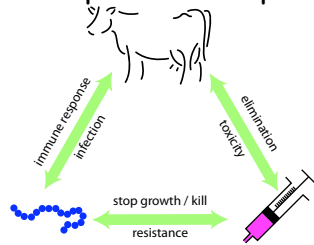


ANTIBIOTIC THERAPY

Therapeutic Principles



ANTIBIOTIC THERAPY

Therapeutic Principles



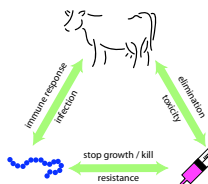
Antimicrobials/host:

- No effect
- Allergic reactions
- Residues
- Toxicity/adverse reaction
- Drug interactions

ANTIBIOTIC THERAPY

Therapeutic Principles

Antimicrobials/bacteria:

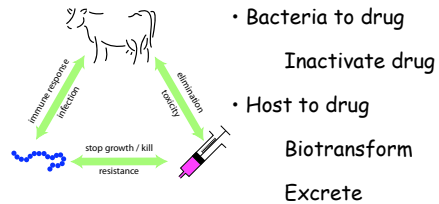


- No effect
- Bacteriocidal effect
- Bacteriostatic effect
- Resistance
- Superinfection

ANTIBIOTIC THERAPY

Therapeutic Principles

Antimicrobials/bacteria/ animal interaction:



ANTIBIOTIC THERAPY

Therapeutic Principles

DRUG SELECTION PROCESS

- Make a diagnosis
- Identify the bacteria
- Pharmacokinetics
- Resistance?

ANTIBIOTIC THERAPY

Therapeutic Principles

DRUG SELECTION PROCESS

- Host factors
 - Species and licensed PARs
 - Withholding times
 - Performance animal (race....)
 - Routes of administration

ANTIBIOTIC THERAPY
Therapeutic Principles
DRUG SELECTION PROCESS

- Host factors

Pregnant or lactating?

Age/Weight

Hydration/renal function

ANTIBIOTIC THERAPY
Therapeutic Principles
DRUG SELECTION PROCESS

- Host factors

Liver function

Biliary blockage

Immune status?

ANTIBIOTIC THERAPY
Therapeutic Principles
DRUG SELECTION PROCESS

- Mechanism of action
- Toxic effects
- Interactions
- Superinfections

ANTIBIOTIC THERAPY

Therapeutic Principles **DRUG SELECTION PROCESS**

- Ease of administration
- Cost
- Supportive care
- Evaluate efficacy

ANTIBIOTIC THERAPY

Therapeutic Principles **COMMON PROBLEMS-Vet's Control**

- Failure to make an accurate diagnosis
- Isolation of the wrong bacteria
- Wrong antimicrobial selected (PK)
- Inappropriate dosing (dose/interval)
- Owner compliance
- Insufficient supporting therapy

ANTIBIOTIC THERAPY

Therapeutic Principles **COMMON PROBLEMS**

Not under Vet's Control

- Bacterial resistance
- Mixed infections
- Poor correlation of in vitro to in vivo sensitivity
- Side effects - cessation of therapy

ANTIMICROBIAL SENSITIVITY TESTING

Kirby-Bauer Test Limitations:

- In vitro vs in vivo
- Interpretation of Results
- MIC vs R or S data
- Interference by treatment

ANTIMICROBIAL SENSITIVITY TESTING PROPHYLAXIS

- FEW APPLICATIONS:
 - Risk – immunocompromised patient
 - Risk – surgery e.g. implants
- GUIDELINES:
 - Bacteriocidal antimicrobials

THERAPEUTIC PRINCIPLES SUMMARY

- Make a diagnosis
- Select the appropriate therapy
- Treat until the animal is normal