Lyme disease, cat-scratch disease, multiple sclerosis, chronic leukemia, amyloidosis, Behçet's disease, retinal vasculitis, retinal vascular occlusion, and chronic uveitis.

RETINAL DETACHMENT

Retinal detachment is the separation of the retina from the underlying RPE. There are three main types: (1) serous/exudative, (2) tractional, and (3) rhegmatogenous retinal detachment.

In serous retinal detachment, the location of the subretinal fluid is position-dependent, characteristically gravitating to the lowermost part of the fundus (shifting fluid sign), and retinal breaks are absent. Diseases associated with serous/exudative retinal detachment include severe systemic hypertension, dural arteriovenous shunt, retinal vascular anomalies, hyperviscosity syndromes, papilledema, posterior uveitis, scleritis, orbital inflammation, and intraocular neoplasms such as choroidal melanoma, choroidal metastasis, lymphoma, and multiple myeloma.

Tractional retinal detachment is caused by internal traction on the retina in the absence of a retinal break. The retina in the area of detachment is immobile and concaved internally. Fibrovascular proliferation is a frequent associated finding. Conditions associated with tractional retinal detachment include vascular proliferative retinopathies such as severe proliferative diabetic retinopathy, branch retinal vein occlusion, sickle cell retinopathy, and retinopathy of prematurity. Ocular trauma, proliferative vitreoretinopathy, and intraocular inflammation are other causes of a tractional retinal detachment.

Rhegmatogenous retinal detachment is caused by the presence of a retinal break, allowing fluid from the vitreous cavity to gain access to the subretinal space. The surface of the retina is usually convex forward. Rhegmatogenous retinal detachment has a corrugated appearance, and undulates with eye movement. Causes of retinal breaks include posterior vitreous detachment, severe vitreoretinal traction, trauma, intraocular surgery, retinitis, and atrophic holes.

OPTIC DISC SWELLING

Optic disc swelling is abnormal elevation of the optic disc with blurring of its margins (Fig. 40e-9). The term "papilledema" is used to describe swelling of the optic disc secondary to elevation of intracranial pressure. In papilledema, the normal venous pulsation at the disc is characteristically absent. The differential diagnosis of optic disc swelling includes papilledema, anterior optic neuritis (papillitis), central retinal vein occlusion, anterior ischemic optic neuropathy, toxic optic neuropathy, hereditary optic neuropathy, neuroretinitis, diabetic papillopathy, hypertension (Fig. 40e-10), respiratory failure, carotid-cavernous fistula, optic disc nerve infiltration (glioma, lymphoma, leukemia, sarcoidosis, and granulomatous infections), ocular hypotony, chronic intraocular inflammation, optic disc drusen (pseudopapilledema), and high hypermetropia (pseudopapilledema).

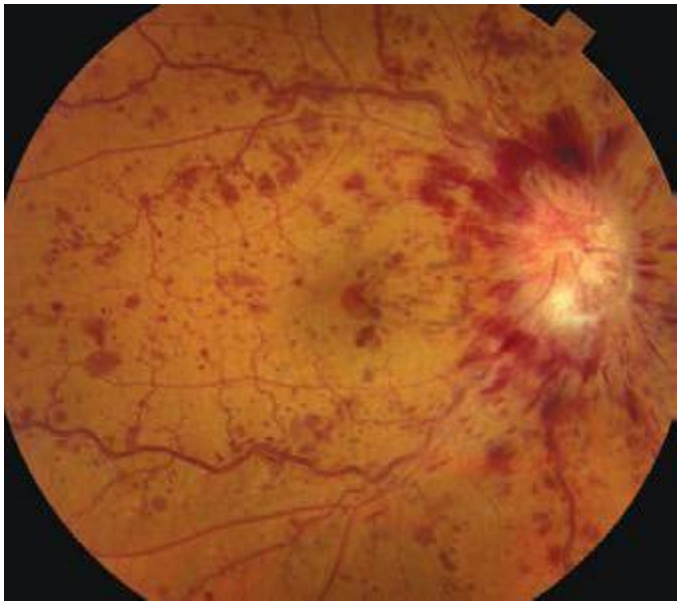

FIGURE 40e-10 Optic disc edema and retinal hemorrhages in a patient with malignant hypertension.

CHORIORETINAL MASS LESIONS

Choroidal mass lesions appear thickened and may or may not be associated with increased pigmentation. Pigmented mass lesions include choroidal nevus (usually flat), choroidal malignant melanoma (Fig. 40e-11), and melanocytoma. Nonpigmented lesions include amelanotic choroidal melanoma, choroidal metastasis, retinoblastoma, capillary hemangioma, granuloma (e.g., *Toxocara canis*), choroidal detachment, choroidal hemorrhage, and wet age-related macular degeneration. Other rare tumors that may be visible on ophthalmoscopy include

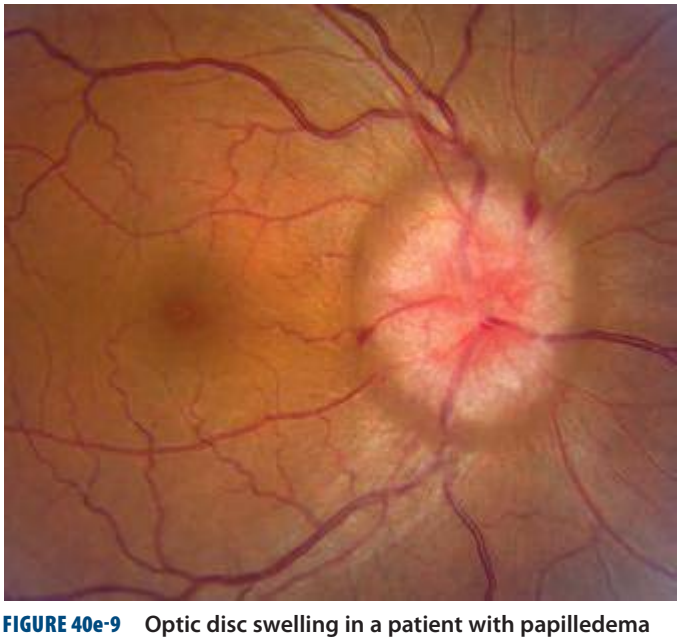

FIGURE 40e-9 Optic disc swelling in a patient with papilledema due to idiopathic intracranial hypertension. The optic disc is hyperemic, with indistinct margins. Superficial hemorrhages are present.

FIGURE 40e-11 Choroidal malignant melanoma. The lesion is highly elevated and pigmented, and has subretinal orange pigment deposits characteristic for malignant melanoma.