LETTERS TO THE EDITOR

Retina to retina adhesions following suprachoroidal haemorrhage

EDITOR,—Retina to retina adhesions occur as a rare complication of suprachoroidal haemorrhage. Previous reports indicate a poor prognosis. We observed a patient who developed suprachoroidal haemorrhage and retina to retina adhesions following a glaucoma shunt procedure. Modern vitreoretinal surgical techniques were used to lyse the adhesions.

CASE REPORT
An 80-year-old white woman with a history of aphakia and recent penetrating keratoplasty developed glaucoma requiring the placement of a Krupin valve with disc. Three days later the patient noted a severe, sharp pain in her right eye.

Visual acuity was light perception. The intraocular pressure was 14 mm Hg. The corneal graft had 2+ deep striae. The anterior chamber was deep with a small hyphaema present. The tube shunt was properly positioned in a deep anterior chamber. A strand of vitreous was incarcerated within the proximal tube. Large, dark, ‘kissing’ choroidal detachments were present. Ultrasound examination showed massive suprachoroidal haemorrhage.

Three days later, the choroidal were somewhat smaller, with the nasal and temporal components slightly separated. Two regions of the nasal and temporal retina remained adherent to one another, with resulting traction retinal detachments (Fig 1).

It was feared that further spontaneous recession of the choroidal would cause tearing of the retina. A surgical procedure was performed using techniques similar to those described for retinal adhesions to anterior segment structures.9 Saline was infused via a 20 gauge anterior chamber maintainer in the inferotemporal limbus. Very low infusion pressure was used to avoid forceful separation of the choroidal detachments. Two additional limbal 20 gauge incisions were created. Using microscope illumination and a vitrectomy probe, vitreous was removed from the anterior segment and tube shunt. Using endolumination, the vitreectomy was extended posteriorly until the retinal adhesions were reached.

The retina to retina adhesions were gently separated with a spatula-shaped retinal pick. The suprachoroidal haemorrhage was drained via two equatorial, radial sclerotomies. The vitrectomy was continued through the limbal approach, removing as much vitreous as safely possible. No tears or persistent traction were found. To avoid postoperative hypotony, the shunt tube was ligated with a 5-0 polyglactin suture.

The patient has been followed for 9 months. Vision recovered to 20/100. The intraocular pressure has been adequately controlled. The retina has remained attached.

COMMENT
Large suprachoroidal haemorrhages may bring the retina into contact with other retinal surfaces, ciliary body, anterior segment structures, or surgical wounds. If firm adhesions form, traction retinal detachment, retinal tears, and rhegmatogenous retinal detachment are likely to occur as the choroidals recede.

We found two references describing retina to retina adhesions complicating suprachoroidal haemorrhage. Berrocal described three cases due to appositional choroidal detachments following scleral buckling surgery.7 Two of the cases were haemorrhagic choroidals. In one eye the condition was successfully treated by draining the choroidalis and reforming the globe with saline and air. The others were judged to be inoperable. Lakhanpal described a case similar to one each of intraretinal and intraretinal adhesions, neither of which could be separated surgically.7

Retina to retina adhesions may occur more frequently than the literature suggests. Media opacities associated with suprachoroidal haemorrhage may preclude recognition of adhesions. Rhegmatogenous detachment may supervene, without recognition of preceding adhesions. Some may lyse spontaneously, without sequelae. We intervened because we felt the risk of rhegmatogenous retinal detachment was high, and the prognosis for repair of such a detachment would be poor.

We believe this is the first case of retina to retina adhesions documented photographically, and the first description of successful management using vitreoretinal surgical techniques.

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Solitary astrocytoma of the retina in a child

EDITOR,—Astrocytic proliferations in the eye are rare lesions usually associated with tuberous sclerosis or neurofibromatosis. Solitary astrocytomas occurring outside this association are exceptional, fewer than 20 cases having been reported. We present an additional case which occurred in a unique anatomical location and discuss the clinical features and treatment of this rare condition.

CASE REPORT
A 3-year-old girl presented with a 6 week history of left divergent squint and an abnormal left retinal reflex. Indirect ophthalmoscopy revealed a large inferior retinal mass and a 360° retinal detachment. A presumptive diagnosis of retinoblastoma was made. There was no significant medical or family history and developmental milestones were normal. She was admitted for examination under anaesthesia. Ultrasound, lumbar puncture, bone marrow aspiration, and bone scan were also performed. The presence of a retinal mass was confirmed and the affected eye was enucleated. The patient made a good recovery and a prosthesis was fitted. Examination of the right eye showed two small areas of anomalous retinal pigment epithelium change.

In view of the histological findings discussed below, the patient underwent further examination for signs of tuberous sclerosis and neurofibromatosis. Chromosomal analysis, computed tomography scan of the brain, and dermatological examination including Wood's light were all normal. After 4 years of follow up the appearances of the right retina were unchanged and there were no signs of systemic disease.

The surgical specimen was a 20 mm diameter globe with 11 mm of attached optic nerve. A white reflex was visible through the normal cornea; the iris and pupil were symmetrical. After fixation, sectioning of the globe showed complete retinal detachment. The intervening space contained opaque fluid. A firm, grey, spherical tumour was present. It arose at the junction of the iris and retina and pressed on the lens posteriorly (Fig 1). No other tumour nodules or other macroscopical abnormalities were present.

Histological examination showed that the tumour arose at the junction of the nervous and non-nervous parts of the lens. It was composed of spindle-shaped cells with moderate nuclear pleomorphism and abundant, fibrillar, eosinophilic cytoplasm. The cells were arranged in storiform patterns and also formed ill defined palisades, some around blood vessels (Fig 2). Several areas of microcystic degeneration were present (Fig 1).

Figure 1 One of two areas of retina to retina adhesion, with traction retinal detachment (small arrows), bridging large nasal and temporal choroidal elevations (large arrows).
and focal collections of macrophages were
associated with these areas. No mitoses were
noted. Small vessels were present throughout
the tumour, but no vascular tufting was seen. Rose
thorn-like vessels, granular bodies, and multi
nucleate change were not noted. Scanty reticulin fibres were present within the tu
mour, but no collagen was seen. With immuno
histochemistry the tumour cells stained positively for S100 protein, glial fibri
lary acidic protein, neuron specific enolase,
and vimentin. They were negative for desmin, the proliferation marker Ki-67, and the onco
gene p53. The choroid, sclera, and ciliary body were not involved and no evidence of
tumour was seen in the optic nerve. A diagnosi
s of solitary retinal astrocytoma was made.

COMMENT

A hamartoma is defined as a nodular or
tumour-like mass arising from faulty embry
onal development of cells and tissues natural to
the place where it arises, as seen, for example, in
vascular birthmarks. Astrocytic prolifera
tions arising from the retina are uncommon
and usually represent hamartomas occurring in
association with tuberous sclerosis or neurofibromatosis.4 Although their growth rate
does not exceed that of the surrounding tissues, on occasion they may enlarge sufficiently to compress
the optic disc and cause visual field defects. Very rarely they may bleed, causing vitreous haemorrhage.

Outside the syndromic settings astrocytic prolifera
tions in the eye are extremely rare and
usually single. Most of the reported cases were
situated on the optic nerve head or were in
continuity with it.5 The features of the
present case, consisting of an astrocytic prolifera
tion arising in the peripheral retina in a
patient without evidence of genetic disease on
extensive examination and follow up, are thus
exceptional. To our knowledge there have only
been four previous reports of solitary astrocy
ctoma not involving the optic disc.6

Previously described lesions were well
circumscribed and composed of well differen
tiated astrocytes. Some were described as low
grade astrocytic neoplasms ('astrocytoma'),
while others were called astrocytic hamarto
mas. In a paediatric setting, differentiation
between these two designations may not be
possible. In view of the cytological features,
absence of systemic findings, and unusual
peripheral location, we feel that the present
case represents a solitary astrocytoma.

Owing to its extreme rarity and overlapping
clinical appearances, solitary retinal astrocy
toma is essentially indistinguishable at presenta
tion from retinoblastoma. All reported cases
have been surprise findings in enucleated eyes.
In several instances tumour necrosis, some
times associated with retinal detachment, has
been associated with the onset of symptoms.2,6
Necrosis was not seen in the present case, but
total retinal detachment with extensive sub
retinal exudate was present and was presumi
ably responsible for bringing this case to clinical
attention.

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Ophthalmology for his opinion on the histological
sections.

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Coats'-like response in a patient with pars
planiits

EDITOR.—Pars planitis is a form of intermedi
ate uveitis characterised by chronic, bilateral
vitreitis, vitreous cellular aggregates (‘snow
balls’), peripheralis, and peripheral fibrovascu
lar (‘snowbank’) accumulation over the
inferior pars plana and vitreous base. Re
ported complications include cystoid macular
oedema (CMO), cataract, band keratopathy,
glucoma, rhegmatogenous and non
rhegmatogenous retinal detachment, retin
oschisis, vitreous haemorrhage, and sub
retinal, retinal, and optic disc neovascularisation.5

Coats’ disease is a primarily unilateral
disease of young males marked by vascular
anomalities, classically telangiectatic retinal
vessels, with massive intraretinal and subreti
nal exudates.4,5 The term ‘Coats’-like re
sponse’ refers to a fundus with the clinical ap
pearance of Coats’ disease in the setting of
other ocular or systemic disease. We report a
case of Coats’-like response in a patient with pars
planiits.

CASE REPORT

A 31-year-old woman had been diagnosed in
1977 with pars planitis. She had initially
presented with mild vitreous haemorrhage in
the right eye without obvious neovascularisa
tion, and had developed bilateral posterior
subcapsular cataracts. Several times during the
course of her disease she had exacerbations of
CMO that necessitated sub-Tenon’s steroid in
jections. Her medical history in
cluded hypothyroidism, and hospitalisa
tion for a ‘viral-inflammatory illness’ in 1990.

In 1989, an area of subretinal blood and exudate
was noted in the inferotemporal periphery of the
right eye, without signs of active ocular inflam
mation or evidence of pre
vious branch vein occlusion. This area ap
peared stable over the next several years. In
1991 the patient presented with keratic
precipitates on the corneal endothelium of the
right eye, with moderate anterior chamber and
vitreous inflammation; the subretinal exudate
remained unchanged. Ultrasonography re
vealed a mildly (maximum 1.9 mm) elevated
mass with an irregular surface and medium to
high reflectivity, without internal vascularity or
associated retinal detachment. Observation
was recommended because the visual acuity
was 20/40 in the right eye.

In 1993, visual acuity was 20/40 in both eyes,
with unchanged posterior subcapsular
vitaracts, quiet anterior segments, and no vit
reous inflammation. Ophthalmoscopy in the
right eye revealed that the subretinal exudate
had extended posterior to the equator, within
the inferotemporal arcade (Fig 1). Fluorescein
angiography revealed telangiectasia of the
retinal vasculature in this same area, with
leakage later in the course of the angiogram
(Fig 2).

COMMENT

Coats’ original description of exudative
retinal vascular disease has since been refined
to describe a specific clinical picture of abnor
mal congestive telangiectatic retinal vessels
accompanied by yellow subretinal exudates,
with or without retinal detachment. The
telangiectasia is a localised fumux dilatation
detachment of retinal arteries and/or veins. Other retinal
findings include vascular loops and beading,
neovascularisation, and focally or segmentally
dilated capillaries.4 A fundus appearance
similar to that of Coats’ disease, called a
Coats’-like response, has been reported in
the setting of ocular diseases such as retinitis pigmen
tosa.6

Figure 1 Subretinal exudate within the
inferotemporal arcade in the right eye. The
arrowhead indicates the area seen on the
fluorescein angiogram in Figure 2.

Figure 2 Fluorescein angiogram (corresponding to
the inferotemporal area of Fig 1)
demonstrating telangiectatic retinal vessels at the site
of the subretinal exudate.
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