

BLUETONGUE

2008 - 2009

UNUSUAL

CASES

DR G.H. GERDES
VIROLOGY STAFF
OIE REF. LAB. STAFF



THE CASES

- clinical
- confirmed?

* Bovine



* Alpaca





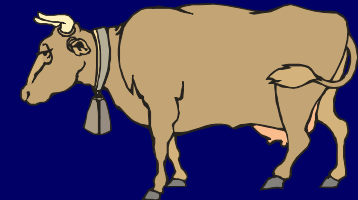
BLUETONGUE IN CATTLE


Inc. > role as maintenance/amplifying host

THE DISEASE

Isolation : Seropositivity : +ve PCR

Historical Perspective





“Up to the present (1932) it has been accepted that bluetongue is a disease specifically and exclusively confined to sheep”

(Bekker et al 1934)

BLUETONGUE TRIAL

SYMPTOMS	FIELD CATTLE	EXPERIMENTAL CATTLE	EXPERIMENTAL SHEEP
Eye discharge	+	+	+
Nose discharge	+	+	+
Salivation	<u>++</u>	slight	Frothing
Swollen tongue	+	-	+
Stomatitis	<u>++</u>	+	<u>++</u>
Torticollis	-	-	+ (late)
Skin lesions	+	-	+
Stiffness	+	-	-
S/c oedema	-	-	+
Coronitis	+	-	<u>++</u>

BT/EHD EPIZOOTICS

- 1933/34

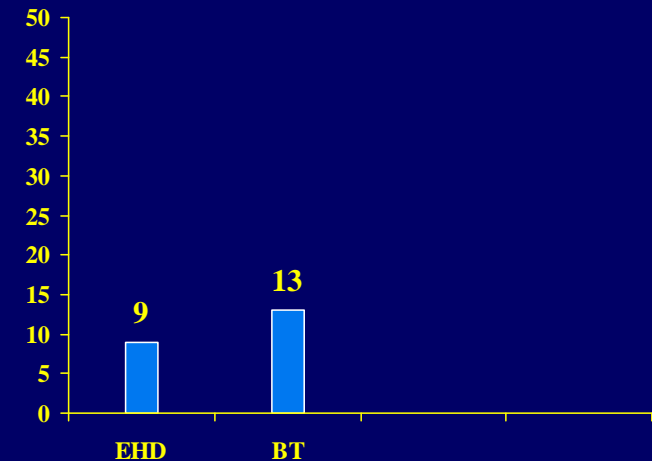
- 1995/96

- * uncommon, widespread
- * lacrimation, salivation
- * nose & teat sloughs
- * stomatitis and coronitis
- * marked drop milk production

Vaccination:

Israel pentavalent (2,4,6,10 & 16)

Sheep vaccine

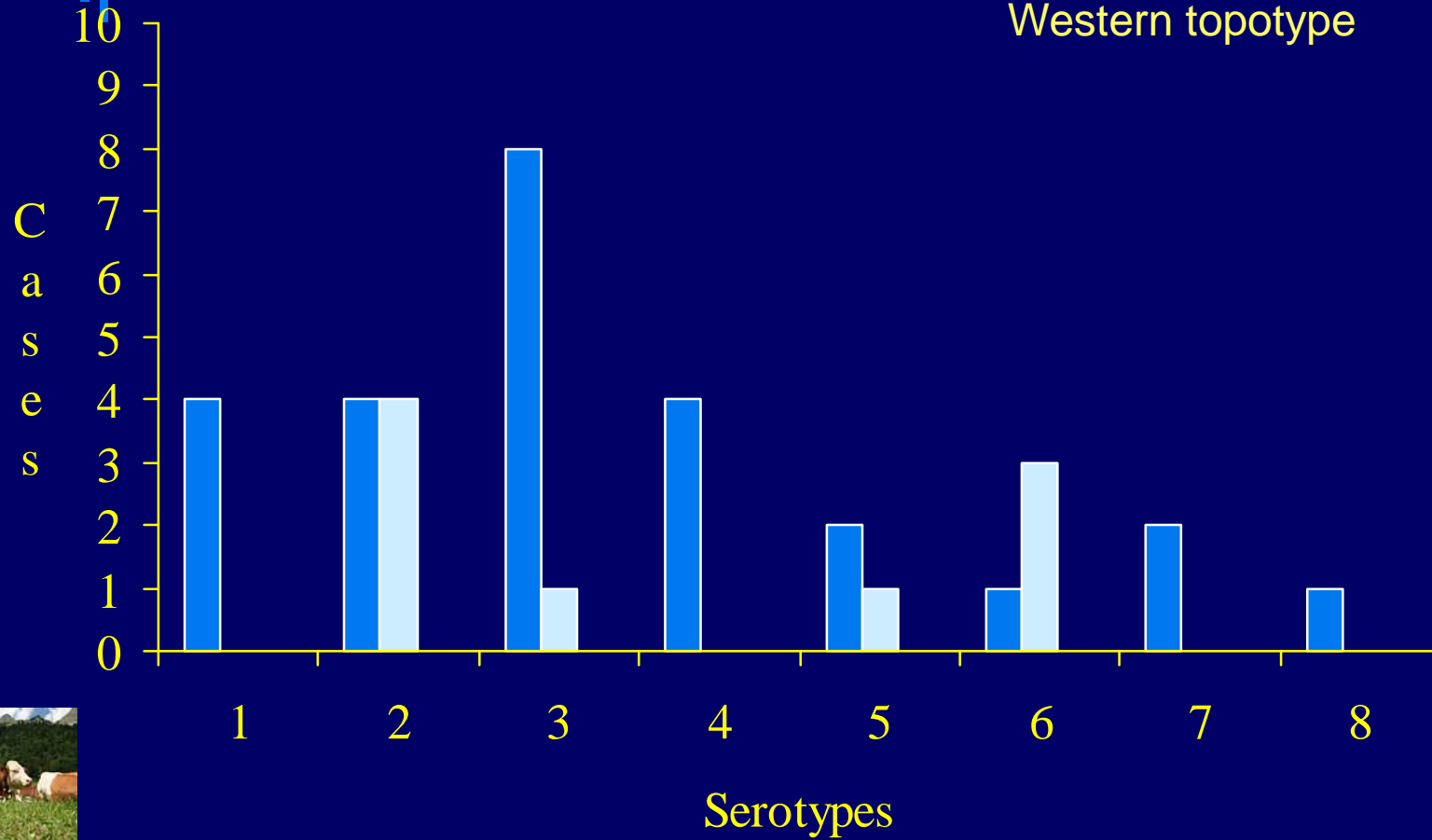


BT SEROTYPES

1996

EHDV serotype 6

Western topotype



■ Ovine ■ Bovine

TWO BOVINES



1. Jan. - W. Cape

11 mths

Febrile, severe salivation

Distal oesophagus
dilated.

Spleen & L. Node

Recovered. BTV 6

BTV 12, 15, 22 cattle strains

Related to EHD

2. March - University

2 yrs

Ruminal atony

Vomition

Severe oesophageal
dilation

Edta blood

Recovered BTV 16

LESIONS

Dysphagia

1. Extensive muscle necrosis
Oesophageal musculature
not
tongue or pharynx

IBARAKI DISEASE

of
cattle



2. Hyaline degeneration
and necrosis of
myocytes of
oesophageal muscles



IBARAKI DISEASE

- Stomatitis and dysphagia in 20-30% cases
- EHDV 2 Eastern topotype
- Japan 1959 also '82 and '87
- Also in Korea 1982
- Seropos. in Indonesia, Taiwan, Australia
- not pathogenic in sheep
- obvious dilatation lumen of oesophagus





THREE ALPACAS

1. - Imported MAY 2008
Stiff gait
Abdominal respiration
2. - Born locally (1 and 2 related)
Febrile 3 days
Unresponsive to treatment - died
3. - Local, unrelated
14 mths. acute death
Foam from nostrils.





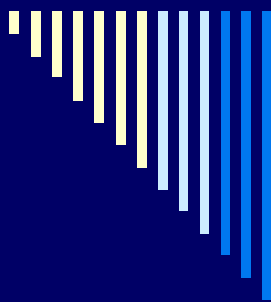
FINDINGS

1. - Received Spleen, lung, l.node
 - Hydrothorax & pericard, lung oedema
 - Necrosis diaphragm, neck & back muscles
 - No isolate

BT/EHDV

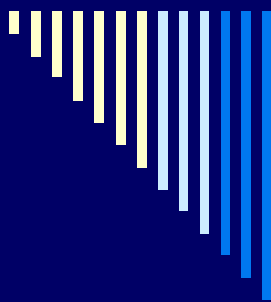
In Retrospect

- What about 3DSS/ephemeral fever
 - fragile
 - fleetingly present
 - muscle necrosis
-

- 
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2.
 - Received spleen, lung, l. node
 - Severe diffuse pseudomembr. necrosis and ulceration of GIT
 - Negative PCR BVDV
 - Negative PCR MCFV
 - Multiple egg deaths
 - Recovered BTV 1
 - French alpaca type 1 (ProMed July report)
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- 
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3.
 - Received chicken embryo (i/v hep. blood)
 - Severe hydrothorax
 - Bacterial pneumonia and enteritis
 - ? Viral pneumonia
 - Multiple egg deaths
 - Recovered BTV and EHDV in consecutive eggs
 - Full genome sequence analysis pending to resolve typing issue
 - Cross neuts. done
-



FINAL THOUGHTS

Endemicity causes a diagnostic dilemma

- Your serology
- Your isolate
- Your positive PCR

= all have limited value

= must have relevance in a clinical context



cause : effect

BTV/EHDV

also

AHSV/EEV

These viruses co-circulate and confuse

THANK YOU

