RETINA AND VITREOUS

TEN YEARS EXPERIENCE WITH RETINOBLASTOMA

By

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SUMMARY

Experience with the management of retinoblastoma during the last ten years by both local cobalt disc application or external beam irradiation, with the cooperation of the radiotherapy department, is mentioned, as well as their prevention discussed, management of the main complications, radiational chorioretinopathy is referred to.

Ten years ago we succeeded to have Stallard's cobalt discs, since then a centre for treatment of retinoblastoma has been initiated where either our own or referred cases were managed under strict follow up regimes.

At first most of the advanced cases unsuitable for disc were rejected, but cooperation with the radiotherapy department helped to improve and cure many of these cases by the use of external beam irradiation (E.B.I.) together with, in some cases, chemotherapy (1980).

Even in early cases, which for some reason or another as in very young infants where the relation between the orbit size and that of the eye were too small to allow insertion of a disc, E.B.I. was tried with poor results. Chemotherapy was used in advanced cases and in cases where further treatment seemed necessary. Follow up was the basis of our conjoint management and decisions about further treatment were discussed after comparison of the serial photos.

Photos were taken by the same treating surgeon, after treatment with either method (Fares, 1986, Radi, 1981, 1984, Abd-ElWahab 1984 and ElMassri, 1986).

Complications in the form of radiational chorioretinopathy occurred with both local disc application or E.B.I., this complication was assessed and a reasonable etiology was advanced. As a result, a new scheme was suggested and we hope that in the future we can be able to assess its validity (Elmassri, 1983, 1986).

Many bilateral cases were cured, as well as, unilateral cases with a normal other eye (Elmassri, 1983). The normal eye as well as the cured other eye were followed up to the age of five years; follow up was done before and after removal of the disc or the E.B.I. sessions, then weekly for a month, every month for 6 months, every 3 months for the next year, 6 monthly up to the age of five years. New tumours arising during the follow up period was similarly managed. In bilateral cases, both eyes were enucleated, in some of these cases where enucleation was done, recurrences occurred in the orbit although the optic
nerve macroscopically or histopathologically seemed normal. Since then post-enucleation irradiation to the orbit was adopted as a routine.

About 200 cases were managed. In the following statistics, cases with enucleation of one eye and a follow up of the normal remaining eye are not included as they are of no significant interest. The following statistics show the size of the problem, the persistent endeavours to give as much help as possible to these unfortunate children and to spare them bilateral blindness.

- Male to female ratio in the following series was 0.9 to 1.
- Mean age was 2.43 years.
- The managed cases were as follows:
  - Fifteen cases of bilateral advanced tumours and not cured.
  - Two cases with bilateral masses, cured.
  - Sixty three cases with unilateral tumour with other eye enucleated for an advanced disease.
  - Twenty four unilateral case with normal other eye.
  - Nineteen cases with a single mass and cured.
  - Eighteen cases with more than one mass and cured.
  - Thirteen cases with a single mass and not cured.
  - Eight cases with a family history either in parents or in brothers or in a far relative.
  - Two cases were cured by using both photocagulation and cobalt disc application.
  - One case cured with photocagulation alone.
  - Twenty four cases were treated with E.B.I. and chemotherapy of them 9 cases were cured, and 10 cases not cured and 4 cases were managed by both cobalt disc and E.B.I.
  - Radiational choioretinopathy developed either after cobalt disc application alone or after E.B.I. only or both together in 13 cases.
  - Spontaneous regression was found in 6 cases.

In the last few years ultrasonography was used as a tool to assess the diagnosis and the effect of other treatment.

From this work, six thesis and several papers were published either in the local or in universal literature.

In conclusion we hope that in the next coming years, with help of our colleagues from various ophthalmic centres, the continuous cooperation between the ophthalmic and radiotherapy departments, we could be able to attain a deep understanding of the problem with better results.
Fig. 2 a. A central big mass before treatment with external beam irradiation.

Fig. 2 b. The same tumour after treatment.

Fig. 3. The periphery of the fundus in a case complicated with radiational chorioretinopathy showing areas of choroidal infarction.
REFERENCES