

Carcinoma Metastatic to the Iris

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THIS PAPER consists of a clinico-pathological study of a case of carcinoma metastatic to the iris. This particular case is of interest because of its unusual course in which the patient came in with eye complaints which was the result of a metastatic lesion from a bronchogenic carcinoma. The metastatic lesion in the iris was the first manifestation of a silent primary tumour in the lung.

A Clinico-pathological Study

A 60 year old Chinese man was seen in Eye Clinic for the following complaints:

1. Redness of the right eye for 30 days.
2. Progressive blurring of vision of right eye after the onset of redness.
3. Whitish mass in right eye - growing gradually in size.

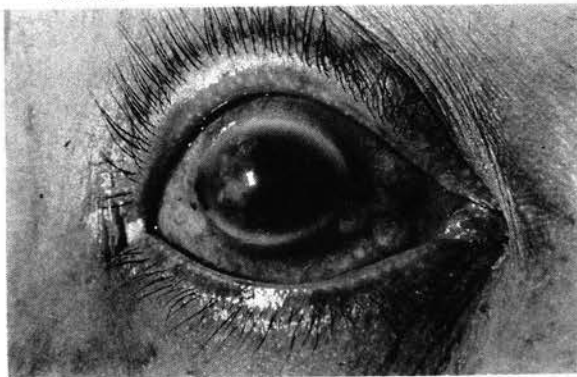


Figure 1

Whitish nodular vascular mass extending from the centre of the pupil to base of iris on temporal aspect, situated at the horizontal meridian.

Brief History

The patient first noticed redness of the conjunctiva about 30 days before the time of examination. Initially the redness was very mild, but became more obvious with time. There was no pain or eye discharge in the early stages. During the same period of the redness of the eye, the patient noticed abnormal colouration over the iris. It started as a white dot which gradually became larger. Associated with the progressive enlargement of the growth, there was progressive deterioration of the central vision. His right central vision according to him was as good as the left eye, had deteriorated markedly to a point of seeing objects vaguely at close distance. In the later stages as the whitish growth enlarged, the patient began to suffer mild pain and photophobia in right eye.

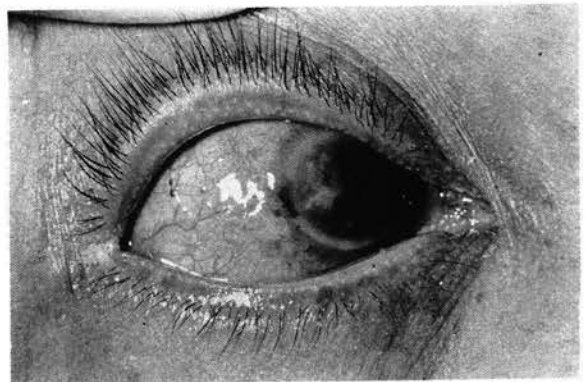


Figure 2

Showing the whitish nodular vascular mass.

Past History

Not been admitted to hospital before. No previous trauma to right eye. No history of venereal disease or tuberculosis.

Personal History

Drinks alcohol occasionally. Smokes cigarettes for past 25 years - 15 to 20 cigarettes a day.

Clinical Findings

General condition satisfactory.

Clinical Findings in Right Eye:

- 1. Poor vision - V.R.C.F. VL. 6/6
- 2. Whitish nodular vascular mass extending from the centre of the pupil to base of iris, on the temporal aspect, situated at the horizontal meridian from 7 o'clock to 10 o'clock position.
- 3. Redness - marked around the cornea.

- 4. Iridocyclitis - Keratic precipitates and marked flare in aqueous. Pupil irregular with posterior synechiae.
- 5. Glaucoma - Tension by applanation
Right eye - 56 mm.Hg.
Left eye - 15 mm.Hg.
- 6. Hyphema and Rubeosis Iridis - Bloodish tinge of aqueous humour. Marked neovascularization of iris.
Fundus - vaguely seen due to post-subcapsular lens opacity and small irregular pupil.

Routine Investigation

Hb. - 14.5 gm.%	Urine: Alb. - NIL
TWDC - 7,600	Sugar - NIL
P - 75%	Deposits - NIL
L - 28%	ESR - 20 mm./hr.
M - 1%	Blood for KT - Negative
E - 0%	

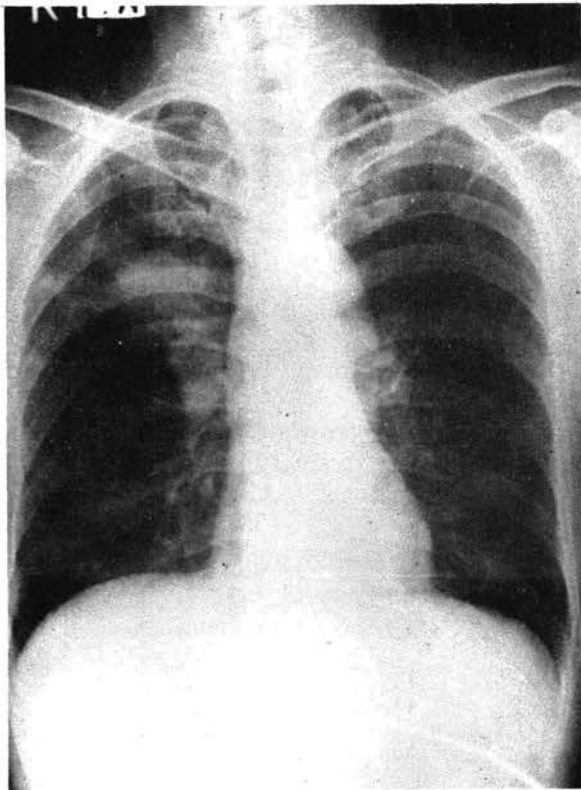


Figure 3
X'Ray Chest

Rounded mass with irregular outlines in posterior segment of the right upper lobe the mass extends into right hilum.



Figure 4

Tomogram showing the rounded mass.

X'ray Chest:

A-P Tomograms:- Rounded mass with irregular outlines in posterior segment of the right upper lobe. The mass extends into right hilum

The X'ray finding is suggestive of carcinoma of bronchus.

Provisional diagnosis of metastatic carcinomatous growth of the iris was made.

Medical Treatment prior to Surgery

The iridocyclitis was controlled by local steroid drops and gutt. Atrophine and secondary glaucoma controlled by oral diamox tablets.

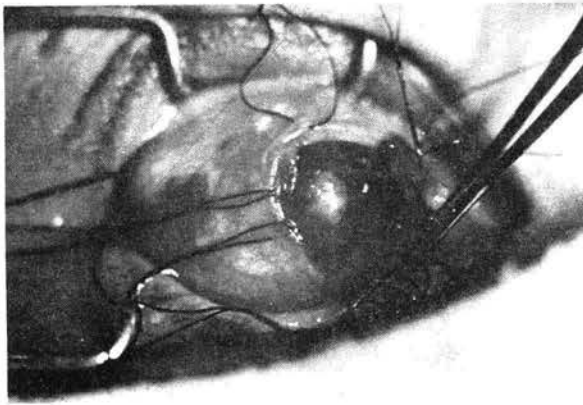


Figure 5

Showing the whitish nodular vascular mass during surgery.

Surgery

Complete excision of the growth in iris was done. The growth was excised from the pupillary margin right to base of iris. The area extends from the pupillary margin to base of iris from 7 o'clock to 10 o'clock position.

Histo-pathology

Sections from iris show small cell undifferentiated carcinoma within vascular space and infiltrating the stroma. Also present are foci of haemorrhages and necrosis.

Interpretation: Small cell undifferentiated carcinoma metastatic in iris. Appearance is compatible with the clinical

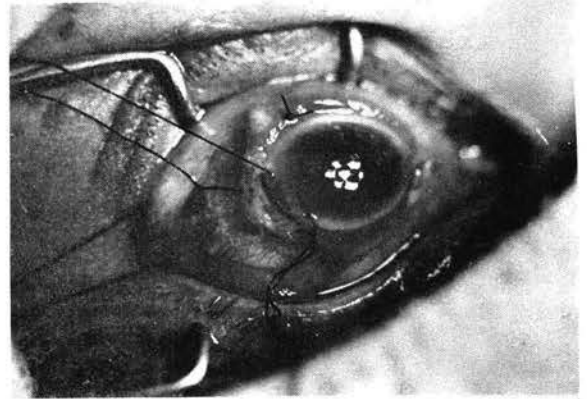


Figure 6

After removal of the nodular mass.

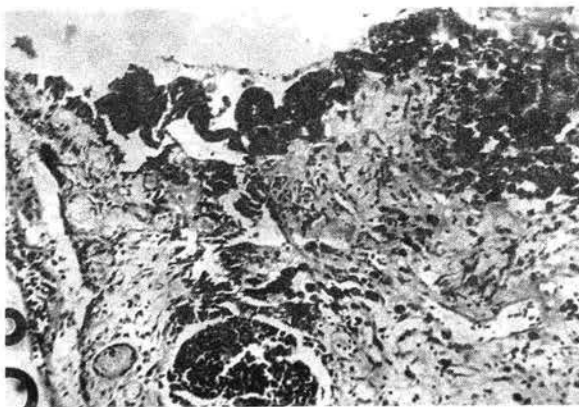


Figure 7

Low Magnification
Small cell undifferentiated carcinoma metastatic in iris.

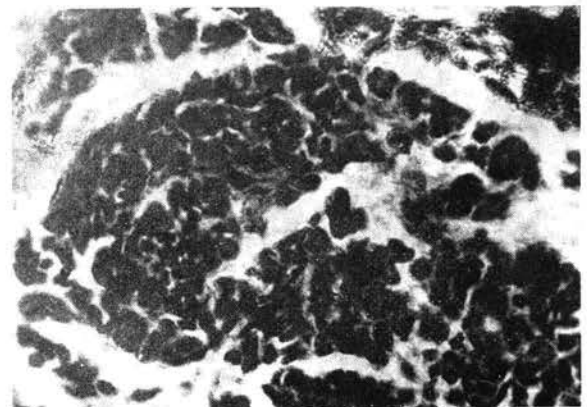


Figure 8

High Magnification
Small cell undifferentiated carcinoma in iris, compatible with clinical diagnosis of metastasis from carcinoma of the bronchus.

diagnosis of metastasis from carcinoma of the bronchus.

Right eye after Surgery – 14 days after surgery
VR. 6/60 VL. 6/6
Tension – 17 mm.Hg.
Fundus – Vaguely seen due to post-subcapsular lens opacity.

Review

With the above comment, I would like to compare this case with a review of 26 cases done by Andre P. Ferry, M D and Ramon L. Font in their paper "Carcinoma Metastatic to the Anterior Segment of the Eye" – Ref. Arch. Ophthalmology/ Vol. 93 July, 1975.

In his 227 patients with carcinoma metastatic to the eye and orbit, there were only 26 cases where metastatic to anterior uveal tract was the predominating feature.

There was a definite propensity for the tumour to involve the horizontal meridian of the iris or ciliary body, rather than the upper or lower portions. The site of the primary tumour in the 26 patients was as follows:

Lung – 14, Breast – 9, Kidney – 2, Rectum – 1.

Ocular symptoms and signs produced by the metastatic tumour at onset or during the course of the disease include – decrease vision 80%, a visible mass 72%, redness of the eye 56%, pain 56%, glaucoma 56%, iridocyclitis 44% and hyphema 24%.

The median survival of the 26 patients with metastatic to the anterior segment of the eye was only 5.4 months from time of ocular surgery. This is poorer than the median survival (7.2 months) of the patients with metastasis confined to the posterior segment and much worse than the median survival (15.6 months) of 28 patients with orbital involvement. Also noted in his study is the propensity for carcinoma of the lung to metastasize in the

eye early and for mammary carcinoma and other cancers to metastasize in the eye late as seen in his study of metastasis in the anterior segment.

Of the nine breast carcinoma metastasis to the anterior uveal tract, eight produced symptoms after the presence of a primary carcinoma been recognised. Conversely of the 14 patients with lung carcinoma in the study of metastasis to the eye preceded recognition of the primary pulmonary tumour in ten. Thus the lung is assuming an increasing importance as a source of tumour metastatic to the iris and ciliary body.

Acknowledgement

I am thankful to the following who helped me in presenting this paper:

1. Professor Pretap – Department of Pathology, University of Malaya for his Histo-pathology Report.
2. Department of Pathology, General Hospital, Kuala Lumpur.
3. Mr. Charley Abraham, Medical Photographer, General Hospital, Kuala Lumpur.
4. Mr. Wong Wai Ming, Medical Photographer, General Hospital, Seremban.

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