The KKESH Uveitis Survey Study Group

Collaboration enables the production of scientific work in a developing region.

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Patterns of uveitis differ among various regions and are influenced by a variety of factors. The adoption of universal classification systems and population-based studies in all countries may provide more reliable data for comparison among different areas. Further, guidelines for the diagnosis and management of uveitis can be developed based on these studies.

In recent months, a uveitis study group was formed at the King Khaled Eye Specialist Hospital (KKESH) in Riyadh, the largest eye hospital in the Kingdom of Saudi Arabia and one of the top-ranked medical facilities in the Middle East. Named The KKESH Uveitis Survey Study Group, this group was formed with the objective of performing collaborative studies to evaluate the patterns of uveitis (anterior, posterior, and panuveitis in children and adults) in the Middle East based on the experience at KKESH.

This article provides an introduction to The KKESH Uveitis Survey Study Group and its research. The papers presented below have been accepted for presentation at this year's American Society of Retina Specialists annual meeting in Las Vegas and the joint meeting of the American Academy of Ophthalmology and the Asia-Pacific Academy of Ophthalmology in Chicago.

BACKGROUND

KKESH has been collaborating with Wilmer Eye Institute of Johns Hopkins Medicine, Baltimore, since 2010. With financial support from the Saudi government, joint research activities have focused on developing treatments for blinding eye diseases, such as diabetic eye disease and uveitis. I joined Wilmer Eye Institute and Johns Hopkins in January 2011 and KKESH in July 2011 as part of this affiliation.

Over the past 2 years, a group of researchers from KKESH, led by Hassan Dhibi, MD, Chief of the Uveitis Division, started to review the uveitis experience at the hospital over the last 25 years. In July 2011, I became head of the Vitreoretinal Division at KKESH, at which point the data were ready to be studied. In total, we carried out a retrospective review of clinical records of 888 cases (1286 eyes) of uveitis referred to KKESH between 1986 and 2011.

In November 2011, Dr. Dhibi presented the preliminary results of the KKESH Uveitis Survey at the 11th International Ocular Inflammation Society Congress and International Assembly of Ocular Inflammation Societies in India, and we began exploring the possibility of forming a scientific collaboration to try to find guidelines for treatments for patients and to publish our work. That month, with a group of 15 doctors from 6 ophthalmic subspecialties, we officially established the KKESH Uveitis Survey Study Group.

RESEARCH

Panuveitis Study

We conducted a retrospective chart review to evaluate the clinical characteristics, complications, and surgical outcomes of panuveitis. A total of 400 patients (727 eyes) with panuveitis were evaluated from January 1986 through December 2011.

The type of panuveitis was granulomatous in 206 (51.5%) patients and non-granulomatous in 194 (48.5%) patients. The etiology was infectious in 61 (15.3%) patients and noninfectious in 339 (84.4%) patients. Mean patient age was 37.7 ±14.6 years (range, 7–88 years). Episodes were bilateral in 290 (72.5%) patients. Mean baseline best-corrected visual acuity (BCVA) was 20/125 (0.8 ±0.67) in both eyes. BCVA of 20/200 or worse at presentation occurred in 280 (38.5%) eyes. Baseline intraocular pressure (IOP) was 12.5 mm Hg OD and 13.5 mm Hg OS. Onset was sudden in 234 (58.5%) patients. The duration of symptoms was short (less than 3 months) in 185 (46.3%) patients. A single

episode occurred in 159 (39.8%) patients, and recurrent episodes in 241 (60.3%) patients.

A total of 288 eyes had posterior synechia at presentation. Clinical diagnosis included Vogt-Koyanagi-Harada (VKH) syndrome in 151 (37.8%) patients, Behçet disease in 104 (26%) patients, idiopathic panuveitis in 33 (8.3%) patients, presumed intraocular tuberculosis in 21 (5.3%) patients, chronic postoperative panuveitis in 12 (3%) patients, toxoplasmic retinochoroiditis in 9 (2.3%) patients, and sympathetic ophthalmia in 5 (1.8%) patients; 63 (15.8%) patients had no clear diagnosis at presentation.

One hundred eighty-one (45.3%) patients underwent surgical procedures secondary to complications, 140 (74.9%) patients due to cataracts. Of these, 80 (57.1%) patients underwent phacoemulsification and IOL implantation, 28 (20%) patients underwent phacoemulsification alone, 14 (10%) patients underwent lens aspiration and IOL implantation, 7 (5%) extracapsular surgery (EECC) alone, 6 (4.3%) patients lens aspiration, 3 (2.1%) patients extracapsular cataract extraction and IOL implantation, and 2 (1.4%) patients pars plana lensectomy. Twenty three (12.3%) patients underwent pars plana vitrectomy, and 18 (9.6%) patients underwent surgical glaucoma procedures. Mean final visit logMAR BCVA in both eyes was 20/100 (0.7 ±0.92).

VKH disease and Behçet disease are the leading causes of panuveitis in Saudi Arabia. Immunosuppressive therapy and surgical intervention helped maintain BCVA in patients with panuveitis in the long term.

VKH Study

We conducted another study to describe the ocular clinical characteristics, complications, surgical outcomes, and treatment of VKH disease, a chronic, bilateral granulomatous panuveitis with accompanying neurologic, integumentary, and auditory involvement. We retrospectively analyzed 194 patients (382 eyes) diagnosed with VKH disease between January 1986 and December 2011.

VKH disease was diagnosed at a median age of 35.1 ±12.8 years (range, 7–68 years), occurred in 135 (69.6%) females, and was bilateral in 188 (96.9%) patients. Visual acuity at presentation was 20/200 to no light perception in 149 (39%) eyes and was 20/50 or better in 124 (32.5%) eyes. Mean baseline BCVA was 20/125 (0.8 ±0.72) in both eyes. Onset was sudden in 125 (64.4%) patients. The duration of symptoms was short (less than 3 months) in 110 (56.7%) patients. A single episode occurred in 87 (44.8%) patients, and recurrent episodes in 107 (54%) patients.

The most common form of presentation was panuveitis in 151 (77.8%) eyes. Slit lamp findings at presentation demonstrated small keratic precipitates in 71 (18.6%) eyes, followed by posterior synechia in 161 (42.1%) eyes, mutton fat keratic precipitates in 61 (16%) eyes, Köeppe nodules in 29 (7.6%) eyes, and band keratopathy in 24 (6.3%) eyes. Retinal detachment was present in 164 (42.9%) eyes, and tractional retinal detachment in 21 (12.8%) cases. Optic nerve swelling was observed in 112 (29.3%) eyes, and sunset glow fundus was found in 63 (14.4%) eyes.

Oral prednisone was the first line of treatment in 168 (86.6%) patients. Immunosuppressive treatment with cyclosporine was used in 87 (44.8%) patients, azathioprine in 58 (29.9%) patients, intravenous steroid in 50 (25.8%) patients, mycophenolate mofetil in 18 (9.3%) patients, and methotrexate in 12 (6.2%) patients. Local steroid therapy and intravitreal triamcinolone injection were administered in 13 (6.7%) patients and 4 (2.1%) patients, respectively. During the 25 years of this study, 89 (45.9%) patients (136 eyes) underwent surgery, and a total of 155 surgical procedures were performed. Among these patients, 104 (67.1%) eyes underwent phacoemulsification, 44 (28.4%) eyes trabeculectomy, 4 (2.6%) eyes vitrectomy, and 3 (1.9%) eyes superficial lamellar keratectomy with EDTA chelation.

At the last visit, mean BCVA was 20/80 (logMAR 0.6 ±0.9) OD and 20/80 (logMAR 0.6 ±0.8) OS. Visual acuity was better than 20/50 in 240 (62.8%) affected eyes and 20/200 or worse in 72 (18.8%) affected eyes. More common complications were glaucoma in 135 (35.3%) eyes, followed by posterior synechia in 96 (25.1%) eyes, cataract in 25 (6.5%) eyes, and choroidal neovascularization in 21 (5.5%) eyes.

CONCLUSION

The preliminary work of The KKESH Uveitis Survey Study Group shows that by pooling talent and efforts, it is possible to produce scientific work in a developing region of the world. We believe that our efforts may help raise both the academic level of our research and ophthalmology as a whole. Ultimately, we hope that this work will benefit the health of patients with uveitis. ■

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