

ROTAVIRUS INFECTION OF YOUNG CALVES IN IRAQ

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Rotavirus like particles have been associated with diarrhoea of calves in the United States (4), United Kingdom (8), Canada (1) and many other countries. The diagnosis of rotavirus infection is based either on direct detection of rotavirus particles by electron microscopy or on identification of viral antigen in faeces. We attempted to detect rotavirus infection in young diarrhoeic and non-diarrhoeic calves with simple methods of agar gel diffusion (AGPT) and discontinuous counterimmunoelectrophoresis (DCIE).

Diarrhoeic and nondiarrhoeic faecal samples were collected at random from animals under 1 month of age in 2 dairy cattle farms at Al-Kallis and Al-Wahda during the period July-October 1981. The faecal samples were purified using the modified method of Rhodes et al. (6) namely that 0.2 ml of trypsin (2 mg/ml of trypsin in 0.001 NHCl and 0.002 mol/l CaCl₂) was used instead of chymotrypsin and the ultracentrifugation step was omitted. The faecal antigen obtained was used in screening for rotavirus antibodies. The agar gel diffusion was performed according to Kwapinski (3) on microscope slides layered with molten agar for 48-72 hr at 10 °C. The DCIE was carried out according to the method of Wallis and Melnik (7). Rabbit standard antiserum to calf rotavirus was obtained from Dr. M. Rhodes (Institute of Agricultural and Natural Resources, Nebraska Lincoln, U.S.A.). Antiserum to calf rotavirus was prepared also employing the method of Ellens et al. (2) and absorbed to normal faecal calf suspension (5).

The results of 3 months survey for rotavirus among dairy calves in 2 closed herds is given in Table. The preliminary data indicate that rotavirus antigens were excreted by 16.6% and 25.6% calves, respectively. The survey for rotavirus antibodies revealed 11 positive serum samples out of 78 (14.1%) in the herd Al-Wahda and 18 positives out of 82 (21.9%) in the herd Al-Kallis. The detection of rotavirus antibodies does not indicate previous rotavirus disease, as many infections are subclinical. Investigations on the occurrence of rotavirus diarrhoe among young calves in various cattle farms with respect to factors such as age, sex and season as well as evaluation of rotavirus antibody persistence are currently in progress.

Herd	Year	Sample number	Samples positive		Number of diarrhoeic calves
			AGPT	DCIE	
Al-Kallis	1981	82	21 (25.6%)	18 (21.9%)	2 (2.4%)
Al-Wahda	1981	78	13 (16.6%)	11 (14.1%)	3 (3.8%)

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