

DOXIL-100

Doxycycline Hyclate Tablet U.S.P.

FORMULATION:

Each uncoated tablet contains:
Doxycycline Hyclate U.S.P.
Eqv. to Doxycycline100 mg

PHARMACOLOGICAL CLASSIFICATION:

Broad and medium spectrum antibiotics.

PHARMACOLOGICAL ACTION:

Doxycycline Hyclate is a tetracycline which is a broad spectrum antibiotic. It is bacteriostatic against susceptible strains of a wide range of Gram-positive and Gram-negative organisms. Doxycycline Hyclate is useful in infections caused by *Haemophilus ducreyi*, *Brucella* (in conjunction with Streptomycin), *Vibrio cholerae*, *Pseudomonas (actinobacillus) mallei* and *pseudomallei*, and *Calymatobacterium (Danovania) granulomatis*. Doxycycline Hyclate Tablet also inhibits the growth of *Yersinia (Pasteurella) pestis*, *Francisella (Past.) tularensis* and *Past. multocida*. More variable success is achieved with infections due to *Escherichia coli*, *Klebsiella*, *Enterobacter (Aerobacter)*, *Bacteroides*, *H. influenzae* and indole-producing strains of *Proteus*. Doxycycline is effective against certain rickettsiae and larger viruses responsible for Rocky Mountain spotted fever, murine typhus, epidemic typhus, scrub typhus, rickettsial pox and Q fever. Doxycycline Hyclate is also effective in relapsing fever (*Borrelia recurrentis*) and is a valuable secondary agent against the spirochetes *Treponema pallidum*, *T. pertenuis*, and *Leptospira interrogans*. High concentrations inhibit the growth of the protozoan *Entamoeba histolytica*. Certain organisms known to have been sensitive may have lost their sensitivity to tetracycline. Many strains of staphylococci and enterococci and nearly all strains of *Proteus vulgaris* and *Pseudomonas aeruginosa* are relatively resistant. Doxycycline Hyclate is well absorbed. After an oral dose of Doxycycline Hyclate, plasma concentrations of the drug reach a maximum of 3 micrograms/mL at 2 hours and are well maintained and thus dosage once daily is usually adequate. Absorption is diminished by the presence of iron, aluminium, calcium and magnesium.

Doxycycline Hyclate is widely distributed into pleural and peritoneal fluid, saliva, semen and prostatic fluid. It passes the placental barrier readily and is also present in the milk of lactating patients. It is concentrated by the liver and excreted, by way of the bile, into the intestine from which it is partially reabsorbed. It is clear that with conventional doses, DOXIL-100 Tablet is not excreted in the urine to the same extent as other tetracyclines and it does not accumulate in the blood of patients with renal failure. Extrarenal infections in such individuals may be treated with DOXIL-100 when indicated. It also has less impact on the intestinal microflora.

PHARMACOKINETICS:

Doxycycline is readily and almost completely absorbed from the gastrointestinal tract and absorption is not significantly affected by the presence of milk or food in the stomach or duodenum. Mean peak plasma concentrations of 2.6 micrograms/mL have been reported 2 hours after a 200mg oral dose, falling to 1.45 micrograms/mL at 24 hours. After intravenous infusion of the same dose peak plasma concentrations are briefly somewhat higher, but become very similar to those after oral dosage on equilibration into the tissues. About 80 to 95% of doxycycline in the circulation is reported to be bound to plasma proteins. Its biological half-life varies from about 12 to 24 hours. Doxycycline is more lipid-soluble than tetracycline. It is widely distributed in body tissues and fluids.

In patients with normal renal function about 40% of a dose is slowly excreted in the urine, although more is excreted by this route if the urine is made alkaline. However, the majority of a dose of doxycycline is excreted in the faeces after chelation in the intestines. Although doxycycline has been reported to undergo partial inactivation in the liver some sources consider this doubtful; however, the kinetics of doxycycline have been reportedly altered in patients receiving drugs that induce hepatic metabolism.

Doxycycline is stated not to accumulate significantly in patients with renal impairment, although excretion in the urine is reduced; increased amounts of doxycycline are excreted in the faeces in these patients. Nevertheless, there have been reports of some accumulation in renal failure. Removal of doxycycline by haemodialysis is insignificant.

INDICATIONS:

Infections caused by susceptible rickettsiae, Chlamydia and mycoplasma including those of the respiratory and the genital tract; treatment of leptospirosis for eight (8) years old and above patients and as alternative

drug for the treatment of syphilis, actinomycosis, tularemia shigellosis and melioidosis.

CONTRAINDICATIONS: DOXIL-100 should not be used during pregnancy and in children under the age of 12 years. Doses of anticoagulants may need to be reduced when DOXIL-100 is given.

As preparations containing iron, aluminium, calcium or magnesium decrease the absorption of tetracycline, do not give to patients receiving antacid therapy, milk or calcium containing foods. Potentially hepatotoxic drugs should not be given with DOXIL-100.

DOSAGE AND DIRECTIONS FOR USE: 200mg on first day, then 100mg daily; severe infections (including refractory urinary-tract infections), 200mg daily. Early syphilis, 100mg twice daily for 14 days; late latent syphilis 200mg twice daily for 28 days. Uncomplicated genital chlamydia, non-gonococcal urethritis, 100mg twice daily for seven (7) days (14 days in pelvic inflammatory disease, Arthralgia (treatment or post-exposure prophylaxis, 100mg twice daily; child (only if alternative antibacterial cannot be given) 5mg/Kg daily in 2 divided doses (max. 200mg daily).

SIDE-EFFECTS AND SPECIAL PRECAUTIONS:The side-effects of (DOXIL-100) include nausea, diarrhoea, and symptoms resulting from the overgrowth of non-susceptible organisms. Overgrowth of *Candida albicans* in the mouth causes soreness, redness and thrush, which may extend into the trachea and bronchi; overgrowth of *C. albicans* in the bowel results in pruritus ani and there may be overgrowth of resistant coliform organisms, such as *Pseudomonas* spp. and *Proteus* spp., causing diarrhoea. The most serious supra-infection is by resistant staphylococci, causing a fulminating enteritis with dehydration and, occasionally, death; this complication is rare, except after abdominal surgery, especially gastrectomy. Occasionally severe and sometimes fatal liver damage has occurred in pregnant women treated with a tetracycline for pyelonephritis especially when large doses have been given intravenously. Tetracyclines are deposited in calcifying areas in bone and in teeth, causing permanent discolouration and malformation; when given in therapeutic doses to young infants or to women during the late stages of pregnancy, tetracycline interferes with the growth of bones and teeth in the infants. Milk teeth are affected if given to children 3 months to six years, and permanent teeth if given to children up to 12 years. An increase in intracranial pressure, which may be associated with a bulging fontanelle in infants, has been reported in patients given tetracyclines. Haemolytic anaemia, eosinophilia, thrombocytopenia have been reported. Vitamin deficiency may occur.

(DOXIL-100) has an anti-anabolic action which may cause a rise in blood urea. Allergic reactions to tetracycline and its analogues have been reported on rare occasions; photosensitivity has occurred.

KNOWN SYMPTOMS OF OVERDOSAGE AND PARTICULARS OF ITS TREATMENT:

In the event of sensitivity reactions, treatment should be withdrawn. Symptoms should be treated symptomatically.

AVAILABILITY: 10 x 10 Blister Pack.

STORAGE CONDITION: Store below 30°C, Protect from light.

Keep the medicine out of reach of children.

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