NEWS

Sixth International Conference on Equine Infectious Diseases

Robinson College, Cambridge 7th-11th July 1991

Reporter: Sandy Love

IN well-structured plenary sessions, held each morning, invited speakers covered topics of immunology, parasitology, bacteriology, epidemiology and virology, which set the scene for parallel afternoon presentations of original work.

To ensure a steep learning curve, tea was served within the poster session with authors present to discuss their work. This was followed by workshops involving in-depth discussion of important issues relating to infectious equine diseases, namely leucocyte markers, equine viral arteritis, neonatal infections, *Rhodococcus equi*, immunisation against EHV-1 and effector mechanisms.

Considerable time was allocated to the equine herpesviruses. In a keynote paper, their classification was outlined, detailing common (or conserved) genetic sequences in the viral genomes. Of particular interest, in a subsequent paper dealing with the characterisation of B cell epitopes responsible for eliciting a humoral response, was the identification of linear epitopes by the immunoreactivity of overlapping synthetic peptides. Further papers dealt with the phenomenon of latency of herpesviruses. In one abattoir survey, 60 per cent of animals harboured EHV-1 or -4 in lymphoid tissues; more commonly in the retropharyngeal, submandibular or bronchial lymph nodes than in the spleen. In fact, using the polymerase chain reaction, it was shown that 90 per cent of bronchial lymph nodes harboured a copy of EHV-1 or -4. Interestingly, EHV-1 or -4 were only isolated in conjunction with the avirulent EHV-2. Although the significance of these observations is not yet clear, it is already known from laboratory studies that the gene products of these viruses can mediate transactivation.

Several other equine viral infections were also covered, including the reclassification of equine arteritis virus as a member of an evolutionary coherent 'coronavirus-like superfamily' based on genome organisation and virion architecture.

Present and future control of equine influenza were reviewed with special reference to the improved duration of immunity by use of immune stimulating complexes (ISCOMS) and development of attenuated vaccines.

In an eloquent account of the work performed to characterise equine rotaviruses, it was concluded that foal rotaviruses form an epidemiologically unique population from those of other neonatal mammals. Foal rotaviruses have now been shown to belong predominately to serotype G-3, as determined by monoclonal antibody based ELISAs, which suggests that it would be highly feasible to produce effective vaccines.

Equine rotavirus is the most significant enteropathogen in foal diarrhoea. However, the reports of two surveys of foal diarrhoea cast some doubt about the aetiological role of *Escherichia coli* in that the recovery rate of this organism was high in control groups of apparently healthy foals.

In a global sense, *Rhodococcus equi* is a serious bronchopneumonia. From the papers dealing with this disease, it was evident that the ecological preferences of this organism are for dry, sandy soil of neutral or slightly acid pH. This may account, in part, for its lower incidence in the UK compared with the USA, Australia and Japan. *R. equi* is considered to be opportunistic with higher disease incidences in foals in hot, dry, dusty conditions at times when maternal antibody is waning and/or in situations of stress. Control measures recommended against *R. equi* phomonia were: 1) decrease the infective challenge by maintaining a 'clean' environment eg collect faeces, encourage good grass cover; 2) increase foal immunity, eg

hyperimmune plasma transfusion; 3) early recognition and treatment of sick foals (clinical signs occur late in the natural course of infection). The drug combination of choice is erythromycin and rifampicin maintained for at least 10 days after resolution of clinical signs. In one study, vaccination of pregnant mares with *R. equi* bacteria did not provide protection against clinical disease in their foals.

In the deluge of molecular biology at this meeting, at times it was possible that some might lose sight of the reasons behind the science, ie the horse and disease. Therefore, it was refreshing to hear a paper address the important question of survival of *Streptococcus equi* in the environment without resource to complex science or jargon. Survival times of *S. equi* in the environment were found to be up to 63 days on unprotected surfaces (and very much longer in soil), which has important implications in the epidemiology and management of equine strangles.

The take-home message of this conference was that novel vaccines of improved efficacy against a variety of equine diseases are on the way. Development and assessment of these new, genetically engineered vaccines will rely on a detailed knowledge of the immune responses that operate in the infectious disease of the horse. Therefore, although mention of immunological phenomena such as the major histocompatibility complex, T-helper cells or complement activation may seem somewhat academic, it was appropriate that the considerable advances in equine immunology of the last decade were a recurring theme during this meeting.

The organising committee under the chairmanship of Professor Lord Soulsby, deserve congratulations for bringing together a diverse group of veterinary scientists to exchange information on many aspects of equine infectious diseases. Considerable financial sponsorship was provided by The Horserace Betting Levy Board and The Equine Virology Research

Foundation for the purpose of subsidising travel costs for many of the overseas delegates. Additional sponsorship has received from: The Donkey Sanctuary, The Home of Rest for Horses, British Equine Veterinary Association, Animal Health

Trust, British Equine Veterinary Association Trust, Intervet U.K. Ltd. and Duphar Veterinary Ltd.

In short, at this meeting there was something for everyone and much information of potential value to equine

clinicians and scientists will be contained in the refereed proceedings which will be available from R & W Publications (Newmarket) Ltd., Goodwin House, Willie Snaith Road, Newmarket, Suffolk CB8 7SQ.

Treatment of tendon injuries - conclusions from the BEVA meeting

Reporter: Andy Bathe

AT the recent BEVA meeting at Bristol, a number of speakers discussed current concepts in the treatment of tendon injuries, and the following provides a summary of these presentations.

In the initial acute stages, measurements should be taken to reduce inflammation. Therapeutic ultrasound shortens the inflammatory phase, but the arguments for the use of a cold laser for tendon injuries were less convincing. Diagnostic ultrasound should be employed accurately to assess the degree

of damage.

Tendon splitting of acute or sub-acute cases with marked core lesions would seem to improve the speed and quality of repair of these severe cases. Superior check ligament desmotomy is thought to exert a protective effect on the tendon and is indicated for recurrent and severe acute cases.

For the more faint hearted, a number of medical options were discussed. The injection of hyaluronic acid into the digital sheath in acute cases of 'low bow' will decrease adhesion formation. Glycosaminoglycans are postulated to govern tendon maturation and Adequan® has been shown to protect large diameter fibrils and encourage collagen production by fibroblasts. It may be

injected into core lesions, peritendinously for focal lesions or intramuscularly for diffuse lesions.

None of these treatments was shown to promote early return to performance. They may well improve the quality of repair but it was agreed that tendon repair takes time and that controlled exercise is important. The post operative regime described would seem to be for general application. It consisted of two weeks box rest, six weeks land walking, four weeks trotting or in a small pen and re-evaluation after this time.

The meeting raised as many questions as it answered and, for those wishing to study the arguments in greater detail, audiotapes are available from BEVA/Audio Bass.

First International Workshop on Animal Locomotion

Reporter: Neil Steven

THIS three day conference was hosted at the Faculty of Veterinary Medicine, University of Utrecht, organised by Biomechanics Research Group.

Presentations covered a wide range of subject matter including applied and

basic research in kinematics and biostatics, computer modelling of gait analysis and construction of 3-dimensional models, also goniometry and rheology.

The proceedings, to be published in a special issue of Acta Anatomica, will prove instructive and thought provoking for all engaged in treatment of lame horses.

The organisers, Drs Schamhardt and van den Bogert are to be complimented on the faultless organisation and presentation of this seminar.

New Diagnostic Centre for Newmarket

ON SUNDAY 11th AUGUST, THE Beaufort Cottage Diagnostics Centre, at Cotton End, Exning, Newmarket was opened by Mrs Jill Rosedale. An extension to the facilities provided by Rosedale and Partners, the new centre features a large overhead x-ray generator, two clinical examination areas for endoscopy, ultrasonography and gamma scintigraphy, extra large stables for mares and foals and approximately 10 acres of paddocks. The services offered include those of on-site farrier Simon Curtis, FWCF.

INTERNAL FIXATION OF FRACTURES AND RECONSTRUCTIVE SURGERY

December 1st to 6th, 1991

Kongresshaus Davos, Switzerland

An equine course in AO/ASIF techniques and selected other procedures.

The course will, for the first time, be carried out using plastic models of equine bones.

For further information please write to:

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