and ceramides; the IL-8 and TSLP release is increased. Treatment with A97614A1 allowed stressed RHE to recover normal morphology, impermeability, TEWL, IL-8 and TSLP amounts, and close to normal amounts of NMFs and ceramides.

STATEMENT (CONCLUSIONS)

The ingredient A97614A1 was shown to have beneficial effects on the mechanical and immunological skin barrier. These results support the potential interest of incorporating it into topical products.

Two case reports of novel cutaneous mycoses in cats in the UK using molecular identification for rapid and accurate diagnosis

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OBJECTIVES

Phaeohyphomycosis and sporotrichosis are saprophytic mycoses affecting humans and animals. Traumatic inoculation results in cutaneous and subcutaneous lesions that can be locally invasive. Traditional culture based methods can be slow and may not sufficiently classify the fungi. Molecular testing however, can achieve a fast definitive identification.

METHODS

Two cats (cat 1–15-year-old male neutered domestic short hair; cat 2–11-year-old female neutered domestic long hair) developed focal suppurative nodular lesions on the dorsal nose. Both cats had been previously diagnosed with diabetes mellitus and were on insulin therapy. There was no response to broad spectrum antibiotics selected following antimicrobial susceptibility tests. Fungal elements were seen on cytology, although initial culture was negative in cat 2. Subsequent isolates were obtained after overnight incubation of fresh discharge on Sabouraud dextrose agar with chloramphenicol. These were submitted for PCR and sequencing of the ribosomal internal transcribed spacers (ITS) with the primers ITS-F and ITS-R.

RESULTS

PCR and sequencing confirmed phaeohyphomycosis with *Exophiala dermatitidis* (cat 1) and sporotrichosis with *Sporothrix pallida* complex (cat 2). Further sequencing of calmodulin and beta-tubulin partial gene sequences confirmed *Sporothrix humicola*.

STATEMENT (CONCLUSIONS)

These are the first reports of *Exophiala dermatitidis* and *Sporothrix humicola* in cats in the UK. The use of molecular methods provided a rapid and definite identification of the fungi. Clinicians and pathologists need to be aware of the emerging use of molecular techniques to achieve rapid and accurate identification of rare fungal microorganisms. This will help reduce unnecessary antibiotic use.

Antimicrobial susceptibility of bacterial isolates from canine wounds in a referral population

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OBJECTIVES

To report the prevalence and antimicrobial susceptibility of bacteria isolated from canine wounds in a referral population.

METHODS

Data was collected from clinical records of dogs with wounds cultured between 01/01/2008 and 01/01/2018. Cases with incomplete clinical information or results were excluded. 1 isolate was included where the same bacteria were isolated from multiple samples in a dog.

RESULTS

392 cases (499 samples) were included. 83.5% of cultures were positive; 54.7% isolated a single organism and 28.8% two or more.

Oral presentations

45.8% of the positive cultures comprised gram-positive isolates only, 31.6% gram-negative only, 15.7% gram-positive and gram-negative, and 3.9% included obligate anaerobic organisms. Other cultures involved unidentified isolates.

The most frequent isolates were: *Staphylococcus pseudintermedius* (27.8%), *E. coli* (18.3%), *Staphylococcus aureus* (6.5%), *Pseudomonas aeruginosa* (5.9%) and *Pasteurella multocida* (4.9%).

Meticillin-resistance (MecA) was detected in 19.5% of the *Staphylococcus* isolates. AmpC and/or ESBL (extended spectrum beta-lactamase) expression was detected in 19.8% of *E. coli*, *Klebsiella* and *Enterobacter* isolates.

Antimicrobial susceptibility of the *S. pseudintermedius* at first culture was 81.3% (cephalexin), 76.7% (enrofloxacin),

68.7% (clavulanate-amoxicillin), 68% (TMPS), 68% (clindamycin), 33.3% (amoxicillin) and 29.2% (erythromycin). For *E. coli* it was 91.3% (gentamicin), 75% (enrofloxacin), 64% (TMPS), 52.7% (doxycycline), 49.4% (clavulanate-amoxicillin) and 44% (cefalexin).

No clear pattern was detected in antimicrobial susceptibility, although the prevalence AmpC/ESBL expression has increased.

STATEMENT (CONCLUSIONS)

Knowledge of common wound pathogens and their antimicrobial susceptibility will aid appropriate drug selection. This is key to antimicrobial stewardship.

The Antimicrobial Stewardship and Pets (ASAP) project: performance and evaluation of an Antimicrobial Stewardship Improvement Strategy in 44 Dutch companion animal clinics

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OBJECTIVES

To evaluate an Antimicrobial Stewardship Programme (ASP) designed to promote responsible antimicrobial use (AMU) in companion animal clinics. This will contribute

to containing the further development and spread of antimicrobial resistance in companion animals.

METHODS

An ASP was developed based upon an interview and a survey study among companion animal veterinarians. The effect of the ASP on AMU was assessed in 44 Dutch companion animal clinics over a three year period, between 2016–2018, using a stepped-wedge design. This multifaceted intervention consisted of post-educational training, an information leaflet for pet owners and clinic specific feedback on AMU.

Monthly information on AMU, differentiated in first, second and third choice antimicrobials (based upon Dutch policy on veterinary AMU) was collected from the Practice Management Systems before and after the intervention. The ASP effect was estimated by meta-analyses of estimated intervention effects for each clinic.

RESULTS

AMU had already been reduced prior to implementation of the ASP (intervention) in many of the clinics. Using trend extrapolation from auto-regressive models, a further decrease in total, second and third choice AMU could be attributed to the ASP in several clinics, resulting in an overall significant decrease for total and second choice AMU as estimated in the meta-analyses.

Participants reported to be more aware of AMU after participation in the ASP.

STATEMENT (CONCLUSIONS)

The ASAP project shows that AMU in Dutch companion animal clinics can be optimised by introducing an ASP. More refined data analyses will follow and feasibility of implementation of ASP on a larger scale will be further explored.

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