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A Newsletter on

CLINICAL PHARMA PRACTICE

An Update on Clinical Research and Drug Information



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PHYSICIAN DESK



Dr. K. JAYAPRAKASH, M.B.B.S., DNB. (Anesthesia)
Consultant Anesthetist,
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SUGAMMADEX (BRIDION)

Sugammadex is a unique neuromuscular reversal drug; a modified gamma cyclodextrin, the first in a new class of selective relaxant binding agents, which reverse neuromuscular blockade (NMB) with the non-depolarizing muscle relaxants rocuronium and vecuronium. Sugammadex can reverse moderate or deep NMB.



MECHANISM OF ACTION

Sugammadex is a modified gamma cyclodextrin. It forms a complex with neuromuscular blocking agents rocuronium and vecuronium, and it reduces the amount of neuromuscular blocking agent available to bind to nicotinic cholinergic receptors in the neuromuscular junction. This results in the reversal of neuromuscular blockade induced by rocuronium and vecuronium.

INDICATIONS AND USAGE

Sugammadex is indicated for the reversal of neuromuscular blockade induced by rocuronium bromide and vecuronium bromide in patients undergoing surgery.

DOSAGE AND ADMINISTRATION

Monitor for twitch responses to determine the timing and dose for Sugammadex administration.

Administer as a single bolus injection.

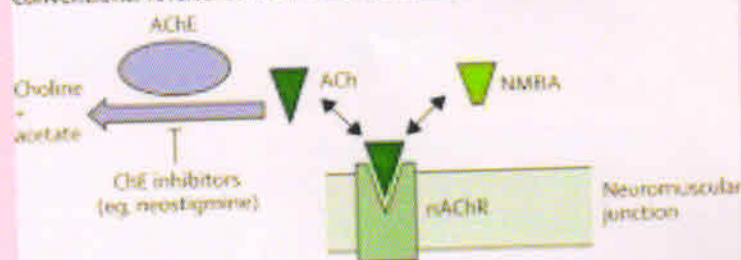
For rocuronium and vecuronium

4mg/kg is recommended if spontaneous recovery of the twitch response has reached 1-2 post-tetanic counts (PTC) and there are no twitch responses to train-of-four (TOF) stimulations.

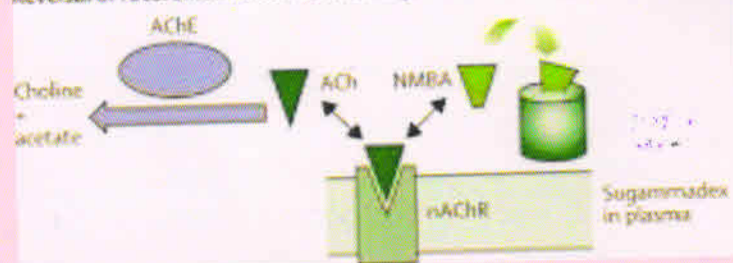
For rocuronium only

16 mg/kg is recommended if there is a clinical need to reverse neuromuscular blockade soon after the administration of a single dose of 1.2 mg/kg of rocuronium.

Conventional reversal of neuromuscular blockade



Reversal of rocuronium blockade with sugammadex



AVAILABLE DOSAGE FORMS AND STRENGTHS

200 mg/2 ml in a single dose vial for bolus injection.
500 mg/5 ml in a single dose vial for bolus injection.

CASE REPORT

Management of ST-Elevated Myocardial Infarction in a 75 Year Old Woman

Case Report : A 75 year old female patient presented with chest pain in emergency department of Vivekanandha Medical Care Hospital, Elayampalyam Tiruchengode. She had a past history of diabetes mellitus for 4 years and she was taking metformin 500 mg orally twice daily before food. A physical examination showed blood pressure of 130/90 mmHg, pulse rate of 68/min, and respiratory rate of 26/min. She was tested for myocardial infarction. Laboratory test revealed positive for troponin - I of 5.8 mIU/ml (<5 mIU/ml). The ECG confirmed the presence of ST elevated myocardial infarction (STEMI). ECHO report suggested RWMA (Regional Wall Motion Abnormalities) of LAD (Left Anterior Descending) territory, moderate LV systolic dysfunction with EF of 38%, mild mitral regurgitation with normal pulmonary artery pressure and no clot / pericardial effusion. She was diagnosed as acute anterior wall ST elevated myocardial infarction (AW-STEMI) with moderate LV dysfunction, KILLIP CLASS – I. She was thrombolysed with tenecteplase (tPA) 30mg IV bolus at single dose and stopped. INJ. Low molecular weight heparin 0.6 cc IV stat was started with Tablet Clopilet-A 150 mg orally for antiplatelet therapy.

She was then prescribed with oral T. Glyceryl Trinitrate – 2.6 mg BD, T. Ranolazine – 500 mg BD, T. Nicorandil – 10 mg BD, T. Trimetazidine – 25 mg stat, T. Storvas – 80mg OD, T. Spirinolactone – 25 mg OD, T. Promethazine – 35 mg OD and T. Pan – 40 mg BD.

On second day of admission, she had BP 110/70mm/hg, pulse 68/min, no fresh changes in ECG & ST- segment is decreased and continued with the same drugs. Patient was hemodynamically stable and posted for CAG (Coronary angiography) on third day. CAG was done through right radial artery and indicates no complications; hence patient was continued with the same drugs for 2 days and discharged.

Patient was advised with T. Nitrolong – 2.6 mg BD, T. Clopilet A – 150 mg OD, T. Storvas – 80 mg OD, T. Aldactone – 25 mg OD, T. Pan – 40 mg BD, T. Cardivas – 3.125 mg BD and to review after 1 week.

CONCLUSION :

This study emphasizes the importance of early diagnosis and treatment which offers the greatest potential benefit for myocardial salvage in the first hours of STEMI. Hence we suggest considering factors like age, comorbidities, time & symptoms of onset of duration and allergies for treatment benefits to the patients.

Ms. LEENA PRIYA

Pharm D, Interns

REFERENCE :

A Maziar Zafari "Myocardial infarction: Definition, treatment and management"
<http://emedicine.medscape.com/article/155919-overview#a8>.

PHARMA QUIZ

- 1) A drug having 40% absorption & hepatic extraction ratio of 0.6. What is the bioavailability of that drug
a) 16% b) 17% c) 24% d) 21
- 2) Antidote of heparin
a) Atropine b) Protaminesulfate c) Physostigmine d) Acetylcysteine
- 3) Who is the father of Evidence based medicine?
a) David sackett b) Hippocrates c) Samuel Thomson d) Lavoisier,
- 4) In a patient with poor glycemic control, hypertriglyceridemia, low HDL, which of the following drug would be best without the risk of myositis as its side effects
a) Fibric acid derivatives b) Nicotinic acid c) Atorvastatin d) Clofibrate
- 5) Drug that can be used for prodrug alkalization of urine
a) Hydrochlorothiazide b) Furosemide c) Acetazolamide d) Spiranolactone
- 6) Drug of choice for supra ventricular tachycardia
a) Verapamil b) Diltiazem c) Digoxin d) Phenytoin

Dr. ANU PHILIP

Lecturer,
Department of Pharmacy Practice

(Answer: Refer Page no - 4)

RECENTLY APPROVED DRUGS BY CDSCO

S. No.	DRUG NAME	DOSE	DOSAGE	INDICATIONS	APPROVED MONTH AND YEAR
1	Hydrocortisone Aceponate	0.584 mg/ml	Cutaneous Spray Solution	Pruritic Dermatitis	06.01.17
2	Dexlansoprazole	30/60 mg	Delayed Release Capsule	Gastroesophageal Reflux Disease	06.01.17
3	Carfilzomib	60 mg	Lyophilized Powder for Injection	Multiple Myeloma	17.01.17
4	Dabrafenib	50 mg/75 mg	Capsules	Metastatic Melanoma	18.01.17
5	Trametinib	0.5 mg/2 mg	Tablet	Metastatic Melanoma	18.01.17
6	Alectinib	150 mg	Capsules	Lung Cancer	23.01.17
7	Eliglustat	84 mg	Capsules	Gaucher Disease	31.01.17

Mr. S. ANANDKUMAR

Assistant Professor

Ref : <http://www.cdsco.nic.in/forms/SearchMore.aspx?ld=23>

NEW DRUG PROFILE

SARILUMAB

Indication

Rheumatoid Arthritis (ra)

Dosage Forms & Strengths

Solution for injection (prefilled syringe)

150 mg/1.14 mL, 200 mg/1.14 mL

Side Effects

Neutropenia, Increased ALT, Upper respiratory infections, Urinary tract infections

Mechanism of Action

Sarilumab (sarilumab) is an interleukin-6 (IL-6) receptor antagonist

Contraindication

hypersensitivity to sarilumab

Precautions

Infections. Serious and sometimes fatal infections due to bacterial, mycobacterial, invasive fungal, viral, or other opportunistic pathogens

Use in specific populations

Sarilumab should be used in pregnancy only if the potential benefit justifies the potential risk to the fetus.

ABALOPARATIDE

Indication

Postmenopausal women with osteoporosis at high risk for fracture

Dosage Forms & Strengths

Solution for SC injection

80 mcg/40 mL (available as a prefilled pen that delivers 30 daily doses of 80mcg)

Side Effects

- Dizziness, Nausea, Headache
- Fast heartbeat . Feeling very tired (fatigue)
- Upper stomach pain

Mechanism of Action

Abaloparatide is a human parathyroid hormone related peptide [PTHrP(1-34)] analog, which acts as an agonist at the PTH1 receptor (PTH1R).

Contraindication : None

Precautions

Orthostatic Hypotension.
Hypercalcemia: Avoid use in patients with pre-existing hypercalcemia

Use in specific populations

Abaloparatide is not indicated for use in females of reproductive potential.

Mrs. T. KUMUTHA, Lecturer

Ref : <http://www.pnnewswire.com/news-releases/regeneron>

<https://www.regeneron.com/kevozara-injection>

DEPARTMENT ACTIVITIES

GUEST LECTURE

Dr. H.N. Shivaprasad, M.Pharm., Ph.D., Director Technical, Prakruti Products, Karwar, Karnataka has addressed about "Nutraceutical Industry: Global Regulations Potential & Opportunities" at SVCP Seminar hall on 07.01.2017.

Mr. Anandapadmanaban, Consortium Clinical Research (P) Ltd, Coimbatore has delivered a speech on "Global Challenges & Opportunities in Clinical Research" at SVCP Seminar Hall on 28.01.2017.

Conferences/Workshop

1st PHARMACEUTICAL SCIENCES CONGRESS 18th & 19th March 2017, BENGALURU

Pharm D students (III & IV Year) and faculty of Department of Pharmacy Practice were participated in IACP sponsored "1st Pharmaceutical Sciences Congress" on the theme of "Connecting Pharmaceutical Sciences and Knowledge Advancement" at M S Rammaya University, Bengaluru on 18th & 19th March 2017.

- ★ Pharm. D Interns and faculty of Department of Pharmacy Practice was attended workshop on "MEDS – 2017-HighReliability in Medication Process" at GKNM Hospital, Coimbatore on 18.03.2017.
- ★ Ms. Vibha K (Pharm.D Intern) received second prize in the Random Quiz Competition in the workshop on "MEDS – 2017-High Reliability in Medication Process" at GKNM Hospital, Coimbatore on 18.03.2017.
- ★ Oshine Elizabeth Jose (IV Pharm.D), S.Anandkumar, was presented at research paper as poster on "Patient medication adherence in type 2 DM population with peripheral diabetic neuropathy" in 1st Pharmaceutical Sciences Congress at M S Rammaya University, Bengaluru on 18th & 19th March 2017.
- ★ S B Nainu (IV Pharm.D) was presented at research paper as poster on "Cognitive impairment of anti epileptic drugs in epilepsy patients" in 1st Pharmaceutical Sciences Congress at M S Rammaya University, Bengaluru on 18th & 19th March 2017.
- ★ Jeny Mary John (IV Pharm.D), Dr. T. Tamilselvan was presented at research paper as poster on "Drug use evaluation in a pregnant women in a tertiary care hospital Presented" in 1st Pharmaceutical Science Congress at M S Rammaya University, Bengaluru on 18th & 19th March 2017.



SPECIAL DAY CELEBRATIONS

"World Cancer Day" was observed by II-Pharm. D students and staff at SVCP Seminar Hall on 04.02.2017.

"International Womens Day" was observed by V-Pharm D Students and staff at SVCP Seminar Hall on 08.03.17.

"World Health Day" was observed by M. Pharm (Pharmacy Practice & Pharmacology) Students and staff at SVCP Seminar Hall on 07.04.17.

DIC ACTIVITIES	NUMBER
No. of Patients Counseled	1035
Drug Information Queries Answered	27

Answers

1. a) 2. b) 3. a) 4. a) 5. c) 6. a) 7. c)



Please send your suggestions to
The Chief Editor

CLINICAL PHARMA PRACTICE NEWSLETTER

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Swamy Vivekanandha College of Pharmacy,

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Book Post

To

24/7
SERVICES

Drug and Poison Information Queries Please Contact : Email - svcpdpic@gmail.com, Phone : 04288 - 234417.