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| --- | --- |
| Logo AGES | |
| Chicken typhus, Pullorum disease | |
|  |  |
| 15.01.2025 11:59 Uhr | |

**Chicken
typhus,
Pullorum
disease**

**Salmonella
gallinarum,
Salmonella
pullorum**

Last
change:
10.10.2023

**Profile**

Chicken
typhus
and
pullorum
disease,
respectively,
are
poultry
diseases
caused
by
bacteria
of
the
species
Salmonella*(Salmonella
gallinarum*
causes
chicken
typhus,
*Salmonella
pull*
orum
causes
pullorum
disease).
These
Salmonella
show
high
specificity
for
poultry
and
waterfowl
and
usually
do
not
cause
symptoms
in
mammals.
Infection
with
*S.
gallinarum*
or
*S.
pullorum*
can
cause
high
losses
in
chickens,
turkeys,
and
other
avian
species.

**Occurrence**

Worldwide

**Host
animals**

Poultry,
other
bird
species

**Infection
route**

The
pathogens
are
introduced
into
flocks
by
infected
animals
and
animate
and
inanimate
vectors
(feed,
water,
objects
such
as
transport
crates,
etc.).
The
transmission
of
the
pathogens
from
infected
parents
via
the
hatching
egg
is
of
great
importance
for
the
spread
of
the
infection
and
leads
to
white
chick
dysentery
in
chicks
(pullorum
disease).

**Incubation
period**

Chicks
infected
in
the
brooder
become
ill
after
an
incubation
period
of
2-5
days

**Symptomatology**

Decreased
hatching
rates,
hatching
of
weak
chicks,
chalky
white
diarrhea
with
a
mortality
of
more
than
50%
and
movement
disorders,
joint
inflammations,
lameness,
cramps,
weeping,
poor
plumage
in
surviving
chicks.
Older
birds,
which
may
be
latently
infected,
show
nonspecific
symptomatology
such
as
laying
performance
decline.

**Therapy**

The
basis
of
control
is
the
detection
and
eradication
of
salmonella
carriers

**Prevention**

Establishment
and
maintenance
of
pathogen-free
stocks

**Situation
in
Austria**

Consistent
control
has
reduced
the
incidence
of
chicken
typhus
and
pullorum
in
Austria,
and
only
isolated
cases
have
occurred
in
recent
years.
The
occurrence
of
*Salmonella
gallinarum*
and/or
*Salmonella
pullorum*
in
poultry
is
notifiable
in
Austria
according
to
the
Poultry
Hygiene
Ordinance
2007.

**Specialized
information**

Chicken
typhus
and
pullorum
disease
are
caused
by
Salmonella,
Gram-negative,
as
opposed
to
zoonotic
Salmonella
**non-motile**
rod
bacteria.
Susceptible
birds
are
mainly
poultry,
but
infections
with
high
losses
have
been
described
in
many
different
bird
species
(turkey,
guinea
fowl,
quail,
pheasant,
sparrow,
and
parrots).
In
**pullorum
disease**,
caused
by
*Salmonella
gallinarum*
biovar
*pullorum*,
vertical
transmission
from
infected
parents
to
hatching
eggs
results
in
reduced
hatching
rates
and
hatching
of
weakly
alive
chicks.
Yolk
sac
regression
is
delayed,
and
acute
septicemic
infections
occur
in
chicks
up
to
3
to
6
weeks
of
age.
Increased
urate
excretion
led
to
the
disease
name
"white
chick
dysentery"
with
high
mortality
of
>50%.
**Chicken
typhus***(Salmonella
gallinarum*
biovar
*gallinarum*)
causes
nonspecific
symptoms
in
older
chickens,
such
as
decreased
laying
performance,
decreased
feed
intake,
and
pale
combs.
Pathology
shows
enlarged
liver
and
spleen
with
pale
necrotic
foci,
possibly
with
fibrinous
deposits
on
the
seroses.
The
infection
may
be
peracute
in
laying
hens.

**Diagnostic**

Serological
tests
are
suitable
for
herd
testing,
but
they
may
cross-react
with
other
salmonellae.
Bacteriological
isolation
and
identification
of
*S.
Gallinarum*
and
*S.
Pullorum*
from
organ
samples
(liver,
spleen,
yolk
sac,
caecum)
are
necessary
for
definitive
clarification.
Bacteriological
examination
is
performed
by
enrichment
or
organ
direct
smears
and
incubation
of
the
culture
media
at
37
°C
or
42
°C
for
24-48
hours.
Differentiation
between
the
two
Salmonella
biovars
is
done
by
testing
for
fermentation
of
ornithine*(S.
Gallinarum*
negative,
*S.
Pullorum*
positive).

**Contact**

**Institute
for
Veterinary
Medicine
Mödling**

Institut
für
veterinärmedizinische
Untersuchungen
Mödling

E-Mail:vetmed.moedling@ages.at

Phone:[+43
50
555-38112](tel:+43%2050%20555-38112)

Address:
Robert
Koch-Gasse
17  
2340
Mödling