

# RETINAL DETACHMENT IN SINGAPORE

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## SYNOPSIS

**Accurate diagnosis and adequate surgery are important advances in the present day treatment of retinal detachment. These two essential factors are discussed in the light of the author's philosophy and management of detachment problems in Singapore.**

## INTRODUCTION

In two decades, acquired causes of blindness in Singapore reversed from glaucoma, optic atrophy, corneal disease and retinal degeneration to retinal degenerative disease, glaucoma, optic atrophy and corneal disease in that order (Table I) (Lim, 1975). As we go into the 80s, retinal disease in the elderly is likely to assume greater importance. Diabetic retinopathy apart, threatening blindness from retinal detachment is also a problem here and, on the occasion of this first scientific meeting of the International Agency for the Prevention of Blindness in South-east Asia, your Chairman has asked me to discuss the problem of retinal detachment as we see it in Singapore. With your leave, I intend to relate my personal philosophy and limited experience of detachment problems as it affects us in this part of the world. Our problems are just as perennial and universal as yours and all that's going to be said on this topic must have relevance and bearing on the local scene to a self-taught ophthalmologist as myself.

## HISTORICAL BACKGROUND

Until the turn of the century, all eyes with retinal detachment were inevitably lost. In 1904, the International Congress of Ophthalmology in Lucerne discussed retinal detachment and could only recommend "subconjunctival injection of saline", reckoning the disease to be untreatable. Then came Jules Gonin (1870-1935) of Lausanne who, as is history now and recorded thus in the Duke's bible (Duke-Elder, 1967) "revolutionized our ideas on the pathogenesis of the lesion and was the first to bring the hope of cure to a catastrophe that before his time was always associated with blindness". Gonin recognised rheuma, i.e. detachment followed holes in the retina and enunciated the first principle of detachment surgery, viz. to find all holes and seal them. His observation was a major breakthrough in the therapeutic revolution of the disease.

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**TABLE I**  
**ACQUIRED CAUSES OF BLINDNESS IN SINGAPORE\***

Prior to 1964		1965 — 1968		1969 — 1972	
Glaucoma	28.6%	Glaucoma	26.6%	Retinal degeneration	22%
Optic atrophy	23.7%	Optic atrophy	28.9%	Glaucoma	20%
Corneal disease	18.5%	Retinal degeneration	17.6%	Optic Atrophy	20%
Retinal degeneration	9.6%	Corneal disease	5.7%	Corneal disease	12.3%
Others		Others		Others	

(\*From: Lim, K.H.: Registration of Blindness in Singapore 1950 — 1972)

**RECENT ADVANCES**

Stupendous advances in retinal surgery have been made and are taking place around us since Gonin's life-time. Two factors are essential and no substitute is possible. The first is accurate diagnosis in recognising what Mr. Fison (1977) calls the first and second cardinal sins, viz. the finding or failure in finding all original holes or any hole — to these I may add all retinal breaks and weak areas are to be included. Life in this respect has been made easier for us with the use of the binocular indirect ophthalmoscope, the Goldmann 3 — mirror contact lens and perhaps the photocoagulator beam as a diagnostic tool, which enable and allow examination of the entire fundus to be made smoothly and with facility. The second essential factor is adequate surgery achieved by an adhesive chorioretinitis in the correct location to seal all actual and potential retinal breaks so that anatomical restoration may be attained and, with it, a return of visual function. Retinal surgery, to my mind, illustrates most vividly the concept of Dr. F. Stansfield, my primary course teacher at the Royal College of Surgeons more than 13 years ago, that surgery may be defined as the restoration of normal anatomy.

**OUR EXPERIENCE**

Without going into local history of detachment surgery in any great detail, sufficient to say that the conjunction of these two factors, accurate diagnosis and adequate treatment could only have taken place under special

conditions such as is obtained in a public hospital which shifts a large turnover of patients and time is irrelevant, for those of us who are in private practice will bear with me that time is a precious commodity and time must be spent in the examination and treatment of detachment patients where the visual results may be less rewarding. Having said that, detachments, as it were, have a certain charm and attraction for the technically fastidious or so it seems to a non-retinal buff as myself, for many centres which have achieved excellence and standing were gained through maturity in retinal work.

To illustrate the point, Table II shows the figures for ophthalmic surgery at the Government General Hospital in Singapore for the years 1969 — 1974 when I was in command, so to speak. More than eight thousand ophthalmic operations were performed each year of which over one thousand were major operations. Of these, the figures for detached retina are shown in Table III. You will notice that we did very little or few diathermies and, since 1972, the diathermy machine was put into cold storage. Cryosurgery gained popularity throughout the years. The sudden increase to 27 from 4 cases of the previous years was due to a change out-look in the prophylaxis of flat retinal holes. Local plombs and indents using silastic sponge material were the most popular methods of treatment and were attempted whenever we could in preference to encirclage. However, we had our quota of requirements for encircling procedures, when a lightly secured silicone strip was placed around the eye, reinforced with a gutter — shaped band beneath the area of pathology and often with drainage of subretinal fluid.

**TABLE II**  
**OPHTHALMIC SURGERY AT THE GENERAL HOSPITAL, SINGAPORE, 1969 — 1974**

Year	Minor Operations	Major Operations	Total
1969	7,440	1,410	8,850
1970	7,660	1,329	8,989
1971	7,624	1,220	8,844
1972	7,707	1,462	9,169
1973	6,897	1,329	8,226
1974	7,597	1,711	9,308

TABLE III

ANALYSIS OF RETINAL DETACHMENT OPERATIONS, GENERAL HOSPITAL,  
SINGAPORE 1969-1974

	1969	1970	1971	1972	1973	1974	Total
Diathermy	1	2	5	1	0	0	9
Cryosurgery	0	0	1	4	4	27	36
Plombs	24	17	21	20	34	45	161
Encirclage	22	8	12	14	18	23	97
Total	47	27	39	39	56	95	303

## DISCUSSION

If one could read between the lines, or between the figures so to speak, one would notice that we tended to do less and less. Sufficient minimal surgery only unto the day for the eye, adopting the simplest technique available. It seems to me that with advances in technique, retinal surgery has generally become easier. Gone were the days of laborious scleral dissection and tenotomies and, for one who had been weaned on the Graefe section for cataract surgery, I was only too pleased to drop the lissps acquired in infancy.

Looking into the future I would like to see the day when we can do away with surgery, as for example, by

delivering a target onto the diseased retina by the conventional ways that one introduces a medication into the body and then to seek out this target with the delivery of a second substance in similar fashion, or preferably through the pupil, so that our retinal merchants will not be done out of business by their medical colleagues.

## REFERENCES

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