

History

A 65-year-old lady presented with a ten year history of nonspecific visual disturbance and mild symptoms of dry eyes. Questioning revealed progressive nyctalopia. Previous medical history of note included Crohn's disease requiring two bowel resections including small intestine.

Questions

1. What clinical sign is present in Figure 1a and b? What does the optical coherence tomography (OCT) in Figure 2 show and what clinical features can be seen in Figure 3?
2. What are the diagnosis, clinical features and associations of this condition?
3. What investigations are needed?
4. What is the treatment?

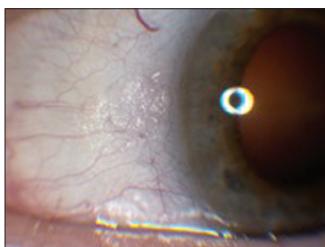


Figure 1a: Right eye anterior segment.

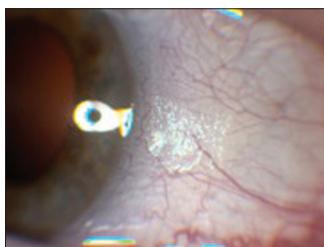


Figure 1b: Left eye anterior segment.

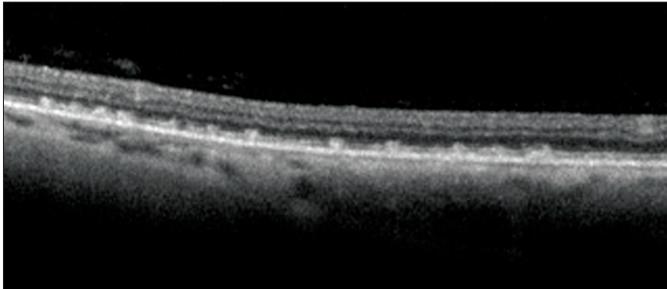


Figure 2: Left OCT of temporal retina.

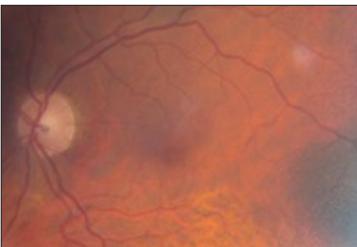


Figure 3a (left) and 3b (right): Left colour image of macular and mid temporal periphery (note flash artefact upper right of both images).

AUTHORS

**Imran Ashfaq,
ST5;
Rajen Gupta,
Consultant Ophthalmologist;
Newcastle Eye Centre,
Royal Victoria Infirmary,
Newcastle-Upon-Tyne, UK.**

SECTION EDITOR



Konstantinos Balaskas,
Consultant in Ophthalmology,
Medical Retina Service,
Manchester Royal Eye Hospital,
UK.
E: konstantinos.balaskas
@cmft.nhs.uk

2. Diagnoses: Vitamin A deficiency. Presents with night blindness, dry eyes with conjunctival and corneal xerosis, corneal ulceration and rarely keratoconjunctival scarring. Vitamin A is required for conjunctival and corneal epithelial maintenance, retinal photo transduction and retinal pigment cell viability. Associations: Poor dietary intake Decreased intestinal absorption (e.g. after surgery for Crohn's) Defective transporation of liver disease Post-surgery for morbid obesity - incidence of vitamin A deficiency after biliopancreatic fistulae has noted night blindness and other reports have noted visual complications associated with vitamin A deficiency after biliopancreatic surgery. From 10% to 69% and several case reports have noted night blindness and other visual complications associated with vitamin A deficiency after biliopancreatic surgery (Scopinaro et al. 1991-2006). 3. Investigations should include: • Serum lipid analysis of vitamin A, and other fat soluble vitamins E and D. This patients probably have normal levels. • Electrophysiology studies. These show reduced rod and cone function which is reversible with treatment. 4. Treat the cause. Vitamin A supplementation (10,000 units/2ml). This patient was given oral orally or intramuscular injection (10,000 units/2ml). • Supplementation Vitamin A and D, Halibut liver oil capsules 4,000 units QD with improvement of other symptoms, normalization of her electrodiagnostic tests, resolution of her bilateral white dots. Lubricant drops can also be prescribed for symptomatic relief of dry eyes.

are either dry or foamy greyish trangular conjunctiva and represent keratitis in epithelium. The foamy type is often associated with gas producing organisms Corynebacterium with gas production at the level of the retinal pigment excrescences at the level of the retinal pigment epithelium. Figure 2 shows an OCT section with xerosis. Figure 2 shows an OCT section with xerosis. Figure 3 shows multiple excrescences at the level of the retinal pigment epithelium correspounding to the white dots seen in Figure 3. Figure 3 shows multiple fine subretinal punctate white dots in the fundus. This is best seen in Figure 3 in which the blackground of a pigmented choroidal nevus. The dots can often resemble fundus nevus.

ANSWERS