PHARMACY PRACTICE BULLETIN

Volume: VI, Issue: 01, January - March 2019

PUBLISHED BY CLINICAL PHARMACY SERVICES DEPARTMENT, P V S HOSPITAL (P) LTD, CALICUT

A Unit of Department of Pharmacy Practice

DEVAKI AMMA MEMORIAL COLLEGE OF PHARMACY, CHELEMBRA, MALAPPURAM, KERALA

In the remembrance of

Sri. K.V. Sankaranarayanan

(01.01.1948 - 12.07.2013)

Founder, Devaki Amma Memorial Institutions

With His Heavenly Blessings

The Destination for Excellence

ISSUE HIGHLIGHTS

I) Stevens-Johnson Syndrome
II) List of drugs approved by DCGI in the last three month
III) Suspected adverse drug reactions reported

DEPT HIGHLIGHTS

I) Medical Camp
II) Seminars Conducted
III) Continuing Education Programs Attended

I) Stevens-Johnson Syndrome

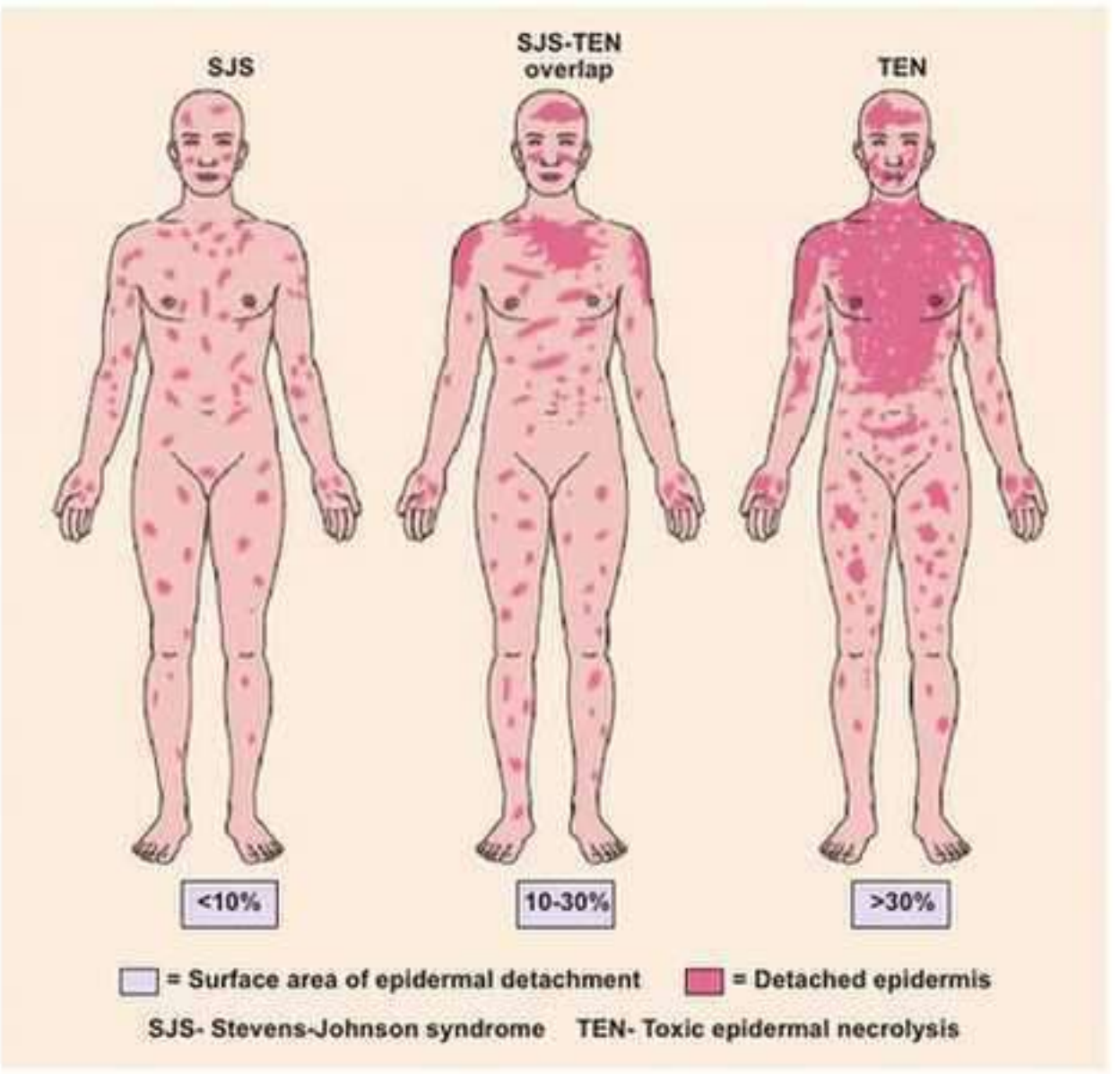
The syndrome was first described in 1992, when the American Pediatrician Albert Mason Stevens and Frank Chambliss Johnson reported the case of two boys aged 7 and 8 years with an extraordinary, generalized eruption with continue fever, inflamed buccal mucosa and severe purulent conjunctivitis. Both cases had been misdiagnosed by primary care physician as hemorrhagic measles.

What is Stevens-Johnson syndrome?

Stevens-Johnson syndrome (SJS) is an infrequent and a severe form of erythma multiforme which is a hypersensitivity reaction present with skin eruption characterized by a typical target lesion. SJS is an uncommon, severe, mucocutaneous blistering disorder with an acute and unpredictable onset. It also occurs due to an adverse hypersensitivity reaction to drugs which result in skin and mucosal eruption.

The more severe form of SJS is Toxic Epidermal Necrolysis (TEN). The difference between two is the extend of body surface area (BSA) involved in epidermal detachment.

If less than 10% of BSA involved it is said to be SJS. If it is between 10- 30 % it is said to be SJS-TEN overlap and when it is more than 30% said to be TEN. Previously SJS was considered as erythema multiforme but now is distinct based on severity, pattern of signs etc.



EPIDEMIOLOGY

The incidence of SJS has been estimated to be around 1-6/1,000,000 person per year with a mortality rate of 1-5% with rises up to 30% in TEN. Cases have been reported in children as young as 3 months.

ETIOLOGY

1. Drugs: More than 80% of cases of SJS or TEN is drug related and 95% of TEN is drug related. The drugs causing SJS are:

Drugs	Examples	Percentage
NSAID's	Paracetamol, Ibuprofen, Oxicam Derivatives, Aspirin	15.95%
Anticonvulsants	Phenytoin, Valproic Acid, Phenobarbital, Carbamazepine	35%
Antibiotics	Sulphonamides, Aminopenicillin, Quinolones, Cephalosporin, Tetracycline	37.2%

2. Infectious causes: Viral disease such as AIDs, hepatitis, herpes simplex virus, mumps, influenza and bacterial infections.

3. Genetic factors: Strong evidence for a genetic predisposition to severe cutaneous adverse drug reaction.

4. Idiopathic: In 20-50% cases.

CLINICAL PRESENTATION

A few days before the onset of rash, the following may appear first:

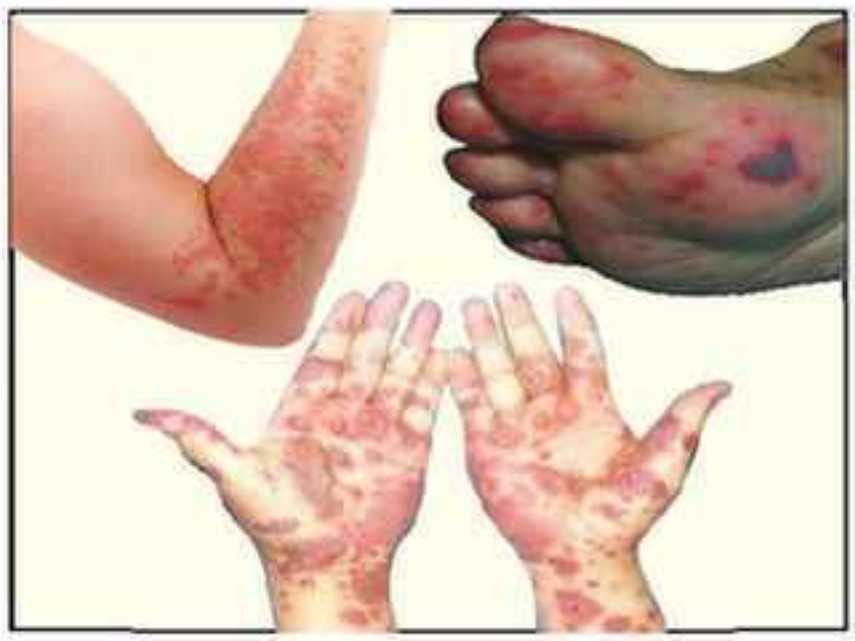
Flu-like symptoms consisting of fever, headache, myalgia (muscle pain), malaise (feeling easily tired), arthralgia (joint pains), sore mouth and throat, cough and burning sensation in the eyes.

As the disease progresses, the following will appear: Multiple discrete red or purple skin lesions which maybe painful and can present on the palms, soles, limbs and trunk. It will progress to form blisters with involvement of mucous membranes of the mouth, nose, eyes or genialia (not all mucosae are involved). The blisters on the skin may rupture leaving denuded skin which is susceptible to secondary bacterial infection and cause scarring. The blisters involving mucous membranes easily rupture, causing redness, erosions or ulcers with or without slough.

The conjunctiva or cornea may be affected causing redness of the eyes due to the on-going inflammation of the eyes and in severe cases, it may cause defective or opaque cornea.

COMPLICATIONS

- Occular Complications: Conjunctivitis, Corneal epithelial defects, Stomal ulcers, Perforations.
- Gastroenterological: Esophageal strictures.
- Genitourinary: Renal tubular necrosis, Renal failure.
- Pulmonary: Tracheo bronchial shedding with resultant and respiratory failure.
- Cutaneous: Scarring and cosmetic deformity.
- Septicemia.



DIAGNOSIS

There are no specific laboratory studies (other than biopsy) that can definitely diagnose SJS. The distinct diagnosis is done based on biopsy. Serum level of following can be elevated: TNF alpha, soluble interleukin-2 receptor, interleukin 6 and C reactive protein.

PATHOPHYSIOLOGY

The pathophysiology includes epidermolysis as a result of keratinocyte cell apoptosis. Apoptosis is an organized series of biochemical reaction leading to cell change and death. The death of keratinocytes causes separation of the epidermis from the dermis. Once apoptosis ensues, the dying cell provoke recruitment of more chemokine. This can perpetuate the inflammatory process, which lead to extensive epidermal necrolysis.

TREATMENT

Withdrawal of any agent suspected of causing the condition is critically important.

Most patients with Stevens-Johnson syndrome are treated symptomatically. Special attention is provided to ensure airway is patent, hemodynamics stable (eg: blood pressure monitoring), fluid status stable, skin care optimised and the pain is adequately controlled if necessary.

Oral lesions are managed with mouthwashes and topical anesthetics are useful in reducing pain and allowing the patient to take in fluids.

Large blisters will be aspirated and areas of denuded skin must be cleansed with astringents (e.g.: potassium permanganate) or use saline compresses. Large denuded areas will be covered with suitable dressings available. Patients may be started on systemic steroid if detected early within the next 24-72 hours.

Eye treatment depends on the severity. Most patients do not need treatment but some may need lubricants, topical steroids or antibiotics. If inflammation worsens certain procedures need to be carried out to prevent scaring and adhesions.

Individual lesions typically should heal within 1-2 weeks, unless secondary infection occurs. Most patients recover without sequelae.

Some may experience numerous long-term sequelae if not treated early especially eye complications such as photophobia (glaring to lights), a burning sensation in the eyes, watery eyes, a sicca like syndrome (very dry eyes) and corneal and conjunctival neovascularization (new tissue or blood vessels formation).

PROGNOSIS

Once the cause of Stevens-Johnson syndrome has been identified and successfully treated (in the case of an infection), or stopped (in the case of medication), the skin reaction will stop. New skin may start to grow after a few days. It takes time to recover from SJS, and most people do. Severe cases can be fatal, though, especially during the three months after it started.

SJS (with less than 10% of body surface area involved) has a mortality rate of around 5%. The mortality for toxic epidermal necrolysis (TEN) is 30-40%. The risk for death can be estimated using the SCORTEN scale, which takes a number of prognostic indicators into account. It is helpful to calculate a SCORTEN within the first 3 days of hospitalization. Other outcomes include organ damage/failure, cornea scratching, and blindness. Restrictive lung disease may develop in patients with SJS and TEN after initial acute pulmonary involvement. Patients with SJS or

Prepared by:
Vismaya Vijayan and Revathi Patteri,
Fifth Pharm. D

II) List of drugs approved by DCGI in the last three month

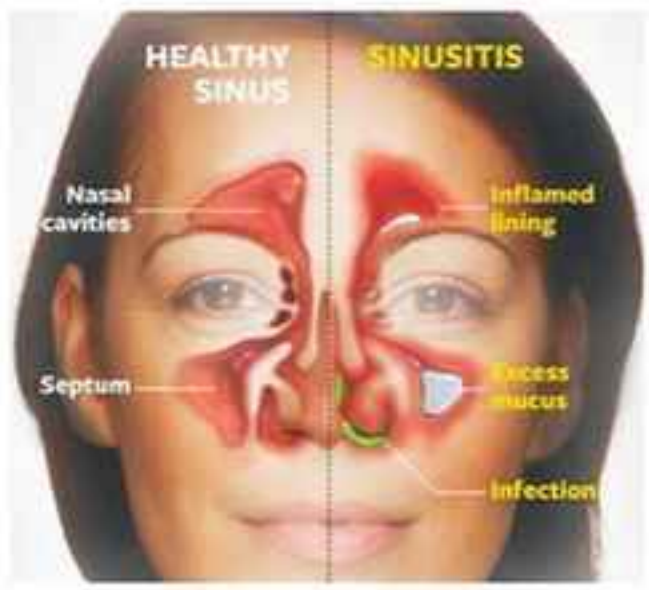
1. Fenspiride hydrochloride film coated extended release tablet 80 mg and Fenspiride hydrochloride bulk

Therapeutic category: Anti-inflammatory and Bronchodilator.

Indication: Acute Rhinosinusitis, Moderate persistent asthma as an add-on therapy.

Mechanism of action: It does not act like conventional anti-inflammatory drugs by inhibiting cyclo-oxygenase. It has certain antihistaminic activity, basically by blocking H_1 receptors. Fensipride also has an alpha-1-adrenolytic activity and an inhibitor effect on cyclic AMP, two properties which could have an impact on inflammatory disease of upper airways.

Pharmacokinetics: Absorption: Stomach or small intestine; Elimination: 90% by urine



Dose: 160-240 mg daily in divided doses for asthma and other respiratory disorders.

Dose adjustment required: In case of adverse drug reactions dose reduction can improve the symptoms. Dose adjustment not required in case of renal or hepatic dysfunction.

Pregnancy: Special precaution for 1st trimester.

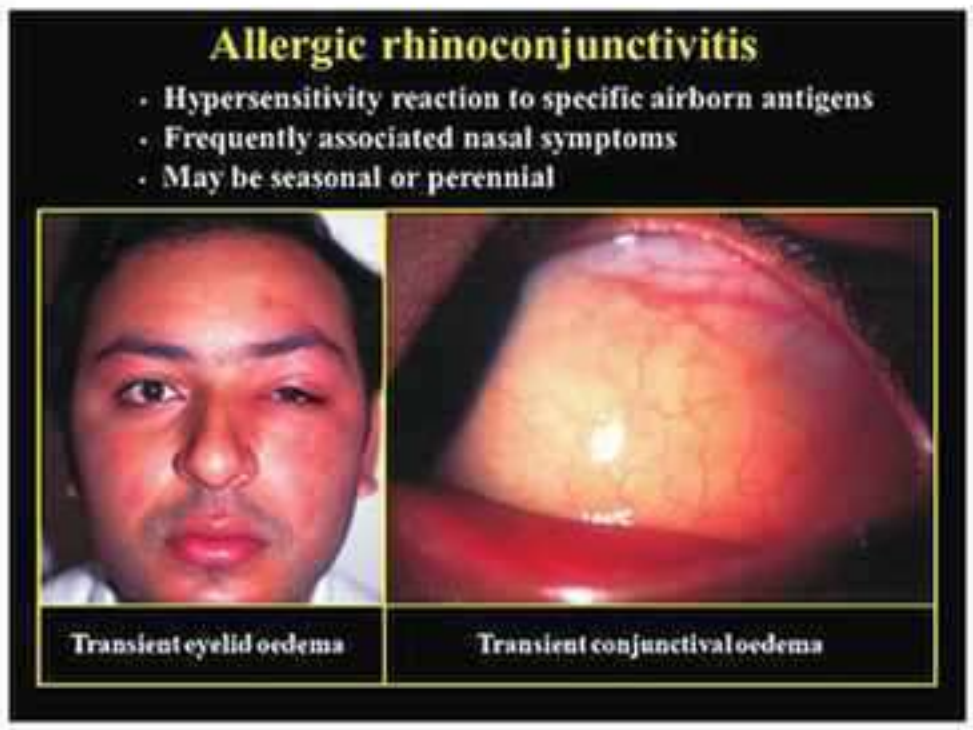
Adverse drug reactions: Minor GI disorder, somnolence, moderate tachycardia which ceases after dose reduction.

2. Bilastine tablets 20 mg and Bilastine bulk

Therapeutic category: Non-sedating H_1 receptor antihistamine.

Indication: For symptomatic treatment of allergic rhino-conjunctivitis (seasonal and perennial) and urticaria in adults

Mechanism of action: Bilastine is a selective histamine H_1 receptor antagonist. During allergic response mast cells undergo degranulation which releases histamine and other substances. By binding to H_1 receptor and prevention their activation, bilastine reduces the allergic symptoms due to the release of histamine from mast cells.



Dose: Adult- 20 mg once daily (1hr before or 2hr after food)

Child- >12years- same as adult dose.

Adverse drug reactions: Headache, malaise, abdominal pain, diarrhea, increased appetite, weight gain, thirst, gastritis, dyspnoea, anxiety, insomnia, vertigo, dizziness, pyrexia, tinnitus, oral herpes.

3. Iguratimod film coated tablets 25 mg and Iguratimod bulk

Therapeutic category: Anti-inflammatory and Anti rheumatoid

Indication: For the treatment of active rheumatoid arthritis symptoms

Mechanism of action: Inhibition of the production of immunoglobulin's and various inflammatory cytokines is the main mechanism of action of iguratimod. The suppression of nuclear factor kappa B (NF-Kb) activation without blocking NF-kB inhibitor, a (IkBa) degradation has been indicated. In addition iguratimod was found to posses anabolic effect on bone metabolism, through both stimulation of osteoblastic differentiation and inhibition of osteoclast genesis.

Dose: 25mg twice daily. (Mostly given in combination with methotrexate)

Adverse drug reaction: Rash, gastro-intestinal symptoms, reversibly increasing liver enzymes.

Prepared by:
Japhia Saju & Pavithra E. C.,
Fifth Pharm. D

III) Suspected adverse drug reactions reported in the past three months in PVS Hospital (P) Ltd, Calicut

Sl. No	Suspected Drug	ADRs
1	Inj. Lasix 20 mg (Furosemide)	Hypokalemia
2	Asthalin Respules (Salbutamol)	Tachycardia
3	Tab. Syncapone (Levodopa 150 mg + Carbidopa 375 mg+ Entacapone 200 mg)	Dyskinesia
4	Inj. Solu Medrol (Methyl predinisolone)	Hyperglycemia
5	Tab. Aldactone 25 mg (Spiranolactone)	Gynecomastia
6	Tab. Deplatt 75mg (Clopidogrel)	Gastro intestinal bleeding
7	Tab. Cardivas 6.25 mg (Carvedilol)	Bradycardia
8	Tab.Sizdone 0.5 mg (Risperidone)	Tremors, Aggression
9	Cap. Rosumac C V (Rosuvastatin 100 mg + Clopidogrel 75 mg)	Echymotic patches
10	Inj. Azithromycin 500 mg	Thrombophlebitis
11	Tab. Metformin VG 2 (Glimipride 2 mg + Metformin 500 mg + Voglibose 0.2 mg)	Hypoglycemia
12	Tab. Sizodon L S (Risperidone 2 mg + Trihexyphenidyl 2 mg)	Extra pyramidal syndrome
13	Tab. Eptoin 100 mg (Phenytoin)	Ataxia

Prepared by:
Devusree B,
Fifth Pharm. D

DEPARTMENT ACTIVITIES

I) Medical Camp

Free Nephrology Medical Camp by Narayanan Nair Memorial Higher Secondary School, Chelembra was conducted at Devaki Amma Memorial Teacher Education College, Chelembra in collaboration with Calicut Medical College on 5th January 2019. Fifth Pharm D and Pharm D Interns provided the clinical services such as conducting kidney function test and providing necessary patient counseling.

II) Seminars Conducted

1. Department of Pharmacy Practice conducted one day seminar on "Accentuation of a well-structured manuscript"on 13th February 2019. The seminar was handled by Dr. S. Ponnusankar (Prof. & Head) and Ms. Roopa B. S. (Lecturer), JSS College of Pharmacy, Ooty.

2. A team led by Dr. Rithu Krishnan, Clinical Pharmacist, MVR Cancer Centre and Research Institute, Calicut conducted an exhibition and presentations on chemotherapeutic devices and various treatments as a part of Science day on 28th February 2019.

III) Continuing Education Programs Attended

1. Mr. Sanjay Sreekumar (Assistant Professor) and Pharm D Interns attended Seminar on "Updating and disseminating knowledge on clinical pharmacology" on 8th and 9th February 2019 at MVR Cancer Center and Research Institute, Calicut. Interns presented scientific posters during the seminar.

2. Fourth Pharm D Students attended International Conference on Clinical Pharmacy and Pharmaceutical Technology on 16th February 2019 at Jamia Salafiya Pharmacy College, Malappuram.

3. Mrs. Sneha Prakash V. (Assistant Professor) attended a continuing education programe on "New Paradigms in Teaching Learning Process" from 25th to 27th March 2019 at Al Shifa College of Pharmacy, Perinthalmanna.

DEVAKI AMMA MEMORIAL INSTITUTIONS

CHELEMBRA, Near Calicut University, Pulliparamba P.O., Malappuram Dt. Pin -673634, Kerala.
Phone: 0483 - 2891623, 2890695, 2891330

DG DEVAKI AMMA GURUKULAM

COLLEGE OF ARCHITECTURE | DEVAKI AMMA MEMORIAL COLLEGE OF PHARMACY | DEVAKI AMMA MEMORIAL TEACHER EDUCATION COLLEGE | DEVAKI AMMA MEMORIAL TEACHER TRAINING INSTITUTE

We Acknowledge:

The doctors and other health care professionals of PVS Hospital (P) Ltd., Calicut for their support and training given to our students.

For Suggestion, Feedback and Interaction

Drug Information Centre,
Department of Pharmacy Practice,
Devaki Amma Memorial College of Pharmacy
Off. Ph: 0495 - 3011333 (Ext-645),
Mob. No: 8281755715
E. Mail: dicdamcop@gmail.com