Abnormal Helminth Egg Development, Strange Morphology, and the Identification of Intestinal Helminth Infections

Technical Appendix

Matuda Classification of Abnormal Ascaris spp. Eggs; Adapted from Matuda (1934) (1).

A. Normal egg: within typically observed size range and shape.
B. Abnormal egg.
   I. United eggs: this form consists of some eggs covered with the same albuminous membrane.
      a. Two eggs united.
         1. United shells of normal morphology.
         2. United shells of abnormal morphology.
         3. Two morulae within single shell.
      b. Three or more eggs united.
   II. Deformity in diameter.
      a. Abnormally large.
      b. Abnormally small.
      c. Giant eggs.
         1. Giant eggs with normal shape.
         2. Giant eggs with abnormal/irregular shape.
   III. Deformity in shape.
      a. Budding.
      b. Indented.
         1. Asymmetrical indentation.
         2. Symmetrical indentation.
      c. Angular deformity.
      d. Abnormally elongate.
Reference