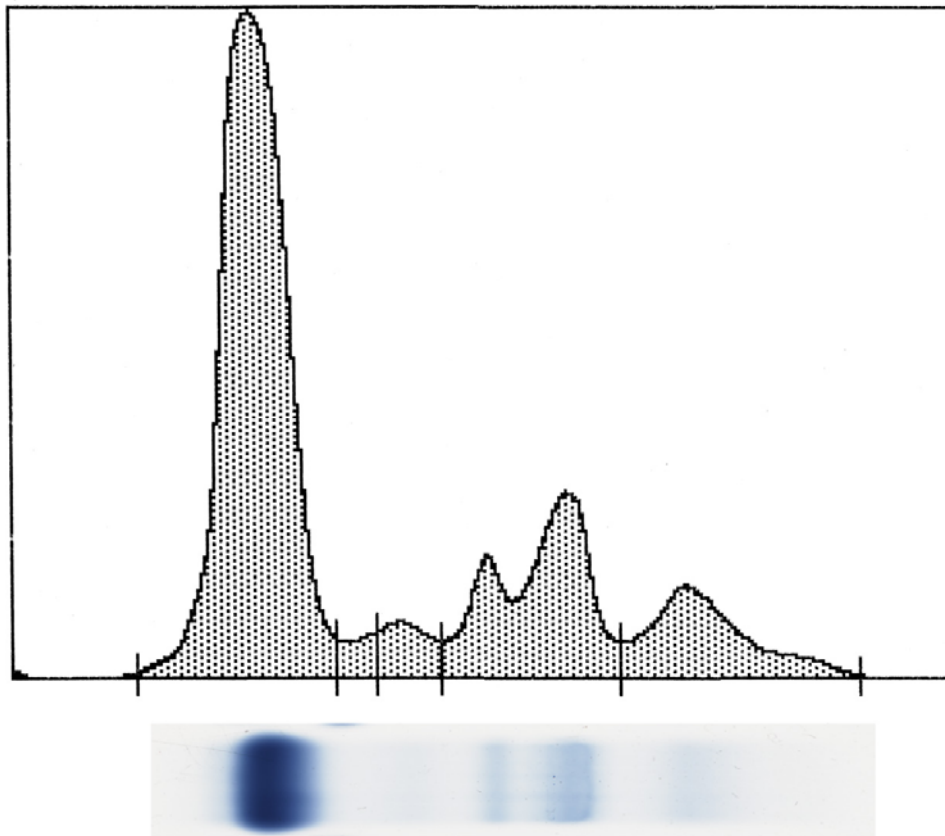


Clinical Case 5: Aspergillosis

Normal EPH

This is a normal EPH pattern from an African Grey Parrot. African Grey Parrots often have low or no visible prealbumin fraction. Albumin, in a normal animal, is the predominant fraction as shown here. Albumin can decrease with acute inflammation. Alpha 1 globulins are not commonly found in significant levels in psittacines (but are a major fraction in other avian species). A small alpha 2 fraction is demonstrated below. This fraction can increase non specifically with acute inflammation. In African Greys as well as a few other parrot species, beta globulins are present as a double peak. The gamma globulins shown below conform to the normal polyclonal resting pattern.

In EPH interpretation, the clinical pathologist examines both this densitometer tracing as well as the gel itself (shown underneath the tracing below). The two give a combined impression with the quantitated fractions to lead the pathologist to give the submitting veterinarian the most accurate interpretation possible.



From left to right: albumin, alpha 1, alpha 2, beta, and gamma globulins. The prealbumin fraction is absent in this bird. The A/G ratio is 1.59.

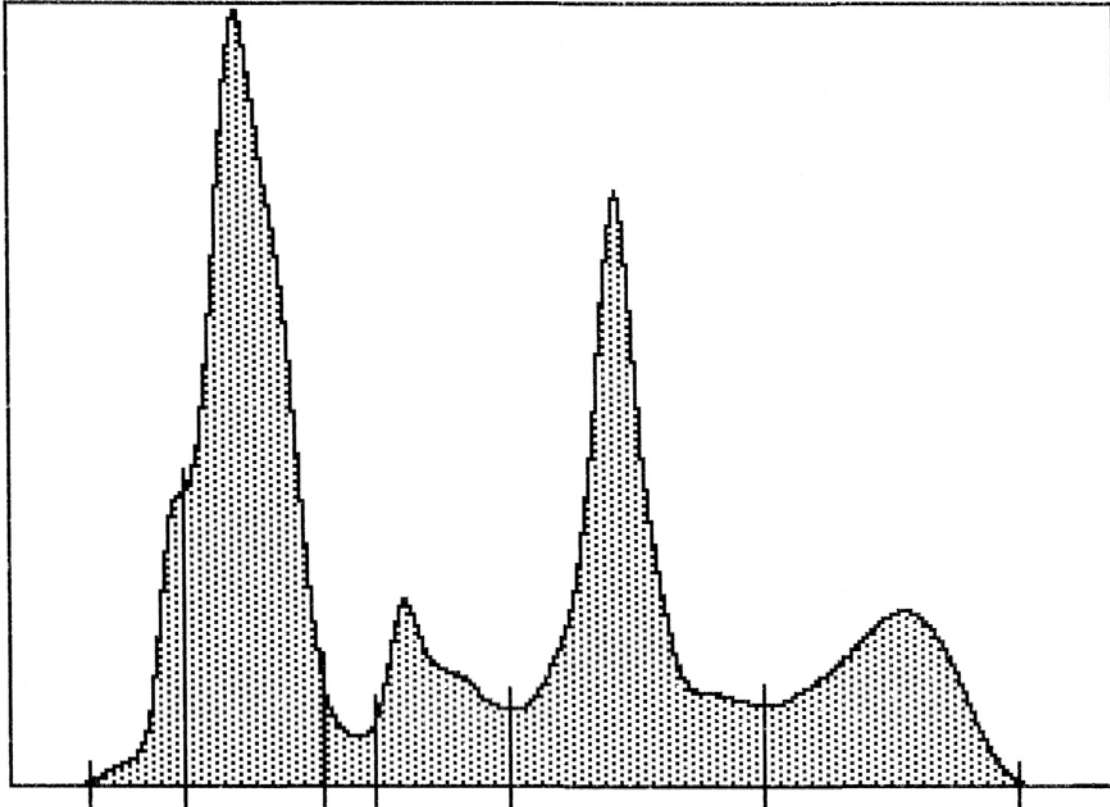
Aspergillosis

Aspergillosis remains a challenging disease to diagnose. Serological and PCR testing offer some ability to diagnose and follow patients through infection and resolution but EPH can offer another sidelight in these two areas also. Ivey (*JAMS*, 2000) documented what had been previously reported by our lab at AAV that a consistent finding among psittacines with Aspergillosis was an elevation in beta globulins. This is not a surprising finding as the beta globulins include transferrin which is a major acute phase protein of avian species. Inflammatory processes with many different etiologies may result in increases in this fraction.

In our lab, approximately 30% of *Aspergillus* serology submissions are accompanied by changes in this acute phase protein fraction. Thus, the absence of this elevation does not completely rule out Aspergillosis. We hypothesize that long chronic infections lead to an anergy of the inflammatory and immune response and often normal EPH can be found. A smaller group of cases show elevations only in the gamma fraction. Below are two confirmed cases of Aspergillosis. Note the fraction differences. The presence of EPH changes can be used in conjunction with routine blood work and testing, clinical signs, and serology to aid in the diagnosis of the patient.

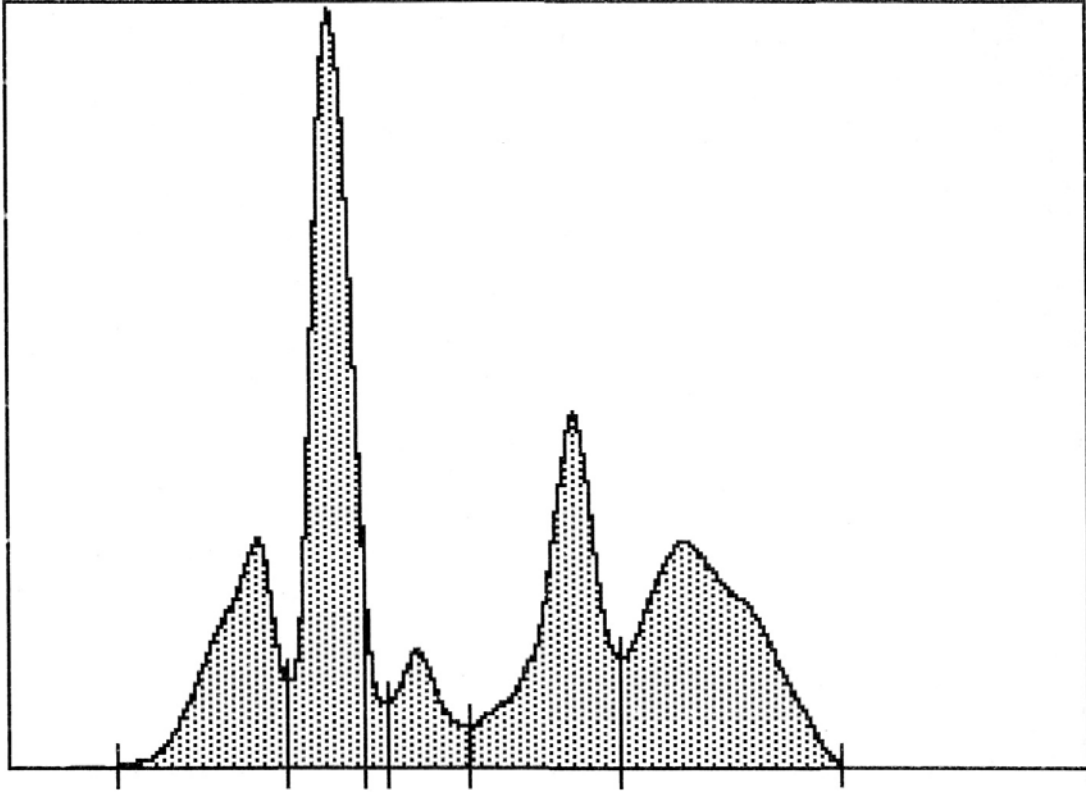
Beta globulin increases in Aspergillosis.

A/G ratio = 0.78, Beta globulins = 30% (normals 15-22%).



Gamma globulin increases in Aspergillosis.

A/G ratio = 0.84. Gamma globulins 26% (normals 10-



16%).