طبقا لقرار اللجنه العلميه المتخصصه للأدويه واللقاحات والتقييم المبدئى للمستحضرات الحيويه ومشتقاتها
الذى بجلستها فى ١٦ / ٥ / ٢٠١٧

Patient information leaflet.
Please read this leaflet carefully as it contains important information on the use of this product. If you have any queries, please consult your doctor or pharmacist.

وزارة الصحة والسكان
الادارة المركزية لشئون الصيدلة
ادارة تسجيل المستحضرات الحيوية
١٦/٥/٢٠١٧

VACSERA

DIPHTHERIA ANTI-TOXIN (10000 Units)

Description:

Diphtheria antitoxin is a sterile solution containing the specific antitoxic globulins that have the power of neutralizing the toxin formed by *Corynebacterium diphtheriae*. It is prepared from the plasma of healthy horses, which have been immunized by repeated successive injections with diphtheria toxoid. The serum is prepared from whole equine immune plasma by pepsin digestion, controlled heating & ammonium sulphate precipitation followed by purification and sterilization.
Diphtheria antitoxin is intended for intramuscular injection or intravenous drip according to severity of the condition.
The product meets the WHO requirements for biological products & therapeutic antidiphtheritic sera.

Composition:

Each vial contains:
Diphtheria antitoxin ≥ 10000 units
Tricresol (as a preservative) ≤ 0.35%

Clinical Pharmacology:

Diphtheria is a disease caused by a potent diphtheria exotoxin elaborated from a toxigenic strain of *Corynebacterium diphtheriae*. It primarily affects the pharynx & in minor instances diphtheria can affect larynx, nasal lining or skin. The disease can be localized to the site of infection resulting in acute inflammation, pseudo-membrane formation in the pharynx or larynx & lymphadenopathy or associated with systemic toxicity, which may include myocarditis and neuritis. The severe local & systemic manifestations are due to binding of the toxin with the cells interfering with enzymes necessary for protein synthesis leading to cell damage & death. The antitoxin neutralizes the toxin at the site of infection and in the circulation but does not affect the pathological changes already induced by the toxin. Early treatment is critical, with the degree of protection inversely related to the duration of clinical illness preceding the administration of the antitoxin.
Primary immunization with diphtheria toxoid with subsequent maintenance of timed booster doses is recommended to protect all age groups.

Indications:

Diphtheria antitoxin is used for passive immunization in diagnosed & suspected cases of diphtheria without waiting for bacteriological confirmation of the infection.
It is used prophylactically under exceptional circumstances as in: Any individual who has had known exposure to toxigenic *C.diphtheriae*, has not completed his diphtheria vaccinations & cannot be kept under surveillance for the development of clinical signs & symptoms.

Dosage and Administration:

The product is given by the intramuscular injection or by intravenous drip.
Sensitivity test should be done before administration of the antitoxin serum (see under precautions).
For prophylactic use: the recommended dose is 10000 Units intramuscularly together with antibiotics & appropriate update to diphtheria vaccination.
For therapeutic use diphtheria antitoxin should be given according to severity of the case & site of infection:
Pharyngeal & laryngeal diphtheria of 48 hours duration: 20000 - 40000 Units.
Nasopharyngeal diphtheria: 40000 -60000 Units.
Extensive diphtheria of three or more days duration or with diffuse swelling of the neck 80000 –100000 Units.
Skin lesions only: 20000 – 40000 Units (for cases where treatment is indicated).
Children are given the same dose as adults.
In urgent cases & in doses more than 40000 Units, the intravenous route is indicated but should never be used unless a preliminary intramuscular injection given at least 30 minutes before has been tolerated.
For intravenous use, the serum must be at room temperature before injection; the injection should be given very slowly, diluted in 250 – 500 ml physiological saline & administered over 2 – 4 hours. The patient should be recumbent during the injection and for at least an hour afterwards.
Repeated doses of diphtheria antitoxin after appropriate initial dose are not recommended and may increase the risk of adverse reactions.

Adverse Reactions:

In some rare cases anaphylaxis to horse serum may occur manifested by hypotension, dyspnea, urticaria and shock. Adrenaline injection (1:1000), antihistaminics and corticosteroids should be readily available.
Febrile reaction may develop 20 – 60 minutes after the injection & is characterized by chilly sensation, slight dyspnea & rapid rise of temperature.
Serum sickness may occur 7-10 days after injection of the antitoxin serum, symptoms including fever, vomiting, diarrhea, joint and muscle pains, lymphadenopathy, bronchospasm & urticaria. Nephritis, myocarditis, neuritis, polyarthritis and uveitis have been reported as rare complications of serum sickness. It is treated with antihistaminics and corticosteroids. Febrile reaction and serum sickness are not IgE mediated and therefore are not predicted by skin testing.

Contraindications:

Should be used with great caution if the patient has a history of allergic diseases (asthma or eczema) or allergic symptoms to any of the antitoxin serum components , previous injection of serum of equine origin or has a history of allergic symptoms in proximity to horses.

Precautions:

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Sensitivity test should be done before administration of the antitoxin serum:
Epinephrine hydrochloric solution (1:1000) and other appropriate agents must be available for immediate use in case an anaphylactic or acute hypersensitivity reaction occurs.
0.1ml of the diphtheria anti-toxin diluted 1:100 in normal saline is injected intradermally and
0.1ml of normal saline is injected intradermally to serves as a negative control in a comparable skin site in the other arm.
A positive test is a wheal with surrounding erythema at least 3mm larger than the negative control test reaction read within 20 minutes.
Diphtheria antitoxin serum should be administered cautiously even in patient with negative sensitivity test
Careful monitoring should be done during sensitivity testing for evidence of hypotension & bronchospasm.
Appropriate history suggesting increased risk as asthma & rhinitis should be taken.
Patients with positive sensitivity testing to the antitoxin or with a history of hypersensitivity reactions to equine proteins (even with a negative or equivocal sensitivity test) should undergo desensitization by serial injections of the diluted antitoxin as indicated below at intervals of 15 minutes, provided no reaction occurs.*
Intramuscular desensitization route:
0.1 ml of 1: 1000 dilution intradermally.
0.3 ml of 1: 1000 dilution intradermally.
0.6 ml of 1:1000 dilution subcutaneously.
0.1ml of 1:100 dilution subcutaneously.
0.3 ml of 1:100 dilution subcutaneously.
0.6 ml of 1:100 dilution subcutaneously.
0.1ml of 1:10 dilution subcutaneously.
0.3 ml of 1:10 dilution subcutaneously.
0.6 ml of 1:10 dilution subcutaneously.
0.1 ml of undiluted antitoxin subcutaneously.
0.2 ml of undiluted antitoxin subcutaneously.
0.6 ml of undiluted antitoxin intramuscularly.
1 ml of undiluted antitoxin intramuscularly.
If the dose is to be given intravenously, the intravenous route is used for desensitization with the same previous doses.
N.B. Repeated doses of diphtheria antitoxin after an appropriate initial dose are not recommended and may increase the risk of adverse reactions.

Storage:

Store between 2 - 8 °C.
Do not freeze.

Presentation:

Vial 10 ml / box.
Vial 10 ml – 40vials / box.
* According to the CDC guidelines.

This is a medicament.

- A medicament is a product, which affects your health and its consumption contrary to instructions is dangerous for you.
- Follow strictly the physician's prescription, the method of use and the instructions of the pharmacist who dispensed the medicament.
- The physician and the pharmacist are experts in medicine, its benefits and risks.
- Do not try yourself to interrupt the period of treatment prescribed.
- Do not repeat the same prescription without consulting your physician.
- Keep out of reach of children.

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