ESCRS FUNDS CME STUDY
Study at University Eye Clinic Maastricht, the Netherlands, will seek to answer critical questions relating to cystoid macular edema

by Dermot McGrath in Paris

A potentially groundbreaking European multicentre, randomised study to be funded by the ESCR is expected to help to transform the current clinical management of cystoid macular edema (CME).

The PREvention of Macular Edema after cataract surgery (PREMED) study, a proposal by the University Eye Clinic Maastricht, the Netherlands, under the supervision of Rudy Nuijts MD, PhD, has been approved for a substantial grant by the ESCR.

“It is an exciting development and we are very proud that our proposal was selected by the External Review Committee and the Research Committee of the ESCR as one of the studies that has the potential to be of real benefit to our patients,” said Dr Nuijts, co-author of the study proposal together with clinical epidemiologist and medical retina specialist Dr Jan S A G Schouten and economic consultant Dr Frank J H M van den Biggelaar.

Dr Nuijts said that the study will seek to answer some critical questions relating to CME.

“Cystoid macular edema remains a significant problem in cataract patients and especially in the diabetic population where the incidence in cataract surgery can be as high as 31 per cent. So the hope is that this study will give us more definite evidence-based recommendations for clinical guidelines to prevent the occurrence of CME after cataract surgery in patients with and without diabetes,” he said.

Dr Nuijts said that funding such a landmark study would also serve to reinforce the ESCR’s core mission to serve the interests of its members and ophthalmology in general. “We know from the excellent work accomplished by Peter Barry with the Endophthalmitis Study some years back of the importance of being able to conduct large-scale, randomised trials that study different treatment regimes and can give answers to the questions that concern all of us in our day-to-day clinical practice. So it is important for us as researchers that we receive funding and that we have the confidence of the ESCR, but it is also important for the ESCR to perform another landmark study and to show the world that the resources of the ESCR are being used for primary research for the benefit of all of its members in Europe and around the world,” he said.

Dr Nuijts noted that while CME is a common cause of vision loss after cataract surgery, there has to date been no randomised controlled clinical trial comparing all the currently existing interventions and to investigate whether combining treatments may have an additional effect.

The aim, said Dr Nuijts, would be to enrol around 2,400 patients without diabetes mellitus and 650 patients with diabetes mellitus who require cataract surgery in at least one eye.

In all groups of the non-diabetic and diabetic population phacoemulsification will be performed with an intracameral cefuroxime injection and postoperative administration of topical betamethasone for four weeks and topical levofloxacin for six days.

Two preventive strategies in the non-diabetic population will be studied, said Dr Nuijts. Firstly, a subtenon triamcinolone injection, followed by a postoperative course of topical corticosteroids and antibiotics. The second group of patients will receive a subtenon triamcinolone injection, with no topical corticosteroids or antibiotics administered postoperatively.

The duration of the study will be 36 months, said Dr Nuijts, at the end of which the researchers hope to have a much clearer picture as to the optimum treatment regimen for cataract patients with and without diabetes mellitus.

“Most surgeons in Europe are still using a combinations of non-steroidal anti-inflammatory drugs (NSAIDs) together with topical steroids. The question is, of course, how long and how often we can administer these treatments and to determine if we could be successful giving only one subconjunctival injection of triamcinolone ideally at the time of the surgery and thereby decreasing the problem of compliance. We know this is a significant problem in the older patient population because they have to use the drops every day, mostly for three to four weeks in most cases. So if we could bring that back to a single injection at the time of surgery, this would have a great advantage and could prove very cost-effective as well,” he said.

In the diabetic population the control group will receive postoperative administration of topical NSAID and corticosteroid and four preventive strategies will be evaluated. Firstly, subtenon triamcinolone injection, followed by postoperative topical corticosteroids and antibiotics; secondly, intravitreal bevacizumab injection with postoperative topical corticosteroids and antibiotics. The third group will include patients treated with a subtenon triamcinolone injection and an intravitreal bevacizumab injection, followed by postoperative topical corticosteroids and antibiotics.

NMO affects two forms of the aquaporin-4 water channel: M1 and M23. The M1 channel more readily escapes from antibodies, but antibody binding to M23 causes aggregation of M23 on the astrocyte surface, which amplifies cell damage. The investigators determined that the NMO antibody targets astrocytes, an autoimmune disease of the central nervous system that damages the optic nerves and spinal cord. It has similar symptoms to multiple sclerosis including vision loss, weakness, numbness, arm and leg paralysis and loss of bowel and bladder control. The antibody test has made it clear that NMO is more common than previously thought. The researchers hope the research will point the way to effective therapies.

Research immunologists have developed an antibody test that will allow clinicians to distinguish between neuromyelitis optica (NMO) and multiple sclerosis, a disease with which it is often confused. A group of researchers from the Mayo Clinic in the US and the University of Tübingen in Germany built on earlier research on the role of aquaporin-4 water channel, an essential component of the central nervous system. They determined that an antibody associated with NMO affects two forms of the aquaporin-4 water channel: M1 and M23. The M1 channel more readily escapes from antibodies, but antibody binding to M23 causes aggregation of M23 on the astrocyte surface, which amplifies cell damage. The investigators determined that the NMO antibody targets astrocytes, an autoimmune disease of the central nervous system that damages the optic nerves and spinal cord. It has similar symptoms to multiple sclerosis including vision loss, weakness, numbness, arm and leg paralysis and loss of bowel and bladder control. The antibody test has made it clear that NMO is more common than previously thought. The researchers hope the research will point the way to effective therapies.


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**JournalWatch**

Test distinguishes NMO from MS

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