

Detection of *Anaplasma* spp. and *Ehrlichia* spp. in dogs from a veterinary teaching hospital in Italy: a retrospective study 2012-2020

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Online Resource 4 Clinical signs of dogs tested positive for *Anaplasma* spp. and *Ehrlichia* spp. infection

| Clinical signs | N | Positives | Positive to <i>A. ph</i> | Positive to <i>A. pl</i> | Positive to <i>E. ca</i> | Positive to <i>A. ph</i> and <i>E. ca</i> | P value |
|-----------------------------|----|------------|--------------------------|--------------------------|--------------------------|---|---------|
| Pale mucous membranes | 66 | 15 (22.7%) | 4 | 0 | 5 | 6 | 0.6364 |
| Anorexia | 66 | 33 (50%) | 12 | 0 | 10 | 11 | 0.5920 |
| Lymphadenomegaly | 66 | 23 (34.8%) | 6 | 0 | 10 | 7 | 0.5922 |
| Cough | 66 | 6 (9.1%) | 3 | 0 | 1 | 2 | 0.5288 |
| Depression | 66 | 25 (37.9%) | 9 | 0 | 9 | 7 | 0.9242 |
| Joint pain/swelling | 66 | 14 (21.2%) | 6 | 0 | 3 | 5 | 0.4179 |
| Neurological signs | 66 | 2 (3.0%) | 0 | 0 | 1 | 1 | 0.5895 |
| Ocular signs | 66 | 3 (4.5%) | 0 | 0 | 2 | 1 | 0.3964 |
| Nasal discharge | 66 | 2 (3.0%) | 0 | 0 | 1 | 1 | 0.5895 |
| Melena | 66 | 6 (9.1%) | 1 | 0 | 3 | 2 | 0.6352 |
| Dyspnoea | 66 | 4 (6.1%) | 2 | 0 | 1 | 1 | 0.7613 |
| Presence of ticks | 66 | 10 (15.2%) | 3 | 0 | 5 | 2 | 0.5901 |
| Fever* | 66 | 28 (42.4%) | 11 | 0 | 9 | 8 | 0.6692 |
| PU/PD | 66 | 13 (19.7%) | 6 | 0 | 3 | 4 | 0.4526 |
| Petechiae | 66 | 3 (4.5%) | 0 | 0 | 1 | 2 | 0.2972 |
| Haematuria | 66 | 3 (4.5%) | 1 | 0 | 1 | 1 | 0.9947 |
| Epistaxis | 66 | 2 (3.0%) | 1 | 0 | 0 | 1 | 0.5527 |
| Vomit | 66 | 10 (15.2%) | 3 | 0 | 3 | 4 | 0.7648 |
| Skin lesions | 66 | 3 (4.5%) | 0 | 0 | 1 | 2 | 0.2972 |
| Diarrhoea | 66 | 10 (15.2%) | 3 | 0 | 4 | 3 | 0.9596 |
| Weight loss | 66 | 11 (16.7%) | 6 | 0 | 3 | 2 | 0.2564 |
| Abdominal pain | 66 | 6 (9.1%) | 2 | 0 | 2 | 2 | 0.9818 |
| Congestive mucous membranes | 66 | 2 (3.0%) | 0 | 0 | 2 | 0 | 0.1645 |

A. ph: *Anaplasma phagocytophilum*; *A. pl*: *Anaplasma platys*; *E. ca*: *Ehrlichia canis*; N: number of dogs for which the data was available; PU/PD: polyuria/polydipsia

* Rectal temperature higher than 39.2° C (Miller JB (2014) Hyperthermia and fever. In: Silverstein DC, Hopper K (eds) Small Animal Critical Care Medicine, 2nd edn. Elsevier, St. Louis, pp. 55-59).