phase in *C. livia* could be an adaptation to the increased need to utilize the body's own reserves in bringing up the nestlings/squabs (in this case, in the production of crop milk also) as suggested by Silverin[2] and this view is further supported by a significant reduction in the body weight of the parent pigeons during this phase.

20 February 1988; Revised 25 March 1988

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OSMOTIC FRAGILITY OF SHEEP ERYTHROCYTES IN *DICTYOCAULUS FILARIA* INFECTION

T. K. BHAT and R. L. SHARMA
Regional Research Centre, Indian Veterinary Research Institute, Srinagar 190 005, India.

DICTYOCAULUS FILARIA infection in sheep is associated with certain blood dyscrasias such as anaemia[1-3] and prolonged whole blood clotting time[4]. The effect of this infection on the resistance of circulating erythrocytes of sheep to osmotic lysis is not known. The present study was undertaken to investigate the effect of this parasite on the osmotic fragility of sheep erythrocytes for 71 weeks under controlled laboratory conditions.

Twenty seven male lambs of Nali breed, aged 6–10 weeks, were randomly distributed into four groups of eleven (infected), five (vaccinated), four (challenge-control) and seven (clean-control). The infected group of animals received each 2000 infective larvae of *D. filaria* on day zero of the experiment, whereas the vaccinated group lambs were each given 1,000 and 2,000 gamma radiation attenuated larvae on days zero and thirty respectively and 4,000 normal infective larvae on day 45. The challenge-control group received 4,000 normal infective larvae on day 45 of the experiment. Osmotic fragility of erythrocytes was determined by subjecting them to a hypotonic shock in buffered saline and was studied till week 71 post-infection (PI).

There was a positive correlation between decreased resistance of erythrocyte to osmotic lysis and the progress of the disease throughout the study period. In infected and challenge-control group of lambs, erythrocytic fragility increased from 3rd week PI and remained at significantly elevated level (0.80% ± 0.03 initiation; 0.65% ± 0.04 completion) from eighth week onwards ($P < 0.001$ initiation; $P < 0.01$ completion). The vaccinated animals did not show any significant increase in the osmotic fragility of their erythrocytes and behaved like clean control animals (0.68% ± 0.02 initiation; 0.50% ± 0.02 completion). During the chronic phase of infection, aptly described as immune-carrier phase, (11 weeks of PI onwards), although the erythrocytic fragility had a tendency to decrease (0.72% ± 0.02 initiation; 0.53% ± 0.03 completion) yet did not return to normal till the end of the experiment. The differences were statistically significant ($P < 0.05$ initiation; $P < 0.025$ completion). This is the first report on increased osmotic fragility of sheep erythrocytes in helminth infection of domesticated animals.

Osmotic fragility of erythrocytes has been shown to vary with their geometrical configuration, membrane defects, decreased membrane cholesterol content, direct action of circulating complement and antibodies on their membrane and decreased erythrocyte acetylcholinesterase activity[5]. Although the osmotic resistance of erythrocytes is known to decrease in certain diseases[6,7] and toxic conditions[8], much remains to be investigated about changes occurring in parasitic disease. The precise reasons for the progressive increase in erythrocyte fragility in the sheep infected with *D. filaria* are not known. Investigations in this direction are currently in progress.

24 February 1988; Revised 19 April 1988

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ANNOUNCEMENTS

NATIONAL WORKSHOP ON BECHE-DE-MER

The 'National workshop on Beche-de-mer' will be conducted at the Regional Centre of Central Marine Fisheries Research Institute, Mandapam Camp, Tamil Nadu, during January, 1989. The exact dates will be announced in due course.

Beche-de-mer is a trade name of the processed product from Holothurians otherwise popularly known as sea-cucumbers. It earns up to Rs. 20 lakhs per year in foreign exchange. The raw material is exploited from a restricted area along the Palk Bay and Gulf of Mannar. The industry which has been concentrating its efforts on a single species which is showing signs of over exploitation is now facing shortage of raw material. There is scope for extending the fishery to other areas and to other species. It has become necessary that all the available information on all aspects of the resource which includes the latest breakthrough in induced breeding and rearing of sea-cucumbers by the Institute are consolidated in a National Workshop to guide the industry to develop on scientific lines.

For further particulars please contact: Dr D. B. James, Convener, National Workshop on Beche-de-mer, c/o Tuticorin Research Centre of CMFRI, 93, North Beach Road, Tuticorin 628 001.

NATIONAL SEMINAR ON ADVANCE IN ECONOMIC ZOOLOGY

The above seminar will be held during 20–22 December 1988, in the Department of Zoology, Jodhpur University, Jodhpur (Rajasthan). The subjects to be dealt with are grouped into five sections: 1. Agricultural zoology; 2. Fish, fisheries and marine borers; 3. Veterinary and medical zoology; 4. Social insects (bees, ants, termites); and 5. Poster session. Intending participants should send the abstract (not exceeding 200 words) so as to reach not later than 30th September 1988. The registration fee is Rs. 150/–. Local hospitality and transport will be provided.

For further information, please contact: Dr S. M. Mohnot, Organizing Secretary, c/o Department of Zoology, Jodhpur University, Jodhpur 342 001.