

*Brief Communication*MIGRATION INHIBITION STUDIES ON PERIPHERAL
LEUKOCYTES AND LYMPH NODE CELLS FROM
RUMINANTS WITH FASCIOLIASIS

Delayed type hypersensitivity against antigens of *Fasciola hepatica* has been repeatedly documented in infected hosts. Evidence has been presented to suggest that the delayed reactivity may develop earlier in the regional lymph nodes of the parasitized organ than in other lymph nodes of the body (Soulsby 1971).

The leukocyte migration test (Aalund *et al.* 1970) was used to analyze the delayed type hypersensitivity of leukocytes from the hepatic lymph nodes of goats and sheep with acute or chronic fascioliasis. For comparison, the test was also performed on leukocytes from a prescapular lymph node and on leukocytes from the peripheral blood.

The animals were 6 goats and 3 sheep that had grazed a heavily fluke-infected area for 2—3 months. All exhibited clinical signs of severe fascioliasis, e.g. grave anemia and emaciation. Seven animals died or were killed. Necropsy revealed acute fascioliasis in 3 goats and chronic fascioliasis in 1 goat and all 3 sheep.

The animals were tested at 4 different antigen levels by applying 1, 2, 3 or 4 drops, respectively, to the 1 ml migration chambers. The antigen was an extract with phosphate buffered saline of adult, washed and disintegrated flukes. The content of dry matter and protein was 1.5 mg and 0.19 mg per ml, respectively.

Table 1. Reactions in 6 goats and 3 sheep.

Species	Source of leukocytes	Number of animals		
		+	0	total
goat	peripheral blood	4	1	5
	Ln portalis	3	1	4
	Ln praescapularis	3	1*	4
sheep	peripheral blood	3	0	3
	Ln portalis	1	1	2
	Ln praescapularis	0	2**	2

* This animal had a positive reaction with leukocytes from the peripheral blood and the portal lymph node.

** One of these 2 animals had a positive reaction with leukocytes from the portal lymph node.

The results are presented in Table 1. The tests were scored as positive, if the leukocytes exhibited inhibition of migration on at least 1 occasion during the 8-week observation period. One of the goats and 1 of the sheep had a positive migration inhibition reaction with leukocytes from the hepatic lymph nodes at a time when no inhibition of migration was encountered with peripheral leukocytes and with leukocytes from the prescapular lymph node.

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