and severe abnormality on electroretinogram (ERG). The basic problem of RP is making an assessment of the progress of the disease. The RP first invents rod photoreceptors, which are placed on the peripheral retina. So the patient first loses peripheral visual fields. It might be inconvenient for the patient, but does not cause severe problems because the central visual field still functions and visual acuity is still preserved. However, at the end stage of the disease, the residual function will be lost, and patients will not be able to do social activities by themselves. So, to assess the central vision is important in an RP clinic. However, to date, it is done by subjective experiments, including visual acuity and visual field. RTVue provides objective results corresponding to retinal morphology, which will be important to evaluate RP prognoses of these patients.

- Inherited trait: autosomal dominant, recessive, X-linked recessive/etc
- Disease locus (responsible gene): many

**Case 1**

A 48-year-old male with a best-corrected visual acuity (BCVA) of 0.8.

1. Fundus photograph of RP patients. Posterior pole shows relatively normal appearance, whereas peripheral showed mottled RPE appearance (Figure 20-1A).
2. RTVue clearly showed IS/OS and OLM lines only in central retina (between arrowheads). It corresponds to relatively good visual acuity. However, the area is much smaller than normal appearance on fundus photograph. ONL was not clear in more peripheral area (Figure 20-1B).
3. Perimetry analysis revealed that the patient possessed only 10 degrees of visual field, which corresponded to RTVue analysis not to fundus appearance (Figure 20-1C).

**Case 2**

A 44-year-old male with a BCVA of 0.3.

1. Fundus photograph. Posterior pole showed relatively normal appearance compared with peripheral retina. However, the reflex has almost disappeared and patchy depigmentation was observed. At the peripheral area, bone spicules were observed (Figure 20-2A).
2. ONL at macular area is quite thin compared with Case 1. Inner nuclear layer (INL) and ganglion cell layer were preserved even in peripheral retina (Figure 20-2B).
3. The patient could not detect I-4 target in Goldmann perimetry (Figure 20-2C).

**Cone Dystrophy**

Cone dystrophy affects predominantly cone photoreceptors, whereas RP affects rod photoreceptors. So, clinical features appear in a central visual loss and color blindness. Unlike RP, peripheral vision loss and night blindness are rare symptoms. The common macular