

CONTAGIOUS BOVINE PLEUROPNEUMONIA (CBPP)

Natna thlentu – *Mycoplasma mycoides* subs. *mycoides* Small colony – bovine biotype (MmmSC)

- *M. mycoides* hi strain chi hrang hrang paruk a awm.
- Mycoplasma te hian cell wall an tlakchham avangin pianphung mumal a nei lova, antibiotic thenkhat penicillin group te hi a haw lo a ni.
- Mycoplasma te hi an thang duang em em a, mahse cholesterol tamna media an mamawh a ni.

Physical leh Chemical action Mycoplasma in a tawrhtheih dan

Mycoplasma mycoides subsp. *mycoides* bacteria te hi boruak ah an damrei thei lova, inkaichhawng tur chuan inhnaihchilh a ngai a. Amaherawhchu, hmun hnawng leh thli tamna hmunah chuan hmun hla deuh hlek atang pawhin a kai theih.

Temperature: 56°C ah minute 60 emaw 60°C ah minute 2 chhungin a chakna a hloh thei.

pH: Thur leh al (acid leh alkaline pH) a ngam lo.

Chemicals/Disinfectants: Mercuric chloride (0.01%/1 minute), phenol (1%/3 minute), leh formaldehyde solution (0.5%/30 seconds)- heng disinfectants kan hman tlanglawn hmang hian a tihlum theih a ni.

Survival: Ram lum deuhah chuan ni 3 chhung pawnah (outside host) an an dam thei a, ram lum lutuk lovah chuan kar 2 chhung pawh an dam thei. Vura dahkhang (frozen) chuan kum 10 chhung pawh an dam thei.

EPIDEMIOLOGY

Natna tuartute (Hosts)

Bawng (*Bos taurus* and *Bos indicus*) in he natna hi an vei ber a. Aisia ramah chuan Lawi (*Bubalus bubalis*), ram sial vulh (*Bison bison*) and yak (*Poephagus grunniens*, formerly *Bos grunniens*) pawn an vei a. Beram leh kel te pawhin natna langchhuak lutuk lovin an vei thei. Sanghawngsei leh ram sial (wild bovids) ten an vei ngai loh avangin natna pudarhtu an ni lem lo bawk.

A natna hrik kai atanga natna lanchhuah inkar hi thla 1-4 emaw a aia rei emaw a ni thei. Experiment hmanga natna an kaitir chawp naah chuan kar 2-3 chhungin natna a langchhuak thei.

Inkaichhawn theih dan

- He natna vei khuh leh hahchhiau avanga a natna hrik boruaka leng vel ran hrisel dangin an hip luh atangin CBPP hi an kai ber.
- He natna hi ran inhnaihchilh ten an inkaichhawng ber a, amaherawhchu hmun hnawng leh thli tamna hmunah chuan meter 200 a hla atang pawhin an kai thei.

- Natna hrik hi chil, zun, ran note tuamtu hamda leh serh atanga tuihnang chhuak ah te an awm thin.
- Bawng puiin a note paiah he natna hi a kaichhawng thei.
- Bawng thenkhat CBPP benvawn vei te hian natna langchhuak lovin he natna hrik hi an lo pai ve reng thei a (kum 2 chung te), chung an natna hrik pai te chu ran hrisel dangah an kaichhawng thin a ni.
- Ran te hian an chettlatna leh phur kual an nihna hmun hrang hrangah an pu darh thin a. A hri leng (outbreak) intanna pawh hetiang vang hi a ni thin.
- Mycoplasma kaina thawmhnaw leh bungbel vel atanga inkaichhawn thu report chu a awm a, amaherawhchu Mycoplasma te environment ah an dam rei thei loh avangin chutianga inkaichhawn hriat tur a awm lo.

Natnahrik awmna/kaichhawn theihna (source) te

CBPP natna hrik hi ran a hri vei te khak, hnap, hnar leh ka atanga an boruak thawk chhuahah an tam hle. Zun atanga inkaichhawn hriat a awm lo. Bawngpa chi a awm thei a, mahse bawngpa chi atanga inkaidarh hriat a ni lo.

A natna thlenna (Occurrence)

CBPP hi Africa rama Sahara chhehvel ram te – Africa ram chhak, thlang, chhim leh ram laili ah te a hluar hle.

DIAGNOSIS

Clinical diagnosis

Bawng puitlingah

- An nat tan tirhin an nguai a, chaw an ei tui lova, khawsik an nei a, chu chu khuh leh awm bawr na leh thaw rangin a zui thin.
- Pneumonia an nei a, thawhah leh thawk harsatna a lo awm a, hemi tiziaawm tur hian an ke hmlam tikak in an ding a, an nghawng an char a, an ka leh pumpui hmangin an thaw hlwi hlwi thin.
- A chuap stethoscope hmanga ngaihthlakin ri hrang hrang – ri hrawih hrawih emaw, innawt ri emaw, ri hek hek emaw a hriat theih a, a awm hnnuai lama khawn rik in a ri a dul.
- CBPP hi benvawn in an vei zui duh hle a, ran te an chhiava in khawsik ser ser an nei zui duh hle.
- Hnathawh luih tir chuan an khuh a ti zual thin.

Bawng note-ah

- Chuap natna an nei lova, ruh chuktuah vung leh na (arthritis) an nei nasa.

- Ran enkawltute tan bawng puitlinga pneumonia leh khuh a lo awm a, bawng note-in ruh chuktuah vung an lo neih bawk chuan CBPP nia ngaih tur a ni.

Tisa a danglamna a thlen dan (Lesions)

- Chuap chhah, sak leh muk, a tuamtu hamda a lo chhah a (marble angin a langchhuak thei).
- Chuap ah tui tling – eng nu deuh phut a awm a, a nasa zualah phei chuan litre 30 lai a tling thei. A rei deuh hnuah tuihnang chu lo khang in khar lian pui a siam thei.

Natna dang CBPP nena ngaihpawlh theih te

Acute form

- Acute bovine pasteurellosis
- Haemorrhagic septicaemia
- East Coast fever (theileriosis)
- Bovine ephemeral fever
- Traumatic pericarditis

Chronic form

- Echinococcosis (hydatid cyst)
- Actinobacillosis
- Abscesses, tuberculosis, bovine farcy

Laboratory Diagnosis

Sample

- Ran damlo atangin – hnar chung swab, chuap thuahna tui leh chuap atanga tui hip chhuah, thisen leh thisen var.
- Ran thi tawh atangin tisa them – chuap, bê, chuap a tui tling leh arthritis nei atangin ruhchuktuaha tui awm.

Procedures

Natna hrik hriathran dan

- Laboratory ah CBPP bacteria that duhna bik media hmanga to tir in ni 10 chung te a duh thin a. Heng bacteria te hi te tak te an ni a, media ah colony 1mm a lian siamin, microscope en chuan “artui kan ro” angin a lang thin.
- Immunological tests (growth inhibition, immunofluorescence or dot immunobinding on a membrane filter [MF-dot] test) hmang pawhin a enfiah theih a ni.
- Polymerase chain reaction (PCR) hmanga enfiah hi a ranga a, a awlsam a, a dik a, a chiang bawk.

Serological tests

- Complement fixation test (CFT), competitive ELISA (OIE prescribed test) leh immunoblotting test (IBT).

PREVENTION AND CONTROL

He natna enkawl dan tur tha ber hi hriat ala ni lova. Antibiotic hmanga enkawl hi recommend a ni lo, a chhan chu – a natna hriatchhuah a ti harsa a, natna benvawn ah a siam avangin a natna thehdarhtu hmanrua ah a siam a, damdawi haw lo *MmmSC* strain bacteria an lo nih theih phah a ni.

Sanitary prophylaxis

- He natna la awm ngai lohna hmunah chuan ran khuahkhirh (quarantine leh movement controls), thisen test, hri kai palh leh a hri kai bul hnaia awm zawng zawng suat vek a tha ber.

Medical prophylaxis

- Hri len tawhna hmunah chuan a hri danna pek (vaccination) a tha ber.
- Tunlaia kan vaccine hman ber chu attenuated *MmmSC* strain a ni.
- Attenuated vaccine te hian a hri a veng tha ber a. Mahse harsatna nasa lutuk lo (khawsik, vung, etc) a thlen ve thin.
- Natna hri len zen zen lohna hmunah chuan vaccine pek hian surveillance a tihbui theih avangin recommend a ni lo.

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