

II. DETERMINANTS OF THERAPEUTIC ROUTE—INTRAMUSCULAR VERSUS ORAL

(A) Once the physician concludes that antibiotic therapy is indicated, he must next decide what therapeutic route is desirable for this particular case before he can move on to the choice of a particular antibiotic drug. The main factors influencing preference for the IM or oral route are shown below:

Intramuscular.—Rapidity of action; potency; higher therapeutic blood levels; avoids oral or gastric intolerance; duration of action and independence from patient cooperation in taking medication; better control over patient; and more efficient for very high dosage.

Oral.—Safety; multiple convenience advantages; portability, self-administration, versatility, time; net cost—saving fees for office visits reduces therapy costs; and avoids pain of injection.

III. DETERMINANTS OF ANTIBIOTIC CHOICE

The study revealed seventeen major determinants of antibiotic choice. Summary discussion will focus upon the three determinants which appear to be probably the most important in selecting the antibiotic of choice.

(A) Perceived efficacy is the prime consideration when dealing with severe ills or when the most potent drugs available are relatively safe. Efficacy includes anticipated effectiveness or "image of effectiveness" and perceived performance or "apparent" clinical response. Positive results produce loyalty, negative results are a major incentive for trying other antibiotics. The "test" may not be scientific. If the patient gets better, the antibiotic prescribed gets the credit; if the patient gets worse, the drug is blamed.

For respiratory and ear infections, penicillin is seen as highest in effectiveness; second place is shared by both the erythromycins and tetracyclines.

(B) Diagnostic indications include clinical evaluation of the pathogen and culture and sensitivity tests (which may be particularly attractive to the "problem solver").

(C) Safety is one of the major considerations in choice of an antibiotic. Its importance rises when the condition treated is not severe; when almost equally effective drugs are available which differ mainly in relative safety; or when treating patients vulnerable to side effects of a particular group of drugs.

Penicillin is seen as one of the most dangerous of all antibiotics in I.M. form (anaphylactic dangers), but is also perceived as one of the safest drugs for the non-allergic individual because of freedom from toxicity in large doses.

Erythromycin is seen as replacing tetracyclines because of its image as one of the safest of modern antibiotics.

Tetracycline is seen as having danger to children and pregnant women and is sometimes generalized as being dangerous to all patients. Pediatricians, in particular, may avoid its use. Most frequent side effects are browning and staining of teeth, interference with bone formation, and photosensitivity reactions.

Of the several remaining determinants, it is particularly interesting to note the importance of the detailman in the antibiotic field because the characteristics of this field include: 1) a vast number of drugs available, 2) the opportunity to play an influential role in sub-classes of antibiotics where no differences between brands are perceived by the physician, 3) contradictory competitive claims which increase the burden of choice by the physician and may increase his reliance upon the detailman whom he trusts, and 4) the importance of product knowledge in a field where the possible fatal consequences of prescribing or failing to prescribe are clearly seen by the physician. Most of the physicians in the groups valued visits from their detailman and felt he provided a helpful service, particularly by helping the physician maintain high comparative product visibility, actionable memory, and therapeutic suitability for the specific antibiotic brands promoted.

The availability of antibiotic drug samples helps influence the prescription practices of physicians even when samples are not being used to make an economic contribution to patient therapy. For the doctor, samples are seen as providing an immediate three-dimensional reference library of drugs, dosages, bottle sizes, colors, etc., as well as enabling him to assist his patients and also engage in "trial and error" therapy.