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| Logo AGES | |
| Contagious porcine paralysis (Teschen disease) | |
|  |  |
| 08.05.2024 11:33 Uhr | |

**Contagious
porcine
paralysis
(Teschen
disease)**

**Teschovirus
Encephalomyelitis**

Last
change:
06.05.2024

**Profile**

Contagious
porcine
paralysis
(Teschen's
disease)
is
an
infectious
disease
of
domestic
and
wild
pigs
caused
by
highly
virulent
strains
of
porcine
teschovirus
serotype
1
(PTV-1,
Picornaviridae),
although
mild
forms
of
the
disease
can
also
be
caused
by
other
PTV
serotypes
such
as
PTV-2,
-3,
-4,
-5,
-6,
-9
and
-10.

**Occurrence**

Infections
with
virulent
strains
of
porcine
teschovirus
(PTV-1)
have
become
very
rare
nowadays
(only
on
the
islands
of
Haiti,
Madagascar
and
La
Réunion).
They
no
longer
occur
in
Western
Europe,
where
predominantly
mild
strains
and
courses
prevail.

**Host
animals**

Domestic
and
wild
boars

**Infection
route**

Directly
from
animal
to
animal
(faecal-oral)
or
indirectly
via
contaminated
infection
carriers
(objects,
contaminated
pig
feed,
etc.).

**Incubation
time**

1
to
2
days

**Symptoms**

Severe
forms
of
the
disease
in
domestic
pigs
are
initially
characterised
by
high
fever,
exhaustion,
inappetence
and
ataxia
(especially
weakness
of
the
hindquarters)
and
then
usually
progress
to
encephalomyelitis,
which
is
often
associated
with
signs
of
paralysis
(paraplegia
or
quadriplegia).
Diarrhea
may
occur
before
the
onset
of
central
nervous
disturbances.
The
disease
is
fatal
in
20-100%
of
cases,
with
death
occurring
3-4
days
after
the
onset
of
the
first
symptoms.
The
subacute
forms
("Talfan
disease")
with
low
mortality
are
common
and
symptoms
such
as
fever,
ataxia,
and
afterhand
paralysis
also
occur;
however,
the
paralysis
symptoms
are
usually
reversible.
In
addition
to
these
two
clinical
pictures,
inapparent
forms
have
also
been
described.

**Therapy**

There
is
no
therapy

**Prevention**

Contagious
porcine
paralysis
is
a
notifiable
animal
disease
according
to
the
Animal
Diseases
Act.
Vaccination
is
not
permitted
in
Austria.
Inactivated
and
attenuated
vaccines
exist,
but
are
not
used
in
the
EU
area
either.

**Situation
in
Austria**

In
Austria,
there
is
an
obligation
to
report
infectious
porcine
paralysis
(infection
with
porcine
teschovirus
1
(PTV
1))
in
accordance
with
Section
16
of
the
Animal
Diseases
Act
(Tierseuchengesetz
-
TSG).
Suspicion
of
Teschovirus
encephalitis
must
be
reported
to
the
official
veterinarian.
In
the
event
of
corresponding
clinical
symptoms
and
the
diagnostic
detection
of
PTV-1,
the
official
veterinarian
will
decide
whether
lockdown/culling
measures
are
necessary
-
depending
on
the
virulence/course
of
the
disease.
In
the
past
10
years,
only
rare
mild
CNS
forms
caused
by
other
Teschovirus
strains
and/or
porcine
sapelovirus
1
(species
Sapelovirus
A)
or
porcine
enteroviruses
G1
and
G2
(species
Enterovirus
G)
have
been
detected.

**Technical
information**

Synonyms:
Teschovirus
Encephalomyelitis,
Teschen
Disease,
Teschen/Talfan
Disease,
Polioencephalomyelitis
enzootica
suum,
Porcine
Enterovirus
Encephalomyelitis,
Benign
Enzootic
Paresis
Teschen
disease
was
first
identified
in
the
Czech
town
of
Teschen
in
1929.
In
1957,
a
PTV-1
virus
with
a
milder
clinical
form
was
detected
in
Talfan
(Wales).

Porcine
teschovirus
A
is
an
RNA
virus
belonging
to
the
genus
Teschovirus
A
of
the
family
Picornaviridae.
Previously,
teschoviruses
were
classified
in
the
enterovirus
group
with
a
total
of
13
serotypes.
Based
on
cytopathic
effect
(CPE),
replication
characteristics
in
different
host
cell
lines,
serological
assays
and
sequence
data,
the
porcine
enteroviruses
(PEV)
have
been
continuously
reclassified
and
are
currently
divided
into
3
groups:
Teschovirus
A
(formerly
Porcine
Teschovirus),
Sapelovirus
A
(formerly
Porcine
Enterovirus
A,
PEV-8),
and
Enterovirus
G
(formerly
Porcine
Enterovirus
B,
PEV-9
and
PEV-10).

Differential
diagnoses
include
infections
with
Sapelovirus
A
(PSV-A),
Porcine
Enterovirus
G
(PEV-G),
Porcine
Parvovirus,
PRRSV,
Aujeszky's
disease,
European
swine
fever,
African
swine
fever,
colienterotoxemia,
selenium
poisoning
or
other
intoxications,
spinal
canal
abscesses,
trauma,
bacterial
meningo(encephalitides).

**Transmission**

The
first
replication
occurs
in
the
tonsils
as
well
as
in
the
intestinal
epithelium
(especially
ileum,
colon).
The
enteric
phase
is
not
clinically
significant
and
is
not
accompanied
by
morphological
changes.
The
enteric
phase
is
followed
by
viremia
and
invasion
of
the
CNS
with
the
typical
picture
of
non-pituitary
(encephalo)myelitis
(inflammation
of
the
brain
or
spinal
cord).
During
the
viraemic
phase,
some
serotypes
show
affinity
for
the
uterus.
Colonization
of
uterine
tissue
with
the
pathogens
can
lead
to
intrauterine
fetal
death.

Infection
is
most
common
in
weanling
piglets
due
to
the
decline
in
maternal
immunity
as
well
as
the
common
co-location
of
animals
of
different
origins
at
this
age.
After
24
hours
the
virus
is
detectable
in
large
quantities
in
the
tonsils
and
cervical
lymph
nodes,
after
48
hours
in
the
mesenteric
lymph
nodes
and
in
the
faeces.
Co-infections
of
teschoviruses
with
other
Picornaviridae,
e.g.
PSV-1
and
PEV-G,
occur.

**Symptomatology**

Teschen
disease
(severe,
fatal/lethal
form)

* Pathogen:
  virulent
  strains
  of
  porcine
  teschovirus
  1
  (PTV
  1)
* Occurrence:
  originally
  in
  Europe,
  sporadically
  Africa,
  China,
  Haiti,
  Brazil,
  Canada
* High
  morbidity
  (individuals
  of
  a
  population),
  high
  mortality
  (up
  to
  90
  %),
  in
  all
  age
  groups
* clinical
  signs:
  convulsions,
  opisthotonus,
  nystagmus,
  coma,
  death
  after
  3-4
  days,
  survivors
  show
  residual
  paralysis

Talfan
disease
(mild
forms
are
predominant
today)

* Pathogen:
  less
  virulent
  teschovirus
  strains,
  including
  PTV-1
* Occurrence:
  Occurs
  worldwide
  and
  more
  frequently
  than
  Teschen
  disease
* Paresis,
  ataxias,
  rarely
  paralysis,
  often
  asymptomatic,
  95
  %
  of
  animals
  exposed
  to
  infection
  develop
  latent
  or
  inapparent
  infections

**Diagnostics**

Suitable
sample
materials
are

* Blood
  (EDTA/serum)
* Brain
  incl.
  spinal
  cord
  and
  trigeminal
  ganglion
* organs

Detection
of
PTV
from
the
above
materials
is
possible
using
the
following
methods:

* PTV
  real-time
  RT-PCR,
  conventional
  RT-PCR
  (if
  necessary
  supported
  by
  sequencing)
* Virus
  isolation
  in
  cell
  culture
* Histopathological
  examination

The
clinical
symptoms
only
allow
a
tentative
diagnosis.
Suspicion
of
teschovirus
encephalitis
must
be
reported
to
the
official
veterinarian.
A
definitive
diagnosis
can
only
be
made
taking
into
account
the
clinical
symptoms
and
epidemiology,
the
pathomorphological
changes
(non-purulent
(encephalo)myelitis)
and
successful
detection
of
the
pathogen
(detection
of
PTV-1).

If
other
teschovirus
or
enterovirus
serotypes
are
detected,
these
are
mild
forms
of
the
disease
with
no
need
for
further
action,
as
the
disease
cannot
be
treated.
Severely
affected
animals
should
be
euthanised
if
the
disease
progresses,
but
in
many
cases
the
disease
heals
itself.

**Contact**

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