Xerophthalmia is the term used to describe the eye signs of Vitamin A deficiency. This is a childhood blinding disease which is caused by a lack of Vitamin A in the diet. Often the first symptom is night blindness followed by Bitot’s spots on the conjunctiva.

Although Bitot’s spots differ somewhat in size, location and shape, they have similar appearance. They are accumulations of foamy, cheesy material on the conjunctiva, often in association with other signs of xerophthalmia.
As the disease progresses the cornea becomes dry and rough. This is known as conjunctival xerosis.

Bitot's spots and conjunctival xerosis are characteristic signs of Vitamin A deficiency. When these two signs are present in children, there should be no mistake in recognizing the disease.
Drying of the cornea (corneal xerosis) may develop if the disease is not treated.

As the nutritional status of the child worsens or if the child develops an infectious disease, the cornea may become increasingly damaged. The dryness may quickly give way to softening of the cornea (keratomalacia). Bulging or rupture of the cornea may follow.
BLINDNESS – The result of Vitamin A deficiency.

Fig. 10. Child, 3 years old. Blind for the last two years. The other eye is also blind.

Fig. 11. Child, 4 years old. The child had measles 1 year ago which caused an eye infection. Now, she is left with a central scar on her cornea.

Fig. 12. Child, 4 years old. The cornea is completely scarred and the eye is blind.

Shrunken eyeball following keratomalacia

Central white scar in the cornea

Staphyloma

If Vitamin A deficiency is not treated, or is treated to late, it may result in severe damage and permanent blindness.

A scar of the cornea impairs it’s transparency and interferes with vision. A perforated eye ball shrinks and leads to complete blindness.