

Summaries from the international literature

Summarized by:

Nancy S. Y. Yuen,* Woon-Ming Chan,[†] and Edwin Chan.[‡]

Injection of tissue plasminogen activator into a branch retinal vein in eyes with central retinal vein occlusion

J. N. Weiss, L. A. Bynoe.

Ophthalmology 2001;108:2249-2257.*

Central retinal vein occlusion (CRVO) is a common retinovascular disorder caused by intraluminal venous thrombosis at the level of the lamina cribrosa. No safe treatment exists that promotes the return of lost vision. The systemic administration of thrombolytic agents to treat CRVO was shown to have some benefits and yet has been associated with serious complications, including patient mortality.

This study reported the results of treatment of CRVO with infusion of tissue plasminogen activator t-PA through cannulation of the retinal vessels after pars plana vitrectomy. Twenty eight eyes of 28 patients had had CRVO for an average of 4.9 months before intervention surgery. Twenty two patients (79%) experienced at least 1 line of visual improvement during the follow-up period (range, 3 to 24 months), and 15 patients (54%) gained 3 or more lines of visual acuity. All patients had areas of clearing of intraretinal hemorrhage after surgery. Complications included 7 vitreous hemorrhages and 1 postoperative retinal detachment, with no other serious intraoperative or early postoperative complications noted.

The authors concluded that t-PA infusion via retinal vein cannulation is a safe and effective method and the total dose infused is only approximately 1% of the usual systemic dose, which results in high local concentration for thrombus dissolution and yet is unlikely to cause systemic hemorrhagic complications. The magnitude and rate of visual recovery after retinal vein t-PA injection is higher than spontaneous recovery of vision observed as part of the natural history of CRVO. The effect of flushing fluid through the retinal venous system, which could have a positive effect independent of the thrombolytic activity of t-PA, has to be addressed by further study randomizing saline or t-PA injection.

Effect of cataract surgery on the progression of diabetic retinopathy

J. Chung, M. Y. Kim, J. S. Yoo, Y. C. Lee.

J Cataract Refract Surg 2002;25:626-630.*

Cataract surgery may affect the progression of diabetic retinopathy. In this study, the author evaluated whether diabetic retinopathy progresses after cataract surgery and whether the progression is a natural course or caused by the surgery by using the fellow eye as a control. One eye of 75 diabetic patients who had a similar stage of retinopathy or no retinopathy in both eyes underwent cataract surgery. The patients were followed up for 1 year and the progression of retinopathy was compared with the contralateral non-operated eye.

Diabetic retinopathy progressed more in patients with preoperative retinopathy — for 23 of 48 patients (47.9%) after surgery — whereas none of those who had no retinopathy preoperatively progressed. Patients with diabetic nephropathy were more likely to have progression of diabetic retinopathy after surgery and the prevalence of clinically significant macular edema was also higher in the operated eyes that had more progression of retinopathy. There was no difference between phacoemulsification and extracapsular cataract extraction in visual acuity outcome or retinopathy progression. The authors recommend frequent follow up and treatment after cataract surgery in patients who have preoperative retinopathy and especially for those who have nephropathy.

Late-onset transconjunctival oozing and point leak of aqueous humor from filtering blebs after trabeculectomy

H. Matsuo, A. Tomidokoro, Y. Suzuki, et al.

Am J Ophthalmol 2002;133:456-462.*

This article summarizes a cross-sectional study on the occurrence of late-onset transconjunctival oozing and point leak of aqueous humor from filtering blebs after trabeculectomy with 5-fluorouracil (5-FU) or mitomycin C

(MMC). 403 eyes of 403 patients with functional blebs for at least 3 months after trabeculectomy with antimetabolites, either subconjunctival 5-FU injection or intraoperative sponge MMC, were examined. Siedel test was performed with extended observation up to 15 seconds. Transconjunctival oozing was identified as transconjunctival aqueous egress without interruption of the conjunctival tissue or aqueous stream on the bleb wall. Point leak was identified as the presence of a spontaneous visible aqueous stream from a leak point. Patients' demographics, clinical characteristics, bleb appearance, and the appearance of avascular area were compared among the eyes with oozing, those with point leak, and those without any leak. Of 403 eyes, 48 eyes (11.9%) had oozing and 8 eyes (2.0%) had point leak. Intraocular pressure (IOP) was significantly lower and an avascular area was more frequent in eyes with oozing or leak than in eyes without oozing ($p < 0.001$). Logistic regression analyses revealed that oozing was significantly more common after use of 5-FU than mitomycin C ($p = 0.024$) whereas point leak was associated with a larger avascular area ($p = 0.045$).

In conclusion, after trabeculectomy with antimetabolites, transconjunctival oozing is more frequent than point leak. Oozing was significantly associated with lower IOP and the use of 5-FU whereas point leak was associated with a larger avascular area.

Phacoemulsification cataract surgery and unplanned anterior vitrectomy — is it bad news?

*J. H. Tan, W. S. S. Karwatowski.
Eye 2002;16:117-120.**

Cataract surgery by phacoemulsification is the current method of choice. This study was performed to establish the incidence of vitreous loss and how this may affect the visual outcome for all grades of surgeons performing phacoemulsification cataract surgery in a teaching hospital in the UK. 2538 phacoemulsification cataract operations were performed during an 18-month period, with 2446 (96.4%) being uncomplicated. The rate of anterior vitrectomy was 3.6% (92 patients).

Of these 92 patients, vitreous loss occurred most frequent during primary phacoemulsification in 46 patients (50%), during quadrant removal in 12 (13%), during cracking in 7 (8%), and during irrigation and aspiration in 21 (23%). The rate of vitreous loss was 2% when performed by consultants, 4% by specialist registrars and staff grades, and 10% by senior house officers. Thirteen patients (14%) underwent further pars plana vitrectomy for dropped nuclei, 5 of whom achieved final visual acuities of 6/12 or better.

Acceptable postoperative vision better than 6/12 was achieved in 49 patients (86%) of the 57 patients without pre-existing eye disease. Poor visual outcome with visual acuities of worse than 6/12 were noted in 8 patients, 5 were

due to cystoid macular edema, 1 was due to retinal detachment, 1 to posterior capsule band, and 1 had no established cause identified. The anterior vitrectomy rate of 3.6% was comparable to other cataract surveys with a reported rate of vitreous loss varying from 1.8% to 5%.

Predictors for success of needle revision of failing filtration blebs

*A. S. Hawkins, J. K. Flanagan, S. V. L. Brown.
Ophthalmology 2002;109:781-785.**

An occasional problem after trabeculectomy leading to failure of control of intraocular pressure, is fibrosis or encapsulation. External needle revision of the bleb with adjunctive 5-fluorouracil (5-FU) or mitomycin C has been used to revive these filtration blebs. This study is a retrospective, non-randomized, comparative case series to assess the factors predicting the success of external needle revision of failing blebs. Needle revisions of filtration blebs with 5-FU were performed by 1 surgeon in 49 eyes. The outcomes for intraocular pressure (IOP), glaucoma medications, and operative complications were analysed.

The success rate of needle revision of blebs was 53.5% with a mean follow-up of 86.31 ± 70.75 weeks, with success being defined as IOP ≤ 18 mm Hg or 20% reduction of IOP from baseline. The fornix-based trabeculectomies were more likely to fail the needle revisions compared with limbus-based trabeculectomies ($p = 0.047$). This may be due to the more diffuse nature of the bleb resulting from fornix-based surgery compared with the more focal bleb from limbus-based trabeculectomy. Whereas preoperative bleb characteristics and other demographic factors were not predictive for success of needle revision, there was also a tendency for combined surgery to fail the needle revision than trabeculectomy alone, although the result was not statistically significant. The author concluded that bleb-revision with needling with 5 FU is an important alternative to surgery for many patients, although one has to be aware of potential complications of this simple procedure.

Swallowed ocular prostheses: report of 3 cases in children with retinoblastoma

*D. M. Moshfeghi, M. W. Wilson, T. L. Martin, B.G. Haik.
Ophthal Plast Reconstr Surg 2002;18:211-213.†*

The author reported 3 instances of 2 children who swallowed their ocular prostheses. A 30-month-old Russian boy who was adopted in the USA had enucleation with primary implant for unilateral retinoblastoma of the left eye. The mother reported swallowing of the ocular prosthesis by the child 3 months later. The child was refitted with a prosthesis. The second prosthesis was again swallowed 4 months later. A 32-month-old boy had enucleation for recurrent retinoblastoma. His mother reported that the boy had swallowed his prosthesis 1 year later. His mother had recently given birth to a new brother.

In all episodes, the prostheses were later recovered in the stool without complication. All 3 were acrylic prostheses, which does not show on X-ray. The paint contained no lead, was non-toxic, and was not radio-opaque. The orbits were normal anophthalmic orbits. The prostheses appeared well polished without obvious damage.

The author believes that retinoblastoma and subsequent enucleation are associated with a high baseline stressful life. Swallowing behaviours of the 2 patients were a reaction to high level of stressful life changes in that the first child was in transition from a foreign country to a new adoptive family and the second child was dealing with a new younger sibling.

Effect of levodopa and carbidopa in human amblyopia

P. K. Pandey, Z. Chaudhuri, M. Kumarh, et al.
J Pediatr Ophthalmol Strabismus 2002;39:81-89.†

Dopamine is present in retinal cells and in the central nervous system (CNS). Amblyopia may be associated with dopamine deficiency. Levodopa is a dopamine precursor. Carbidopa is a peripheral decarboxylase inhibitor that prevents peripheral breakdown of levodopa. The authors conducted this randomized double-blind prospective clinical trial to study the combined effect of levodopa and carbidopa in amblyopia.

In 1998, 82 patients with 88 amblyopic eyes treated in New Delhi, India were divided into 2 groups of patients aged 2 to 12 years and older than 12 years. Each group was subdivided into the following 3 groups:

- low-dose levodopa (2 mg/kg) and carbidopa (0.5 mg/kg)
- high-dose levodopa (3 mg/kg) and carbidopa (0.75 mg/kg)
- placebo.

Treatment lasted for 3 weeks. Repeated assessments of visual acuity (VA), contrast sensitivity (CS), and visual evoked potentials (VEP) were performed.

Statistically significant improvement in VA and CS was found in the high-dose subgroups of both pediatric and adult patients 3 weeks after starting treatment. For patients in the high-dose subgroup of the pediatric group, VA improved from 0.18 to 0.437 at 3 weeks while CS improved from 0.79 to 1.16. For the high-dose subgroup of the adult group, VA improved from 0.135 to 0.513 while CS improved from 0.9 to 1.33 at 3 weeks. At 6 months, VA and CS in both subgroups returned to pretreatment values. No significant change in VA or CS was found in the other subgroups. No significant change in VEPs was found in all subgroups.

The authors concluded that combined levodopa at 3 mg/kg and carbidopa at 0.75 mg/kg for both adults and children is effective for the short-term improvement of amblyopia. This therapy may be a useful adjunct to conventional occlusion therapy by improving the visual acuity of the amblyopic eye, thus resulting in better compliance to occlusion therapy.

Enzymatic sclerostomy: pilot human study

J. A. Dan, S. G. Honavar, D. A. Belyea, et al.
Arch Ophthalmol 2002; 120:548-553.†

Clostridial collagenase can selectively digest collagen and act as a 'biological knife'. 'Enzymatic sclerostomy' is the creation of deep focal scleral digestion using highly purified collagenase, thus enabling micropercolation of aqueous humor. The authors conducted this prospective non-comparative pilot human study of 16 symptomatic blind hypertensive eyes of 16 patients in India. Enzyme applicator was surgically implanted on the sclera under the conjunctiva. Fixation was by tissue glue. The procedure could be as short as 5 minutes. The applicator was removed surgically after 22 ± 2 hours. The removal procedure took less than 3 minutes. The mean baseline intraocular pressure (IOP) of the 16 eyes was 43.5 ± 9.8 mm Hg. The mean IOP on the day of removal of the applicator was 24.8 ± 10.6 , a 43% decrease. The mean decrease from baseline was 28.7% at 1 week, 25.5% at 1 month, and 20.0% at 1 year. All mean values were statistically significant to $p < 0.001$. Symptoms were relieved for 86% of patients. Complications included misposition of applicator causing full-thickness sclero-corneal perforation requiring scleral patch graft in 1 eye. The authors concluded that enzymatic sclerostomy is effective for lowering IOP and has potential as a surgical treatment for glaucoma. They suggested that further technical refinement and studies are justified.

The clinical efficacy of silicone punctal plug therapy

M. C. Tai, C. B. Cosar, E. J. Cohen, et al.
Cornea 2002;21:135-139.†

Dry eye syndrome is a frequently encountered problem in ophthalmology. Nasolacrimal outflow occlusion with punctal plugs has been employed to conserve naturally produced tears. The materials include absorbable implants (collagen, catgut) and non-absorbable implants (silicone, Teflon). Silicone punctal plugs are commonly used for complete and reversible occlusion of the lacrimal drainage system.

The authors reviewed the medical records of 203 eyes of 153 patients who had undergone silicone punctal plug insertion to evaluate its clinical efficacy and safety in various ocular surface disorders. Of these disorders, dry eye syndrome was the most common indication for punctal plug treatment (127 eyes, 62.5%), followed by epitheliopathy after penetrating keratoplasty (32 eyes, 15.8%). Other indications included superior limbic keratoconjunctivitis, neurotrophic keratitis, ocular cicatricial pemphigoid, and recurrent corneal erosion. The symptoms improved in 150 (73.9%) of 203 eyes at 4 ± 2 weeks' follow up. The mean score of fluorescein staining of the cornea was significantly reduced ($p < 0.01$). The frequency of the lubricant use was significantly reduced with punctal occlusion ($p < 0.001$). Considering all plugs, the estimated probability of plug

retention was 0.494 with a mean survival time of 85.1 ± 7.3 weeks. There was no statistical difference in plug retention rates between lower and upper plugs. Spontaneous total extrusion of the plugs was the most common complication in the study (103 eyes, 50.7%). Epiphora (11 eyes, 5.4%), partial extrusion (5 eyes, 2.4%), conjunctival erosion (3 eyes, 1.5%) and fragmentation of the plug (one eye, 0.5%) were the other complications encountered. The plug was removed from 14 eyes (14 plugs, 6.9%) because of epiphora in 11 eyes and conjunctival erosion in 3 eyes. The authors concluded that silicone punctal plug insertion is a simple, efficient, safe, and reversible method to treat aqueous tear deficiency and other ocular surface diseases not controlled by lubrication with preservative-free tears.

Clinical and theoretical results of intraocular lens power calculation for cataract surgery after photorefractive keratectomy for myopia

*M. T. Odenthal, C. A. Eggink, G. Melles, et al.
Arch Ophthalmol 2002;120:431-438.†*

Unsatisfactory refractive outcome is common after cataract surgery in eyes previously treated by refractive surgery. This retrospective study aimed to identify the factors contributing to the error and find a more accurate method to select the appropriate intraocular lens (IOL) power. Fifteen eyes of 9 patients who had previously undergone photorefractive keratectomy (PRK) for myopia had cataract surgery performed by different surgeons at different centers. Retrospectively, different methods to calculate or measure keratometry values and different IOL formulae were used to predict the postoperative refraction, which was compared with the actual refractive outcome. The authors found that use of measured keratometry values after PRK and before cataract surgery in IOL selection always caused hyperopic postoperative refraction, sometimes requiring exchange of IOL. They believe that conventional keratometric and topographic measurement is inaccurate at finding the 'true' refractive corneal power in eyes after PRK. Further analysis shows that the best prediction was by calculation using the keratometry value before refractive surgery corrected by the refractive change at the spectacle measured 1 year after PRK. The authors thus suggest all refractive surgeons should issue a 'wallet card' to all patients with data on preoperative K values and refractive changes at spectacle plane measured 1 year after refractive surgery.

A long term visual outcome comparison in patients with optic nerve sheath meningioma managed with observation, surgery, radiotherapy, or surgery and radiotherapy

*R. E. Turbin, C. R. Thompson, J. S. Kennerdell, et al.
Ophthalmology 2002;109:890-900.‡*

Optic nerve sheath meningioma is a vision threatening disease that may spread intracranially. However, there is

neither a standard treatment protocol nor any controlled study to compare the effects of various treatments modalities. A retrospective analysis of 64 patients from different centers, with clinical history and courses of optic nerve sheath tumor, and radiological features of optic nerve sheath meningioma, was performed to study the long-term outcomes of different treatment options, including observation, surgery alone, radiation therapy alone, and surgery and radiation therapy in combination. Of these 64 patients, 32 did not have histologically proven optic nerve sheath meningioma but examinations were clinically and radiologically suggestive of this condition. All patients had at least 50 months of well-documented follow up. Although patients were enrolled from different centers, most of the centers had similar treatment strategies — observation until visual or radiological progression.

With a mean duration of 150 months follow-up 13 patients were observed only, 12 had surgery only, 18 had radiotherapy only, and 16 had surgery and radiotherapy. Surgery included biopsy, or partial or complete resection. Only 32.8% of patients showed radiological progression of the tumor during follow-up despite visual deterioration. During the last follow up, the observation alone group, the surgery alone group, and the radiation and surgery group showed a statistically significant decrease in vision. The radiation therapy alone group also showed a decrease in vision but this was not statistically significant from baseline. 44.4% of the radiation therapy alone group showed at least 2 lines of visual improvement, while 31.3% of the radiation and surgery group showed at least 2 lines of visual improvement. Only 2 patients (8%) who were never treated with radiotherapy showed improvement in vision.

33.3% of patients treated with radiation alone had complications, including retinopathy, vascular occlusion, iritis, and temporal lobe atrophy. 66.7% of patients treated with surgery alone had complications, including vascular occlusion, neovascular glaucoma, cerebral spinal fluid leak, iritis, and neurotrophic exposure. 62.5% of patients treated with radiation and surgery had complications, including retinopathy, vascular occlusion, neovascular glaucoma, cerebral infarct, cerebral spinal fluid leak, severe motility deficit, iritis, recurrent orbital hemorrhage, and lymphoma. The author recognized the problems associated with a retrospective uncontrolled study and agreed that treatment should be individualized, but recommended radiotherapy once there is deterioration in visual function.

A prospective, randomized, double-blind, placebo-controlled study of orbital radiotherapy for Graves' ophthalmopathy

*C. A. Gorman, J. A. Garrity, V. Fatourechi, et al.
Ophthalmology 2001;108:1523-1534.‡*

Radiotherapy has long been used for Graves' ophthalmopathy. There are different retrospective studies of orbital irradiation and studies comparing radiotherapy and steroid

therapy, but those are not controlled studies and thus the effectiveness of orbital irradiation has never been proven. Gorman et al conducted a prospective, double-blind, controlled study to evaluate the efficacy of radiotherapy for Graves' ophthalmopathy. Forty two patients with moderate, symptomatic Graves' ophthalmopathy were recruited. Those with optic neuropathy and those who received steroid treatment within 2 weeks were excluded. For those patients who were recruited, 1 orbit was randomly selected for orbital irradiation while the contralateral orbit received sham therapy at the beginning of the study. Six months later, the therapies were reversed. Objective and quantitative measurements, including the volume of extraocular muscle, fat (measured by computerised tomography scan), degree of proptosis, range of extraocular movement, area of diplopia, and lid fissure width, were documented every 3 months for 1 year.

No statistical differences between the 2 orbits for various parameters were detected at the third, sixth, and ninth months. At the twelfth month, the irradiated orbits had slight improvement only but this was clinically insignificant. Natural improvement could not be excluded. The author concluded that there was no demonstrable beneficial effect of orbital irradiation for Graves' ophthalmopathy

Treatment options and future prospects for the management of eyelid malignancies: an evidence-based update

*B. E. Cook Jr, G. B. Bartley.
Ophthalmology 2001;108:2088-2097.‡*

Approximately 5% to 10% of skin cancers occur in the eyelid. Of these, basal cell carcinoma, squamous cell carcinoma, sebaceous cell carcinoma, and malignant melanoma are the commonest types. Although primary excision with frozen section or Moh's microscopic surgery are the treatments of choice for many surgeons, there are many other treatment modalities as recommended in different studies, and there is currently no preferred practice pattern as a guide for ophthalmologists.

These authors performed a Medline search of the literature from 1966 to 1999 and other textbooks and monographs to try to provide evidence-based clinical recommendations for treatment options and future prospects for the management of these eyelids tumors. 110 articles and sources were reviewed. Different treatment recommendations were rated in 2 ways:

- importance to the care process
 - level A most important
 - level B moderately important
 - level C relevant but not critical
- strength of evidence in the literature to support such recommendations
 - level I, strong evidence — study design addressed the issue in question, performed in the population of interest, and executed in a manner assuring production of accurate

and reliable data with appropriate statistical method
level II, substantial evidence — lacks 1 or 2 components of level I
level III, consensus of expert opinion — evidence not meeting levels I or II.

All treatment recommendations searched are important to patient care and outcome and therefore rated as level A. For basal cell carcinoma, squamous cell carcinoma, and sebaceous cell carcinoma, the treatment recommendations with published evidence considered as level I include excision with frozen section or Mohs' microscopic surgery. For other methods such as photodynamic therapy, carbon dioxide laser treatment, electron beam radiotherapy, chemotherapy, cryotherapy, retinoids and alpha-interferon, the evidence support is level II only, mainly due to the small numbers of patients in the studies. For sebaceous cell carcinoma, the use of conjunctival map biopsy with either Mohs' microscopic surgery or frozen section has strong evidence support rated as level I.

For malignant melanoma, many treatment recommendations focus on the margin of excision based on tumor thickness with only substantial evidence support for level II. The only strong evidence, level I, is the use of adjuvant interferon therapy as reported in several prospective randomized controlled studies. The author concluded that different retrospective and prospective studies provided important information about the treatment options of the 4 eyelid tumors.

Dural carotid cavernous fistula: definitive endovascular management and long-term follow up

*P. M. Meyers, V. Van Halbach, C. F. Dowd, et al.
Am J Ophthalmol 2002;134:85-92.‡*

Indirect or dural carotid cavernous fistula (CCF) is due to communication between the dural branches of the internal or external carotid arteries through the wall of the cavernous sinus. It may occur either spontaneously or is associated with trauma, pregnancy, prior surgery, sinusitis, or cavernous sinus thrombosis. Approximately 30% to 40% of patients with retrograde cortical venous drainage can have significant morbidity, including blindness and cerebral hemorrhage.

Meyers et al retrospectively analyzed 135 consecutive patients with indirect CCF who underwent examination and treatment in 1 center from 1986 to 2000, with a mean duration of follow-up of 56 months. This is the largest series reported in the literature. After initial confirmation, localization of the lesion and documentation of the venous drainage pattern, patients without vision loss and cortical venous drainage would receive carotid-jugular compression therapy. If this failed or patients had a cortical venous drainage pattern as shown by arteriogram (31%) or progressive visual decline, endovascular embolization was immediately undertaken.

Endovascular treatment was performed for 133 patients (98%), either transarterial embolization in the early period or transvenous embolization in the later period. A single procedure was performed in 93 patients (70%), while the others received 2 or more treatments. Complete angiographic and clinical cure (resolution of all signs and symptoms) was achieved for 121 patients (90%).

At the latest follow up, 131 patients (97%) showed good clinical recovery (significantly diminished symptoms with no new signs or symptoms occurring), 1% had moderate disability, and 2% were severely disabled due to the disease. There were 8 (6%) complications, including cerebral infarction, decreased vision, diabetes insipidus, orbital ecchymosis, retroperitoneal hematoma, and deep vein thrombosis without pulmonary embolism. 2.3% of patients had

permanent morbidity, but there was no procedure related mortality.

Although spontaneous resolution of dural CCF without embolization, as reported in different literatures, ranged from 5% to 43%, clinical symptoms may not accurately reflect the risk of cerebral hemorrhage and stroke. The most important risk factor is cortical venous drainage signifying elevated intracranial venous pressure which may predispose to cerebral infarct or hemorrhage and that can only be identified by arteriogram. The authors concluded that, with the observed favorable outcomes and low rate of procedural morbidity in the patient population with long-term angiographic and clinical follow-up, endovascular therapy would be the primary treatment for patients with indirect CCF.



**The Members of the Editorial Board of the
Hong Kong Journal of Ophthalmology wish to express their gratitude
to the following individuals for their invaluable input as
reviewers of articles contributed to the Journal in the years 2001 and 2002.**

Vivian Balakrishnan
Pramod S. Bhende
David H. Y. Chan
Nim-Chung Chan
Wing-Kwong Chan
Chung-Chai Chi
John K. H. Chua
Randolph D. Glickman
William V. Good
Sung-On Hung
Rahat Husain
Chun-Yu Ko

Kwok-Wai Lam
Tim T. T. Lam
Brad Lau
Rupert W. H. Lee
Geffrey M. Liebmann
Christopher S. C. Liu
Hugh Parsons
Srinivas K. Rao
Steve Seah
Tarun Sharma
David L. Smerdon
Barbara S. M. Tam

Clement C. Y. Tham
Agnes T. Y. Tse
Raymond K. K. Tse
Andrew T. C. Tsin
Barbara Wiggert
Chi-Cheong Wong
Tien-Yin Wong
Donald C. F. Woo
David T. W. Yew
Nancy S. Y. Yuen