients and relatives have a greater tendency than ever before to investigate matters for themselves. To that end, if we ‘Google’ Macular Hole Surgery the first pages of results all seem to advocate face down positioning. I am not a social scientist. However, I feel that many patients will assume a ‘better safe than sorry’ attitude and follow this Internet advice regardless of any suggestion from their doctors that prone positioning is not necessary and this may have a hidden impact on non-prone position MH closure rate figures as it is unlikely that they would report to their surgeon that they followed other advice.