ANTIMICROBIALS
CASE STUDY –one week old standardbred foal

History:
Foal was normal until yesterday, other than leaking urine from the umbilicus for 2 days after birth. Yesterday developed swelling of the left hock and is now very lame in that leg.

Clinical Examination:
Lameness, fluid swelling of the tibiotarsal joint, left hock, febrile with a moist exudative umbilicus.

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Q1. List the Problems you can identify:

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Your initial diagnosis is septic arthritis of the left tibiotarsal joint, probably secondary to umbilical infection (in this case) and bacteraemia. No other joints appear to be infected.

Q2. What bacterial samples could you take?

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Q3. How would you take these and get them to the lab? Describe your procedures for collecting the samples.

Diagnostic Workup

- Radiographs of the left hock do not indicate osteomyelitis.
- Ultrasound scan of the umbilicus indicates fluid accumulation in an umbilical remnant, suggestive of an abscess

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Q4. What immediate treatment would you give while awaiting the culture and sensitivity results?

What problems might be anticipated with your choice(s) of antimicrobial therapy?

What precautions might you take?

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Q5. What other immediate treatment would you give while awaiting the culture and sensitivity results?

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Results:

Joint fluid – E. coli (1)

Blood culture – E coli (2) Bacillus spp (3)

Umbilical fluid – E coli (4)

Antibiotic MIC ug/mL	1,2,4	3
Ampicillin	2	1
Penicillin	>64	0.5
amoxycillin	2	1
co-trimazine	1	0.4
gentamicin (& amikacin)	0.25	0.1
erythromycin	>64	0.032
cephalothin	4	1
oxytetracycline	4	2
enrofloxacin	0.016	0.4

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Q5. What antibiotic treatment would you choose based on the sensitivities?

What practical considerations should be taken into account?

How long will the foal need to be treated?

ANTIMICROBIALS
CASE STUDY 2- Scottish Terrier named Snapper

10 year old entire male dog

History:

Treated by Ref vet "on and off" for 8 mos for a recurrent urinary cystitis

History of dysuria and proteinuria

Amoxycillin, co-trimazine and enrofloxacin each used separately for 6-7 day courses, each caused a clinical improvement followed by an interval before recurrence.

ANTIMICROBIALS
CASE STUDY 2- Scottish Terrier named Snapper

Q1.List the problems that you can identify:

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CASE STUDY 2- Scottish Terrier named Snapper

10 year old entire male dog

On clinical examination you find a bilaterally symmetrical but large prostate, urinary bladder wall slightly thickened and Dysuria, otherwise normal findings.

Q2. Now list the problems you identified on examination:

CASE STUDY – Snapper

Results of a urine culture/sensitivity collected by cystocentesis:

Urine culture – E. coli (1)

Urine culture – Proteus (2)

Antibiotic MIC ug/mL	1	2
amoxycillin	16	>32
carbenicillin	>32	>32
cephalothin	16	1
cephadroxil	0.5	0.5
erythromycin	1	16
gentamicin	2	>32
amikacin	1	2
co-trimoxazole	0.5	0.5
tetracycline	2	4
nitrofurantoin	>32	8
norfloxacin	0.08	0.08

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CASE STUDY 2– Scottish Terrier named Snapper

What other clinical pathology test would be most likely to benefit your diagnosis?

CASE STUDY – Snapper

Results:

Urine culture – E. coli (1) **Ejaculate – E. coli (3)**

Urine culture – Proteus (2)

Antibiotic MIC ug/mL	1	2	3
amoxycillin	16	>32	>32
carbenicillin	>32	>32	>32
cephalothin	16	1	1
cephadroxil	0.5	0.5	0.5
erythromycin	1	16	1
gentamicin	2	>32	2
amikacin	1	2	1
co-trimoxazole	0.5	0.5	0.5
tetracycline	2	4	2
norfloxacin	0.08	0.08	0.08

ANTIMICROBIALS
CASE STUDY 2– Scottish Terrier named Snapper

Q4. Which of the resistances reported would you have expected and why? Are any of the results surprising?

Q5. Choose an antibiotic or combination of antibiotics to treat Snapper and design a dosage regime for him. Justify your decisions.

Q6.What are the limitations of in vitro antibiotic sensitivity testing?