

Atlantische Tijdschrift voor Geographisch
Medicine
L. a. v. Mrs. A. van Amerongen, Woudstra
Koninklijk Instituut voor de Tropen,
Mauritshoofd 63
Amsterdam

2565

. Amsterdam, 18 oktober 1977

Heer gezachte mevrouw van Amerongen,

Overeenkomstig onze ligten het
telefoon gesprek van mededeling van de
afpraak, stuur ik U hierbij de inleidende
versie 1 en 4 van de "Proceedings" van de Nijboers-
gaderingen van de Med. Ver. voor Parasitologie der
vervingen die welke onder hetzelfde nummer
dooreen misverstand zijn opgenomen in het
manuscript dat U op 10 oktober door dr. v. d. Kaay
reeds toegesonden.

Met zeer veel dank voor de door U in
derzake te nemen moeite, verblijf ik,

hoogachtend,

Respect A. M. —

(Elizabeth A. Meulman, secretaris N.V.P.)

J. ANDRIANSEN (University of Copenhagen, Zoological Laboratory,
Universitetsparken 15, DK 2100, Copenhagen, Denmark)

Host-parasite relationship between intestinal cestodes and their hosts, with special reference to immune dependent reactions between Hymenolepis diminuta and its hosts.

The two most important phenomena involved in the regulation of the individual worm size and the total worm population are:

- 1) Competition between other parasites
 - a) Intraspecific competition (crowding)
 - b) Interspecific competition
- 2) Host immune reactions
 - a) Specific immunological responses
 - b) Non-specific immunological responses

The results of crowding: decrease in individual worm length, weight and egg-production and dispersion of the tapeworm population in the intestine was shown.

Interspecific competition between Hymenolepis diminuta and the acanthocephalan, Moniliformis moniliformis in the rat, where the tapeworms are forced posteriorly in the small intestine, are lighter and shorter and produce fewer eggs than in single infections, was shown.

Besides the competition for space and food it was put forward that also host immune reactions were involved in intra- and inter-specific competition because it is known that at least antibodies are produced against as few as 5 worms.

In correlation with this it was proposed not to use the term "premunition" in cestode infections because host immune reactions are involved and not only intra-specific competition.

Results of host immune reactions from normal mice, rats, golden hamsters and congenitally athymic nude mice were compared.

The hosts all have an expulsion mechanism which in several respects resembles the well-known "self-cure" in many nematode infections and especially Nippostrongylus brasiliensis infections in rats: The primary infection is destrobilated and expelled, the destrobilation and expulsion is inhibited by immunosuppressive treatment, the expulsion rate is increased in secondary infections and most of the residual worms are damaged (in this case destrobilated) - and furthermore the destrobes are migrated to the anterior part of the duodenum synchronously with the expulsion in the rats.

It was shown that immunological responses provoked by Moniliformis non-specifically rejected a concurrent H. diminuta infection- there was no cross immunity between the parasites.

The role of the humoral antibodies and cellular immunity was discussed in relation to the serological antibody titers and the histopathology of the intestine with special reference to the plasma cells, eosinophils and mast cells - both from laboratory models and from human infections.

The hypothesis was put forward that the functional antigens are related to the number of scolices and released from the scolex region but not to the total worm biomass or worm surface area.

1. P. MAS BAKAL and N. IN 'T VELD (Laboratory of Parasitology, University Leyden)
Investigation into the occurrence of Toxoplasma in pharyngeal and palatine tonsils by means of animal experiments.

Out of 124 children, 63 boys and 61 girls, ranging from one year to seven years, attempted isolation of Toxoplasma was successful in four cases. Examination for antibodies was not rendered possible. The generally accepted percentage of positive dye tests in a similar - however random chosen - age group is about eight per cent (Fleck, 1963; Harboe, 1952; Thalhammer, 1967). In our - selected - group a higher one is to be expected. An arbitrary percentage of twice the eight per cent results in 20 positive cases, among which the four successful isolations must be looked for. Out of 20 persons, aged 14 to 21 years, with known positive dye test, one isolation was successful. No generalized lymph node enlargements were mentioned in the history of these five persons, relapsing laryngo pharyngeal symptoms only. Nevertheless Toxoplasma cannot simply be designated as the cause of the morbid symptoms. Striking facts are the considerably higher number of successful isolations, exclusively in boys, in the younger age group and the only one in the elder, concerning a girl of 16; though antibodies to Toxoplasma in the blood is proof of infection, the presence of the organism - especially in the tonsils - is not self-evident, as witness only one isolation among 20 persons with positive dye tests.

1. Fleck, D.G., J. Hyg.(Lond.) 61 (1963) 61-75
2. Harboe, A., Acta Pathol. Microbiol. Scand. Suppl. 93, (1952) 325-331
3. Thalhammer, O., Pränatale Erkrankungen des Menschen, Georg Thieme Verlag (1967)