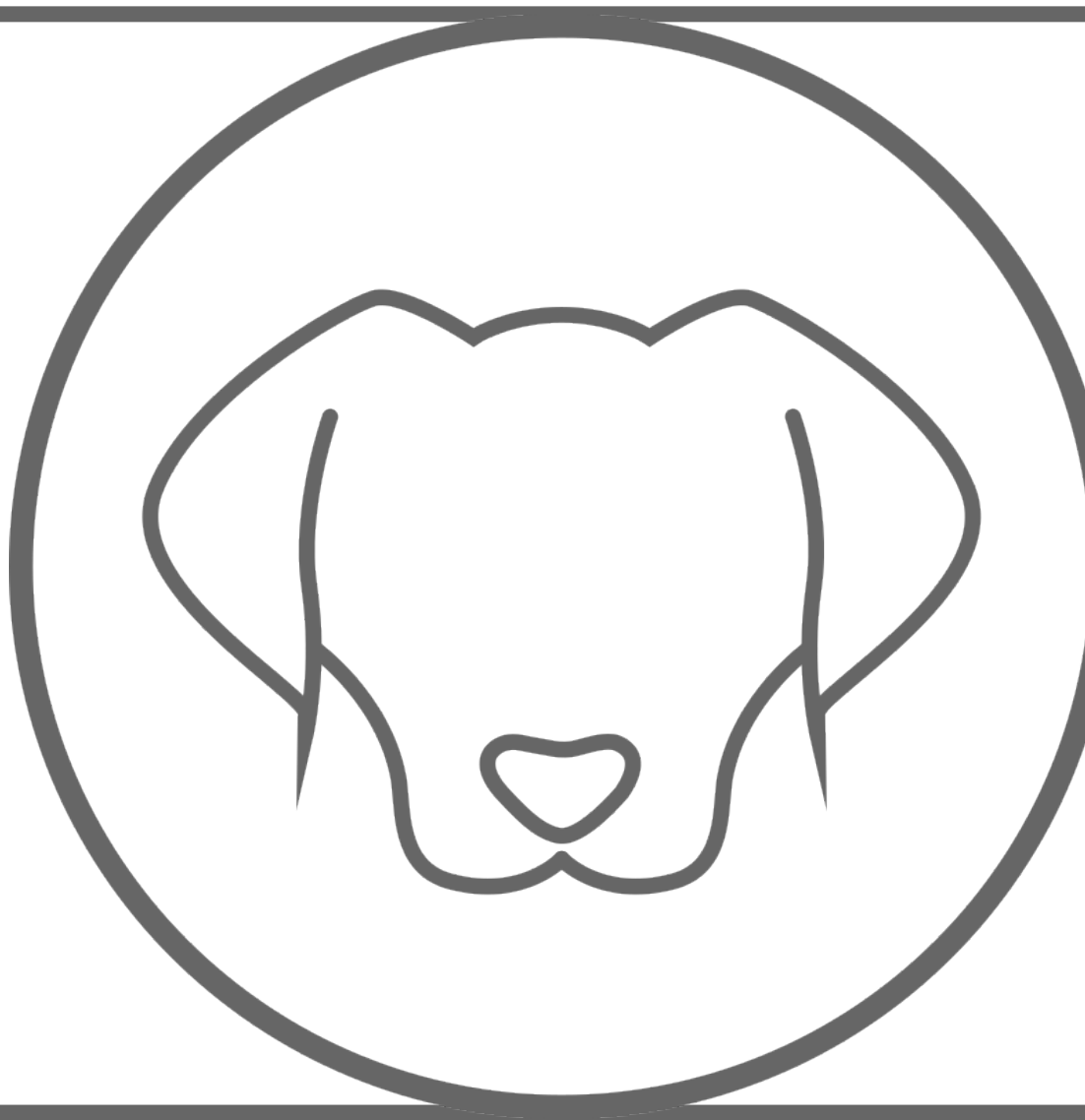




ANTIMICROBIAL SUSCEPTIBILITY of ANAEROBIC BACTERIA isolated from DOGS with ORAL DISORDERS



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Objectives

The objective of this study was to assess the antimicrobial susceptibility of oral bacteria isolated from dogs with stomatitis.

Samples

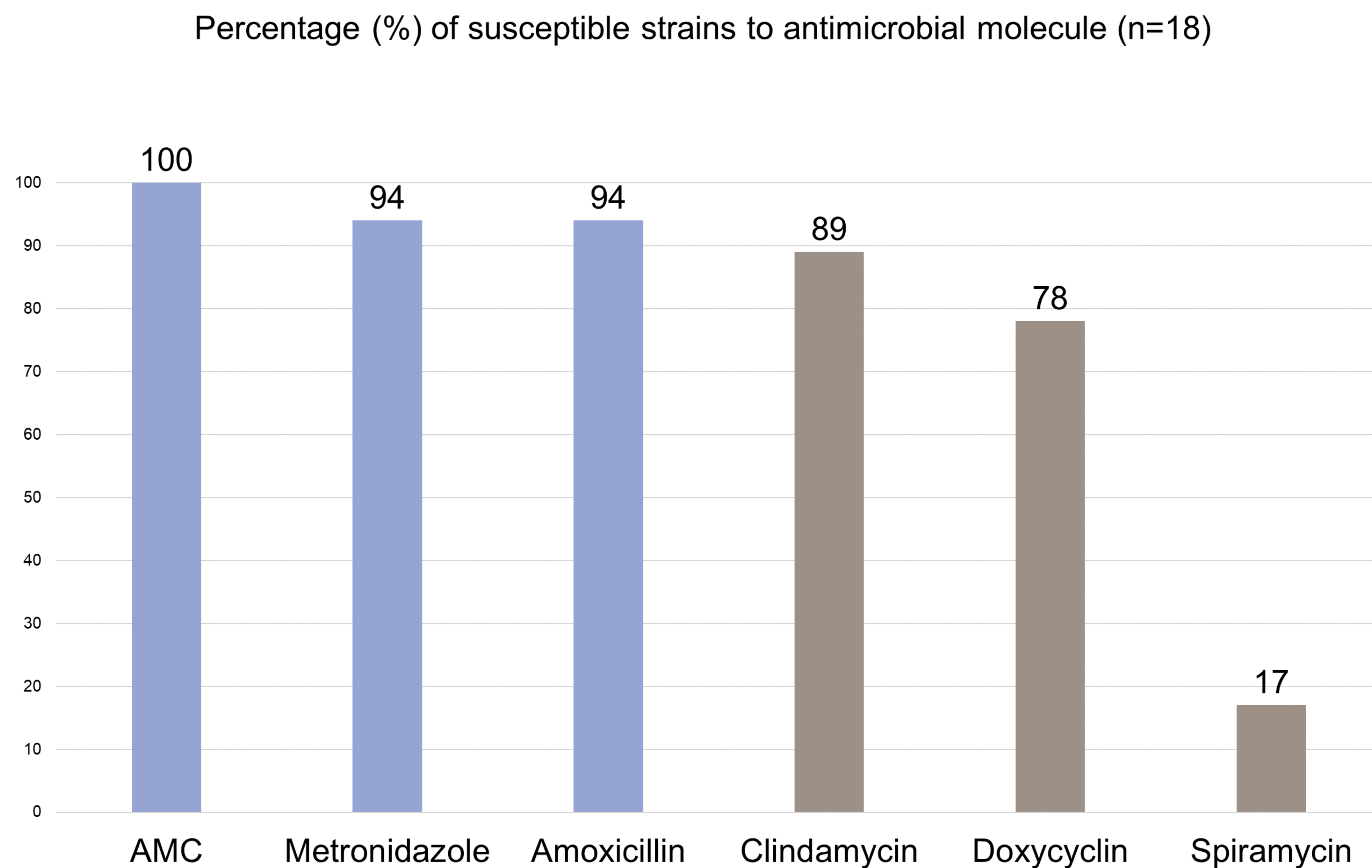
Oral bacterial strains were collected by swabs from dental plaque on dogs displaying stomatitis, in several European countries. Eighteen Gram-negative anaerobic isolates were identified (3 strains of *Bacteroides pyogenes*, 3 strains of *Porphyromonas sp.*, 12 strains of *Prevotella sp.* including *heparinolytica* and *intermedia*). Metronidazole, Spiramycin, Amoxicillin, Doxycyclin, Clindamycin, Amoxicillin-Clavulanic Acid (AMC) and Spiramycin-Metronidazole association were tested.

Procedures

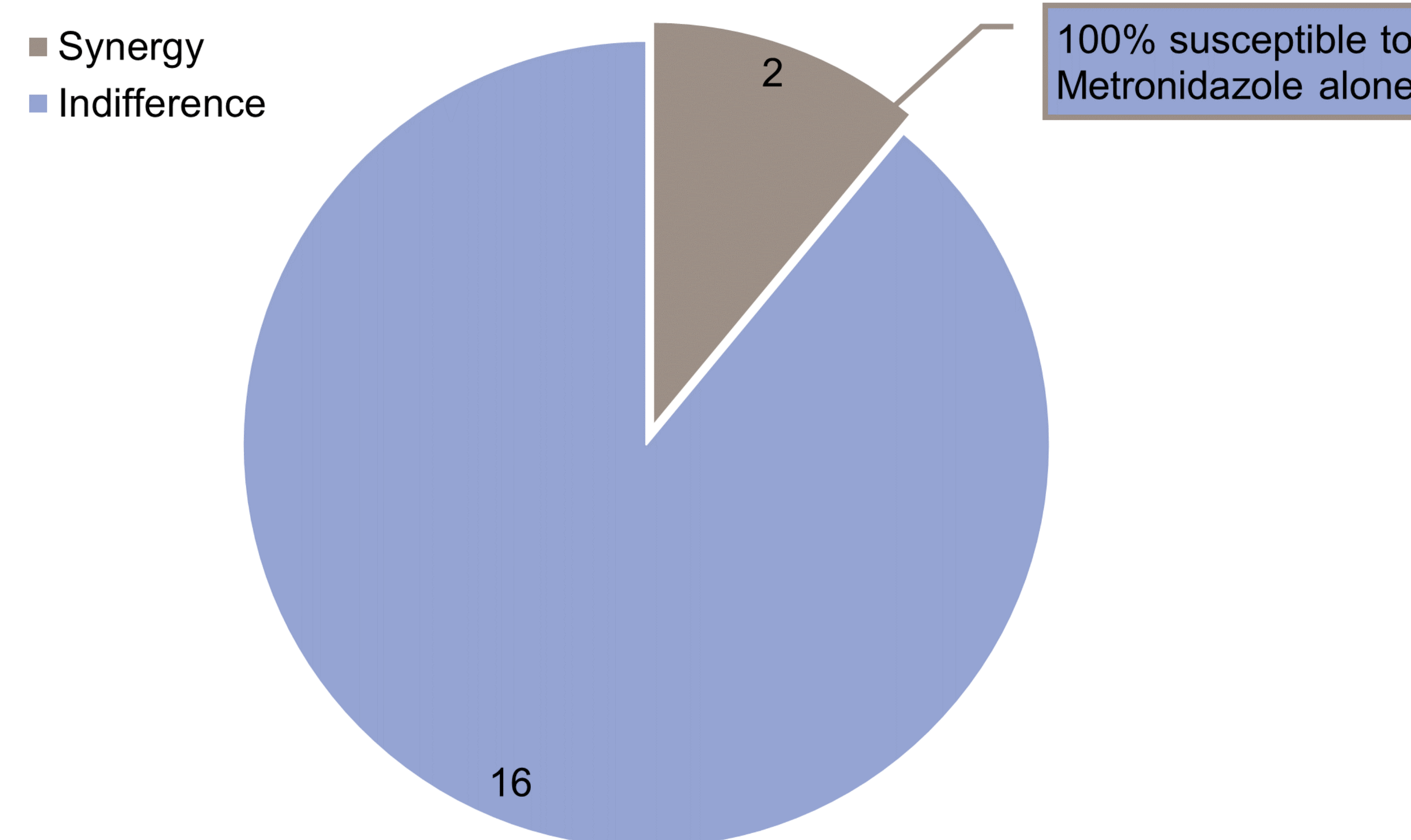
In a French reference laboratory, Minimal Inhibitory Concentration (MIC) values were determined using standardized methodology described in the Methods for Antimicrobial Susceptibility Testing of Anaerobic Bacteria. The Fractional Inhibitory Concentration (FIC) index was calculated to evaluate the Spiramycin-Metronidazole association (ratio Spiramycin/Metronidazole = 1/0.532).

Results

The proportion of susceptible strains reached over 90% for AMC, Metronidazole and Amoxicillin. Spiramycin revealed a negligible proportion of susceptible strains. The susceptibility level of bacteria was good for Clindamycin and at a lesser extent, intermediate for Doxycyclin. The FIC index indicated no synergy in the association of Spiramycin-Metronidazole, except for 2 strains also susceptible to Metronidazole alone.



Spiramycin - Metronidazole association (ratio 1:0.532) against oral anaerobic bacteria (n=18)



Conclusion

This *in vitro* study confirmed the **high susceptibility levels** ($\geq 90\%$) to **Metronidazole, Amoxicillin and AMC** of anaerobic bacteria involved in **canine oral disorders**.

The results highlighted the absence of benefit of Spiramycin, alone or in association with Metronidazole.

Due to its narrower spectrum and good oral diffusion, **Metronidazole remains** the most **appropriate antimicrobial** to target **anaerobic oral bacteria**.



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