Antimicrobial prescribing for canine pyoderma in UK primary-care practices

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Background:

Concern has been raised regarding the potential contributions of veterinary antimicrobial use to increasing levels of resistance in bacteria critically important to human health[1]. Canine pyoderma is a frequent, often recurrent diagnosis in pet dogs, usually attributable to secondary bacterial infection of the skin[2]. Antimicrobials are recommended for lesion resolution[3,4].

Aims:

• To estimate pyoderma prevalence in a UK vet-visiting canine population.

• To describe case characteristics & treatment prescribed in a large number of dogs diagnosed with pyoderma in UK primary-care practice.

Methods:

Electronic patient record (EPR) data routinely collected in 2010 by UK primary-care veterinary clinics participating in VetCompass[5] were used to identify dogs diagnosed with pyoderma.

Patient & prescribing data (one pyoderma episode per dog) were extracted. Additional case data were reviewed in a subset randomly selected for case validation.

Results:

Of 54,600 dogs presented to 73 participating practices in 2010, 683 (**1.3%**) had at least 1 recorded pyoderma diagnosis.

Superficial pyoderma was recorded most frequently (**Table 1**):

Recorded pyoderma type	Number of dogs	% of 90 dogs reviewed in detail
Surface	2	2.2
Superficial	37	41.1
Deep	6	6.7
Mixed (deep + other)	5	5.6
Unclear, ambiguous or absent clinical description	*40*	*44.4*
Total	**90**	**100**

Table 1: depth of pyoderma lesions in the 90 episodes reviewed in detail
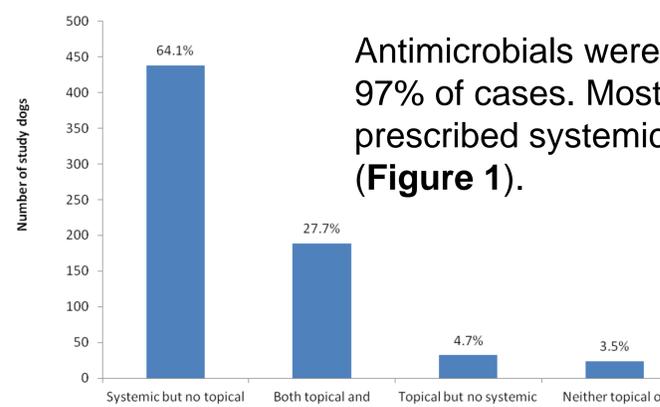
Antimicrobials were dispensed in 97% of cases. Most dogs were prescribed systemic therapy (92%) (**Figure 1**).

Figure 1: Antimicrobial formulations initially prescribed within 24 hours of diagnosis in UK canine pyoderma cases
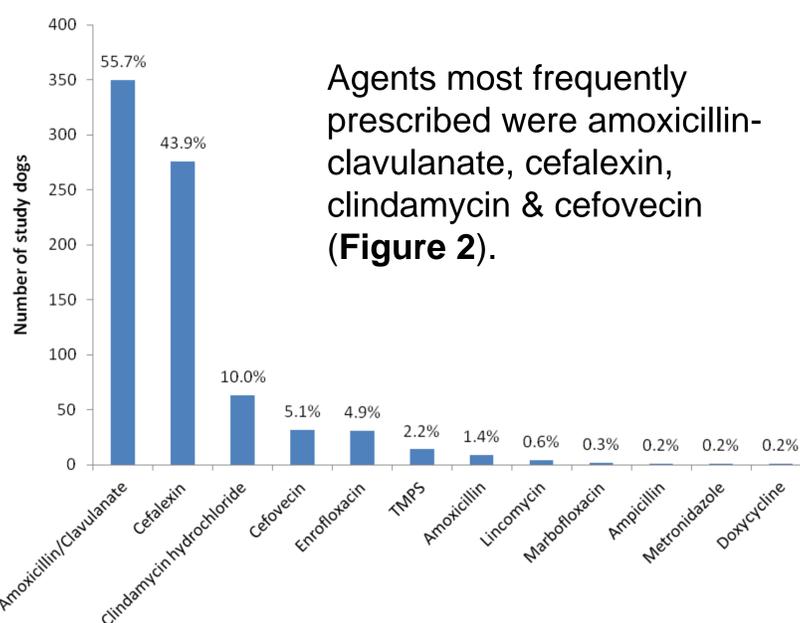
Agents most frequently prescribed were amoxicillin-clavulanate, cefalexin, clindamycin & cefovecin (**Figure 2**).

Figure 2: Systemic antimicrobial agents initially prescribed or administered within 24 hours of diagnosis in UK canine pyoderma cases
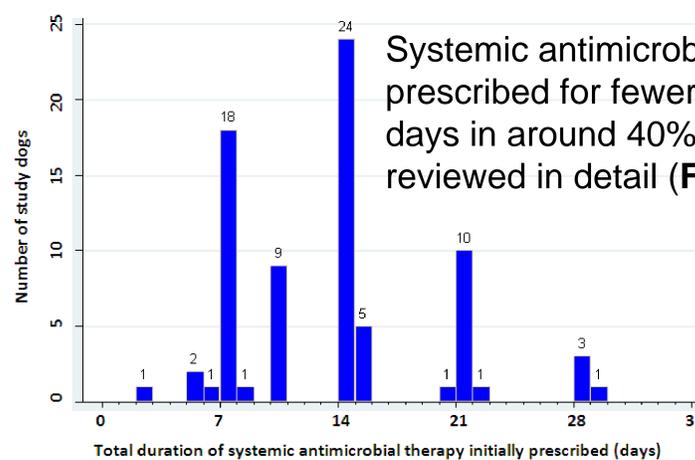
Systemic antimicrobials were prescribed for fewer than 14 days in around 40% of cases reviewed in detail (**Figure 3**).

Figure 3: Total estimated duration of treatment with the systemic antimicrobial agent initially selected

Prescribed daily doses were below minimum manufacturers recommended daily dose in 26% of 43 dogs with sufficient information for dose evaluation.

Conclusions:

• Antimicrobial prescribing behaviour for treatment of canine pyoderma was variable but frequently appeared inconsistent with current recommendations for clinically effective but prudent use[3,4,6].
• Use of clinical data from primary practice EPRs can provide valuable insight into common clinical conditions and associated prescribing.

References
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