

# Canine Ehrlichiose

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Die **Ehrlichiose** der Hunde (auch *Tropische Canine Panzytopenie*, „Zeckenfieber“) ist eine akute bis chronische Infektionskrankheit, die durch Rickettsien verursacht wird. Die klassische, durch *Ehrlichia canis* hervorgerufene Ehrlichiose ist im Mittelmeerraum endemisch, so dass Hunde vor allem bei Urlaubsreisen in diese Region gefährdet sind.

Die durch *Anaplasma phagocytophilum* hervorgerufene „Granulozytäre Ehrlichiose“ wird nach neuere Systematik als Canine Anaplasmose bezeichnet.

Die Erreger befallen die weißen Blutkörperchen (v. a. Monozyten und Lymphozyten).

## Erreger

Der Erreger der klassischen Ehrlichiose (Mono- und lymphozytäre Ehrlichiose) ist *Ehrlichia canis*, ein obligat intrazelluläres Bakterium. Vor allem die Braune Hundezecke (*Rhipicephalus sanguineus*) ist Überträger und Reservoir für *E. canis*. Die Zecken können den Erreger bis zu fünf Monate beherbergen. Der Erreger ist vermutlich ein primärer Zeckenparasit und befällt Hämozyten, Mitteldarmzellen und Speicheldrüsenzellen der Zecke. Hunde sind nur sekundäre Wirte und werden beim Saugakt über den Zeckenspeichel infiziert.<sup>[1]</sup> Eine Ehrlichiose kann durch weitere, sogenannte Sekundärinfektionen, z. B. mit Babesien und Hämobartonellose verkompliziert werden. Infektionen des Menschen durch den Erreger kommen vor, allerdings vermutlich nur durch Übertragung durch Zecken, eine Hund-Mensch-Übertragung ist unwahrscheinlich. Inwieweit durch die Ausbreitung dieser Zecke auch auf Deutschland, autochthone Infektionen vorkommen, ist bislang nicht vollständig gesichert. Sie sind aber keineswegs auszuschließen, so dass die Ehrlichiose nicht mehr als typische „Reisekrankheit“ angesehen werden kann.<sup>[2]</sup>

## Symptome

Die Symptome sind meist unspezifisch und sehr mannigfaltig. Alle Hunderassen, vor allem Welpen, sind betroffen.

Nach einer Inkubationszeit von knapp drei Wochen zeigen die Tiere in der Akutphase ständig wiederkehrendes Fieber, Nasenbluten (Epistaxis), schleimig-eitrigen Nasenausfluss, Erbrechen, Abgeschlagenheit, Atemnot, Schwellung der Lymphknoten (generalisierte Lymphadenopathie) und eventuell zentralnervöse Störungen wie Muskelzucken und Überempfindlichkeit. Nach einer symptomfreien Phase im zweiten und dritten Monat der Infektion beginnt das chronische Stadium mit Blutungen und Ödemen, Abgeschlagenheit, Abmagerung, Blutarmut (Anämie), Milzvergrößerung (Splenomegalie), Gelenkerkrankungen (Polyarthritis), sowie Meningoenzephalitis mit Krämpfen und Paralysen. Das klassische Bild mit stark erhöhter Blutungsneigung tritt jedoch nur etwa in einem Viertel der Fälle auf.<sup>[1]</sup>

## Pathologie

Pathologisch-anatomisch finden sich zahlreiche kleine Blutungen (Petechien, Ekchymosen) an der Oberfläche innerer Organe. Leber und Milz ist zumeist vergrößert. Die Lymphknoten sind vergrößert und bräunlich verfärbt. Pathohistologisch zeigen Leber und Milz eine lymphoretikuläre Hyperplasie. In der Niere zeigen sich eine Vaskulitis und Plasmazellinfiltrate. In der Lunge kann eine interstitielle Pneumonie auftreten.<sup>[1]</sup>

## Diagnose

Klinisch ist die Diagnose nicht zu stellen. Differentialdiagnostisch kommen andere Infektionskrankheiten (Babesiose, Hämobartonellose), die auch als Sekundärinfektionen mit einer Ehrlichiose vergesellschaftet sein können, sowie eine immunologisch bedingte Thrombozytopenie in Frage.

Labordiagnostisch können herangezogen werden:

- Erregernachweis aus dem Blut oder in Proben von Lunge und anderen Organen möglich über eine Giemsa-Färbung und Immunfluoreszenztests. Die Monozyten und Lymphozyten zeigen dabei eine typische Morula-Struktur, in der Giemsa-Färbung allerdings nicht sehr zahlreich. Der optimale Nachweis ist 13 Tage nach der Infektion möglich. Die charakteristischen Morulae kommen bei *Ehrlichia ewingii*-Infekten in neutrophilen und eosinophilen Granulozyten vor.
- Thrombozytopenie, Hyperglobulinämie, Anämie und Neutropenie können die Diagnose unterstützen.
- Über PCR und In situ-Hybridisierung kann *E. canis* in Geweben nachgewiesen werden.
- Antikörperrnachweis im Serum: Ein Titer ist 7–21 nach der Infektion und bis zu 16 Monate nach der Elimination des Erregers nachweisbar.<sup>[1]</sup> Ein Titer von 1:10 oder höher ist beweisend. In der Frühphase der Infektion kann er negativ sein. Zudem müssen mögliche Kreuzreaktionen, z. B. mit *Anaplasma phagocytophilum* in Betracht gezogen werden.<sup>[2]</sup>

## Behandlung

Die Therapie erfolgt durch Antibiotika wie Doxycyclin, Tetracyclin und Oxytetracyclin über zwei Wochen. Seropositive Tiere sollten isoliert werden.

Eine Verhütung kann durch regelmäßige Kontrolle und sofortige Entfernung von Zecken bzw. durch den Einsatz von zeckenabwehrenden Wirkstoffen (z. B. Permethrin) erfolgen.

## Einzelnachweise

[1] Carlheinz Wiedemann: Die canine Ehrlichiose, eine eingeschleppte Infektion. In: Kleintierpraxis 37 (1992), S. 319–325.

[2] J. Jensen et al.: Vorkommen von *Ehrlichia canis* bei Hunden in Deutschland? Tierärztl. Praxis 35 (2007), S. 123-128

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