## Chapter 12

### SKIN

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#### 12.1 MANAGEMENT OF SKIN CONDITIONS

General guidelines for topical therapy: Whilst systemic administration of drugs is often necessary in dermatology, many common skin diseases can be effectively managed using the wide range of topically applied physical or pharmacological modalities that are available. Topical treatment offers the potential to achieve high concentrations of a drug in the skin with minimal exposure of other organs.

This can greatly increase efficacy and also safety relative to systemic administration. When side effects do occur, they are most likely to take the form of localized reactions. Some factors that affect penetration of topical agents include: concentration of medication, thickness and integrity of the stratum corneum, frequency of application, occlusiveness of the vehicle, and compliance.

Vehicle: Topical medication must be applied to the skin in a suitable vehicle. This term encompasses all the constituents of the formulation apart from the active pharmaceutical agent. Various vehicles deliver topical therapy, most frequently in the form of creams and ointments, solutions, lotions, emollients, gels, powders, soaps and paints. The choice of vehicle may be as important as the active drug. Either the vehicle or its active ingredient(s) may cause local toxicity.

**Ointments:** Ointments are greasy semisolid preparations, which are normally anhydrous and insoluble in water. They are petrolatum-based vehicles, capable of providing occlusion, hydration, and lubrication. Some ointments contain emulsifying agents such as polyhydric alcohols (macrogols, polyethylene glycol), or cetostearyl alcohol (e.g. emulsifying ointment). The latter have the advantage of being less greasy, with good solvent properties, and are easily washed off.

Ointments require fewer preservatives than other vehicles since they contain no water and do not sustain growth of microorganisms. Ointments are particularly suitable for chronic dry lesions. They often have mild antiinflammatory effect.

**Creams**: Creams are emulsions of oil and water and are generally well absorbed into the skin. They may contain an antimicrobial preservative unless the active ingredient has sufficient intrinsic bactericidal and

fungicidal activity. They are emollient, lubricant and mildly occlusive (but less so than ointments). Generally creams are cosmetically more acceptable than ointments because they are usually greasy and easier to apply.

Solutions: A solution involves the dissolution of two or more substances into homogenous clarity. The liquid vehicle may be aqueous, hydroalcoholic, or nonaqueous (alcohol, oils, or propylene glycol). Collodions are liquid preparations consisting of cellulose organic solvent. nitrate in Thev evaporate rapidly to leave a flexible film which can hold medicaments in contact with the skin. They are most frequently used to apply salicylic and lactic acids to warts. They may also be used as protectives to seal minor cuts and abrasions. They are easy to apply and water repellent, but inflammable.

Lotions: Lotions are liquid formulations which are usually simple suspensions or solutions of medication in water, alcohol or other liquids. The applied lotion leaves the skin feeling cooler via evaporation of the aqueous component. Lotions are easier to apply and allow for uniform coating of the affected area, and are often the favorite preparation in treating children. Lotions are more drying than ointments, and preparations with alcohol tend to sting eczematized or abraded skin. Lotions are suitable for application to large surface areas due to their ability to spread easily. Aqueous suspensions of powders which require shaking prior to each application are known as shake lotions. Examples include calamine lotion, steroid lotions, and emollients containing urea or lactic acid.

**Emollients:** Soothe, smooth and hydrate the skin and they are indicated for all dry or scaling disorders. Their actions are short lasting and they should be applied frequently even after improvement. They are useful in dry and eczematous conditions, and to a lesser extent in psoriasis. It should be applied in the direction of hair growth. Preparations containing an antibacterial ingredient should be avoided unless infection is present.

**Gels:** Gel consists of active ingredients in suitable hydrophilic or hydrophobic bases. Gels are popular because of their clarity and ease of both application and removal. They are suitable for facial or hairy areas because after application little residue is left behind. Nevertheless, they lack any protective or emollient properties. If they contain high concentrations of alcohol or propylene glycol, they tend to be drying or cause stinging. Gels require preservatives. They generally have a high water content.

**Powders:** Powders absorb moisture and decrease friction. Because they adhere poorly to the skin, their use is mainly limited to cosmetic and hygienic purposes. Generally, powders are used in the intertriginous areas and on the feet. Adverse effects of powders include caking (especially if used on weeping skin), crusting, irritation, and granuloma formation. They are occasionally used to deliver drugs such as antifungal agents applied to the feet.

Paints: Paints are liquid preparations, either aqueous, hydroalcoholic or alcoholic (tinctures), which are usually applied with a brush to the skin or mucous membranes and then evaporate.

#### 12.2 ANTI-INFECTIVE SKIN PREPARATIONS

**General considerations:** Both topical and systemic antibiotics are commonly used in dermatological conditions according to requirements. Systemic antibiotics are commonly prescribed for deeper bacterial infections.

#### **12.2.1 TOPICAL ANTIBIOTICS**

Topical antibiotics play an important role in the management of many common dermatologic conditions. Topical agents are very effective for the treatment of superficial bacterial infections. Some topical antibiotics are potentially hazardous and frequently their use is not necessary if adequate hygienic measures can be taken. Moreover, not

all-skin conditions that are oozing, crusted or characterized by pustules are actually infected. Before using an antibiotic, consideration should always be given to the alternative of using an antiseptic in order to reduce the risk of promoting antibiotic resistance.

#### AZELAIC ACID

Indications; Side-effects; Cautions, Contraindications; Dose: see section 12.7.

#### BACITRACIN

Indications: Superficial bacterial infections of the skin e.g., impetigo, furunculosis, and pyodermas. It is available in combination with neomycin sulphate in powder and ointment preparations, and as a triple antibiotic combination consisting of bacitracin zinc, neomycin sulphate and polymyxin B sulphate as ointment, which is indicated for treatment of secondarily infected eczematous dermatitis such as atopic dermatitis, nummular dermatitis, or stasis dermatitis.

**Cautions:** use cautiously in patients with leg ulcer as it causes sensitization.

**Side-effects:** allergic contact sensitization and, rarely, anaphylactic shock.

Dose: apply 3-4 times a day.

#### **Proprietary Preparations** see under Neomycin

#### CLINDAMYCIN

Indications; Side-effects; Contraindications; Dose: see section 12.7

#### ERYTHROMYCIN

Indications; Side-effects; Cautions, Contraindications; Dose: see section 12.7.

#### FUSIDIC ACID

Indications: staphylococcal skin infections, erythrasma, pitted keratolysis. Cautions: pregnancy & lactation; avoid contact with eye as it causes irritation of conjunctiva.

Side-effects: rash, irritation, hypersensitivity reaction, pruritus, urticaria, burning sensation in skin, contact dermatitis, dry skin

**Dose:** ADULT & CHILD: apply 2% cream/ointment 3-4 times daily until improvement occurs.

#### Proprietary Preparations

<u>Fusidic acid 2%+Betamethasone valereate</u> 0.1%: Facid (Eskayef), Cream, Tk. 150.00/10 gm

**Fusigal** (*Sharif*), Cream, Tk. 135.00/15 gm **Xzema** (*Orion*), Cream, Tk. 200.75/10 gm

#### Fusidic Acid 2%+Hydrocortisone Acetate 1%

Fusidate-H (Aristo), Cream, Tk. 125/10 gm Fortison (Incepta), Cream, Tk. 125/10 gm Fusitrim (Asiatic), Cream, Tk. 125/10 gm Fusibac-H (Drug Int.), Cream Tk. 125/10 gm Fusider (Opsonin), Cream, Tk. 94.34/10 gm Fusidic Plus(Beximco),Oint.Tk. 125.47/10 gm Dose:apply 3 times daily to uncovered lesions for up to 2 weeks. Apply less frequently to covered lesions.

#### GENTAMICIN [ED]

(see also section 1.1.4)

Indications: bacterial infections Side-effects: contact dermatitis, crossreactivity with other aminoglycosides Contraindications: known hypersensitivity to gentamicin Dose:apply 3-4 times a day for7-10 days.

#### **Proprietary Preparations**

Genacyn (Square),Oint., 0.10%, Tk.12.05/10 gm Gentamicin (Albion), Cream, 0.3%, Tk. 11.00/10 gm Gentin (Opsonin), Cream, 0.3%, Tk. 9.43/10 gm Gentosep, (Beximco), Cream, 0.3%, Tk. 18.45/15 gm Monamycin (Amico), Cream, 0.3%, Tk. 16.75/15 gm; Tk. 7.00/5 gm

Gentamicin 0.3%+ Hydrocortisone Acetate1% Gento HC (Gaco), Cream, Tk.60.00/10gm Dose: apply 2-3 times daily.

#### METRONIDAZOLE<sup>[ED]</sup>

(see also section 1.1.9)

Indications: acne rosacea, vaginal infections

**Cautions:** pregnancy, breastfeeding, avoid unnecessary prolonged exposure to sunlight

**Contraindications:** known hypersensitivity to metronidazole

**Side-effects:** skin redness, dryness, burning, irritation, or stinging

**Dose:** for vaginal infections:twice daily for 5 consecutive days

For acne: Wash the affected skin area with mild soap about 15-20 minutes before applying the medication. Apply a thin layer of gel and rub it gently into the affected area

#### Proprietary Preparation

Flamyd (Incepta), Gel, 0.75%, Tk.50/30 gm

#### **MUPIROCIN**

Indications: bacterial skin infections, particularly impetigo, folliculitis, impetiginized eczema, burns, lacerations, and leg ulcer; and to eliminate nasal staphylococcal carriage, even MRSA

**Cautions:** moderate to severe renal impairment, avoid contact with eyes, pregnancy, lactation, child < 3 months

**Side-effects:** pain, burning, and itching, an uncommon cause of postoperative ACD following dermatologic surgery. **Dose:** apply 2-3 daily times for a maximum of 10 days

#### **Proprietary Preparations**

Mupirocin 2%

Bacron(Biopharma), Cream, Tk. 125.47/10gm Bactoderm (Unimed), Oint., Tk. 140/10gm Bactroban (GSK), Oint., Tk. 123.62/10 gm Bactrocin (Square), Oint. Tk. 140/10gm; Tk. 98.11/10gm

**Dermupin** (*Acme*), Oint. Tk. 130/10 gm **Mupi** (*Alco*), Oint.Tk. 80/5 gm; Tk.140/10gm **Mupibac** (*Pharmasia*), Oint. Tk. 130/10 gm **Mupiderm** (*Healthcare*), Oint.,Tk.140/10 gm Mupiron (Eskayef), Oint.Tk. 140/10 gm Muroderm (General), Oint.Tk140/10 gm Muron (Drug Int.), Oint, Tk. 130/15 gm Sinaban(Ibn Sina), Oint Tk. 140/10 gm Systop (ACI), Oint Tk. 140/10 gm

#### NEOMYCIN

(see also section 1.1.4)

Indications: effective against several gram-negative and several gram positive bacteria. It is useful for treating minor wounds and cutaneous infections. It is used in combination with bacitracin to achieve optimal staphylococcal and streptococcal coverage

**Cautions:** Ototoxicity may occur if large areas may be treated, renal impairment, pregnancy, children

**Contraindications:** known hypersensitivity, perforated eardrums

Side-effects: allergic contact dermatitis, cross-sensitization with other aminoglycosides, local irritation and itching

#### Proprietary Preparations

<u>Neomycin 3.5 mg + bacitracin 400 IU +</u> polymyxin 5000 IU /g Neocin Plus (Opsonin), Oint, Tk. 30.11/10 g Poyban (Popular) Oint, Tk. 30.11/10 g Neogen plus (General) Oint, Tk. 30.11/10 g Dose: apply 3-4 times daily for 7-10 days.

<u>Neomycin 0.5%+ Bacitracin 500 IU/qm (Oint.)</u> <u>Nuba (Biopharma)</u>, Oint., Tk. 40.15/20 gm <u>Nebason (Jayson)</u>, Tk. 17.36/10 gm <u>Neobacrin (GSK)</u>, Oint., Tk. 43.76/20 gm <u>Nebanol (Square)</u>, Powder, 0.5% + 500 IU/gm, Tk. 20.07/10 gm; Oint. Tk. 44.06/20 gm <u>Tybac (Somatec)</u>, Powder, 5 mg+4.18 mg,Tk.15.43/10gm

**Neobacin**, (*Kemiko*), Oint., Tk. 43.90/20 gm **Neobac**, (*Rephco*) Oint., Tk.17.43/10 gm; Tk. 23.60/20 gm

**Neotracin** (*Acme*), Powder, 500 mg+ 456 mg/100 gm, Tk. 20.07/10gm ,Tk.17.42/10gm **Neocitrin** (*ACI*),Powder, 5 mg + 4.56 mg/gm; Tk. 20.08/10 gm

Neocin (Opsonin), Oint., 250 IU + 5 mg/ml, Tk. 17.36/10 gm; Powder.Tk.77.15/5g Dose: apply 2-4 times daily.

#### NITROFURAZONE

**Indications:** prevention or treatment of surface bacterial infections of wounds, burns, and cutaneous ulcers, before skin grafting

Contraindications: hypersensitivity, cross-sensitivity with other nitrofuran derivatives

**Side-effects:** sensitization, generalized allergic skin reactions

**Dose:** 0.2% ointment/cream: apply 2 times daily for 7 days.

#### **Proprietary Preparation**

Furasep (Beximco), Cream, 0.2%, Tk.17/20g

#### POLYMYXIN B

**Indications:** bacterial skin infections, especially gram negative infections. Usually used in combination with other topical antibiotic agents to broaden their coverage

**Cautions:** treatment of large areas may cause ototoxicity particularly in children, in elderly and in renal impairment

**Side-effects:** skin rash, urticaria, eosinophilia, fever, nephrotoxicity

**Dose:** in combination with bacitracin or as triple antibiotic ointment

with bacitracin and neomycin: apply 1-3 times a day

#### **Proprietary Preparations**

see under neomycin One g ointment contain Oxytetracycline HCl 30mg and Polymixin 10.000 IU Renamycin (*Renata*), Oint. Tk.44/3.5g; Tk.12.62/5g Tetraderm (*Rephco*), Oint.Tk. 12.43/5g

#### RETAPAMULIN

Indications: impetigo due to *S. aureus* or *S. pyogenes* in adults and children 9 months of age or older **Cautions:** pregnancy & lactation **Side-effects:** pruritus, paresthesia, irritation, pain at the site of application, allergic contact dermatitis **Dose:** apply twice daily for 5 days.

Generic Preparation Ointmet 1%

#### SILVER SULFADIAZINE[ED]

**Indications:** treatment & prophylaxis of infection in burn wounds, infection in leg ulcers, pressure sores, infection in skin graft donor sites and extensive abrasions.

**Cautions:** hepatic and renal impairment, pregnancy, breast-feeding, neonates

**Contraindications:** pregnancy and breast-feeding, sensitivity to sulfonamides and should not be recommended in neonates

**Side-effects:** allergic reactions, burning sensation, itching, rashes, leucopenia, may develop if drug is used for prolonged period. Hemolysis in glucose-6-phosphate dehydrogenase (G6PD) deficiency patients, methemoglobinemia **Dose:**apply once or twice daily

#### Proprietary Preparations

Silver Sulfadiazine 1%

Burn Free (*Albion*), Cream, Tk.14.00/10 gm; Tk.35.00/25gm Burna (*Square*), , Cream, Tk. 40.00/25 mg

Burnless (Sharif), Cream, Tk. 225.00/250 gm; Tk. 35.00/25 gm Burnsil (Beximco), Cream, Tk. 45.00/25 mg **Dazine** (*Alco*), Cream, Tk. 50.00/25 gm; Tk. 202.30/250 gm; Tk. 380.00/500 gm G-Silver Sulphadiazine (Gonoshasthaya), Cream, Tk.20.00/25 gm; Tk.195.00/256 gm Medizen (Pharmasia), Cream, Tk. 35/25 gm Neozine (Opsonin), Cream, Tk. 30.11/25 gm; Tk. 225.85/250 gm; Tk. 399.00/500gm Sibalyn (ACI), Cream, TK. 40.00/25 gm; Tk. 260/250 gm Silcream (Jayson), Cream, Tk. 60.00/25 gm; Tk. 300.00/250 gm; Tk. 495.00/500 gm Silvadazin (Aristo), Cream, Tk. 35.00/25 gm; Tk. 225.00/250 mg;Tk. 425.00/500 gm Silverax (Healthcare), Cream, Tk. 57/25 gm

# TETRACYCLINE HCI<sup>[ED]</sup>

Indications; Side-effects;

**Contraindications:** see section 1.1.7 **Dose:** see notes above.

#### **Proprietary Preparation**

G-Tetracycline (Gonoshasthaya), Oint., 3%, Tk. 17.75/20 gm

#### 12.2.2 ANTIFUNGALS

(see section 1.2)

Fungal infections are among the most common causes of skin diseases. Most localized fungal infections are treated with topical preparations. Treatment with topical antifungal therapy enjoys several advantages over systemic management, including: fewer side effects, fewer drug interactions, localization of treatment, and generally lower cost.

Systemic antifungals are indicated for extensive fungal skin infections, tinea pedis, onychomycosis, and tinea capitis. They are used as preventive therapy for the immunosuppressed.

**Dermatophytosis:** Ring worm infection can affect the scalp by *Tinea capitis*, body by *Tinea corporis*, groin by *Tinea cruris*, hand by *Tinea manuum*, foot by *Tinea pedis* and nail by *Tinea unguinum* (also called onychomycosis). Scalp infection requires systemic treatment. Most local ringworm infections can be treated adequately with topical antifungal preparations. *Tinea* infection of the nail is almost always treated systemically.

**Pityriasis versicolor:** Pityriasis or tinea versicolor is caused by lipophilic yeasts of the genus *Malassezia*, formerly known as *Pityrosporum*. Several topical agents are useful in treating pityriasis versicolor, and these include selenium sulfide, zinc pyrithione, sodium sulfacetamide, Ciclopirox olamine, as well as azole and allylamine antifungals. If topical application fails, or if the infection is wide spread, it is treated systemically with an azole antifungal.

Candidiasis: Candidiasis refers to a diverse group of acute and chronic integumentary or disseminated yeast infections, most commonly caused by Candida albicans. Candida species are the most common cause of fungal infection in immunocompromised persons. Candidal skin infections may be treated with topical application of the immidazole antifungals. Topical application of nystatin is also effective for candidiasis.

**Compound topical preparations:** Combination of an imidazole and a weak corticosteroid may be of value in the treatment of eczematous intertrigo and a severely inflamed patch of ringworm. The combination of nystatin and a weak corticosteroid may be of use in the treatment of intertrigo associated with candida. Combination agents have a higher rate of treatment failure and disease relapse.

**Choices of anti-fungal formulation:** Lotions or sprays are suitable for application to large and hairy areas. Ointments are generally used on dry areas. Creams are suitable for moist areas.

#### BENZOIC ACID + SALICYLIC ACID (WHITFIELD'S OINTMENT)<sup>[ED]</sup>

It is a combination of 6% benzoic acid which has fungistatic action and 3% salicylic acid which has keratolytic action.

**Indications:** superficial fungal infections, pityriasis versicolor

Cautions: avoid contact with eyes.

**Contraindications:** Known hypersensitivity to any component of Whitfield's ointment

Interactions: see Appendix-2

**Side-effects** : mild inflammatory lesions. **Dose:** apply twice daily to the affected area for at least 4 weeks.

#### **Proprietary Preparations**

Ointments containing Benzoic acid 6% and Salicylic acid 3% : Albi-Whitfield (Albion), Oint., Tk.9.00/20 gm Benzalic (Central), Oint., Tk.14.00/20 gm BS (Acme), Oint. Tk. 665.00/Kg G-BENZOSAL (Gonoshasthaya), Oint., Tk. 12.50/25 gm Whitefield (Asiatic), Oint. Tk.13.00/30 gm

#### BUTENAFINE

Indications: dermatophytoses, pityriasis versicolor

**Cautions:** lactation, avoid contact with mouth, eyes, and other mucous membranes, child less than 12 years of age

**Contraindications:** pregnancy, known hypersensitivity to butenafine

**Side-effects:** burning, stinging, contact dermatitis, erythema, irritation, itching **Dose:**Cream:For tinea pedis: once daily for 4 weeks, or twice daily for 1 week For tinea elsewhere: once daily for 2

weeks For pityriasis versicolor: once daily for 2 weeks

#### **Proprietary Preparations**

Butefin (Square), Cream, 1%, Tk. 40.15/10gm Fintop (Drug Int.), Cream, 1%, Tk. 40/10gm Tenafin (Beximco), Cream, 1%, Tk.50/15gm

#### CLOTRIMAZOLE<sup>[ED]</sup>

Indications: dermatophytes, pityriasis versicolor, cutaneous and vaginal candidiasis

**Cautions:** pregnancy & lactation, hepatic and renal impairment, avoid use around the eyes

Contraindications: known hypersensitivity to clotrimazole

Side-effects: erythema, burning, irritation, stinging, contact dermatitis, peeling, blistering edema, pruritus, and urticaria at the site of application Dose: Apply twice daily for 2-4 weeks. Intravaginal clotrimazole tablets:

(see section 6.2.2)

#### **Proprietary Preparations**

Clotrimazole 1%

 Afun
 (Square), Cream, Tk. 35/10 gm.

 Cantrim
 (Rephco), Cream, Tk. 28/10 gm

 Clarizol
 (Incepta), Solu., Tk. 50.00/20 ml

 Cloderm
 General) Cream, Tk. 35.10/10 gm

 Closten
 (Alco), Cream, Tk. 25/10 gm

 Clotrim
 (Acme), Cream, Tk. 30/10 gm;

 Tk.18.31/5 gm;

Clotzol (Sharif), Cream, , Tk. 29/10 gm Clozox (Unimed), Cream, , Tk. 25/10 gm Dermasim (ACI), Cream, Tk. 40/15 gm; Solu., Tk. 68.00/20 ml ;

Fungin (Ibn Sina), Cream, Tk. 35/10 gm Itch Free (Albion), Cream, Tk. 28/10 gm Neosten (Beximco), Cream, Tk. 40/20 gm; Tinazol (Popular), Cream, Tk. 25.09/10 gm Triderm (Healthcare), Cream, Tk. 35/10gm; Tk. 45.00/20 gm

Trimazole (Opsonin), Cream, Tk.18.86/10gm Tinatrim (GSK), Cream, Tk. 30.88/10 gm

#### ECONAZOLE

Indications: dermatophytoses, pityriasis versicolor, mucocutaneous candidiasis Cautions: avoid use around the eyes Contraindications: known hypersensitivity to econazole, porphyria, pregnancy

Side-effects: erythema, burning, stinging, contact dermatitis, and pruritus. Dose:1% cream: 1-2 times daily for 2-4 weeks

Vaginal candidiasis: see section 6.2.2

#### Proprietary Preparations Econazole 1%

Conacream (Supreme), Cream, Tk.32/10 gm Ecoderm (Rephco), Cream, Tk. 28/10 gm Ecolet (Amulet), Cream, Tk. 32/10 gm Econal (Kemiko), Cream, Tk. 32/10 gm Econate (Incepta), Cream, Tk. 32/10 gm Econate -G (Incepta), Cream, Tk. 70/30 gm Ecoren (ACI), Cream, Tk. 30.11/10 gm Ecozol (Opsonin), Cream, Tk. 52.83/30 gm; Tk. 24.15/10 gm

Pevaryl (Sanofi) Cream, Tk. 32.49/10 gm Spectazole(Healthcare),Cream,Tk.35/10 gm

#### ECONAZOLE WITH TRIAMCINOLONE

steroid-responsive inflammatory dermatoses with econazole-sensitive mycotic and/or bacterial superinfections; **Dose:**apply 1-2 times daily for 2 weeks.

Econazole 1% + Triamcinolone 1% Aristocort Plus (Aristo), Cream, Tk. 20/5 gm; Tk. 35.00/10 gm Avison (Orion), Cream, Tk. 35.13/10 gm Dicot (Drug Int), Cream, Tk. 40/10 gm Ecoderm T.A (Rephco), Cream, 35/10 gm Ecolon (Supreme), Cream, Tk. 34.00/10 gm Econate Plus (Incepta), Cream, Tk. 40/10 gm Ecoren T (ACI), Cream, Tk. 41.15/10 gm Ecostat (Sharif), Cream, Tk. 34/10 gm Ecotrim (Beximco), Cream, Tk. 34.50/10 gm Ecozol Plus (Opsonin), Cream, Tk. 25.66/10g Elocon (Amico), Cream, Tk. 40/10 gm Enazol Plus (Biopharma), Cream, Tk. 34.13/10 gm Fungicort (Ibn Sina), Cream, Tk. 40/10 gm Fungison (Chemist), Cream Tk. 40.00/10 gm Pelsone(Albion), Cream, Tk. 48/10 gm Peviderm (Pharmasia), Cream, Tk. 40/10 gm Pevisia (Asiatic), Cream, Tk. 34/10 gm Pevisone (Sanofi), Cream, Tk. 48.00/10gm; Cream, Tk. 75.28/20 gm

Pevitin (Square), Cream, Tk. 40.15/10 gm

**Spectazole-N** (*Healthcare*), Cream, Tk. 40.00/10 gm

Tinacort (Kemiko), Cream, Tk. 40/10 gm Tricoderma (General), Cream, Tk. 34.13/10gm

#### FENTICONAZOLE

Indications: vulvovaginal candidiasis. Cautions: pregnancy, lactation Contraindications: known hypersensitivity to imidazole derivatives Side-effects: transient burning, sensitization

**Dose:**one applicator full (about 5 g) is administered into the vagina by a reusable applicator (morning and evening for three days).

#### Generic Preparation Cream, 2%

## FLUCONAZOLE<sup>[ED]</sup>

(see section 1.2.1)

Indications: candidiasis, dermatophytosis (tinea), onychomycosis, pityriasis versicolor, cryptococcal meningitis, sporotrichosis

Cautions, Side-effects & Dose: see section 1.2.1 under Fluconazole Interactions: see Appendix -2

#### **Proprietary Preparations**

Afluzole (*Ambee*), Cap., 150mg, Tk. 22.08/Cap.; 50 mg, Tk. 8.03/Cap; Powder for Suspn., 50 mg/5 ml, Tk 78.3/ 35ml Apicon (*APC*), Cap., 50 mg, Tk. 8.00/Cap. **Canazole** (*ACI*), Susp.., 50 mg/5 ml , Tk. 78.29/35 ml; Tab. , 50 mg , Tk. 8.03/Tab.;150 mg , Tk. 22.08/Tab.; 200 mg , Tk. 25.00/Tab. Candid (Amico), Tab., 150 mg, Tk. 22.00/Tab.; 50 mg, Tk. 7.00/Tab. Candidal (Radiant), Cap., 150 mg, Tk. 22.50/Cap.; 50 mg, Tk. 8.00/Cap. Candiflu (Globex), Cap., 50 mg, Tk. 8.00/Cap. Candinil (Healthcare), Cap., 50 mg, Tk. 8.00/Cap.; 150 mg, Tk. 22.00/Cap.;Susp., 50 mg/5 ml, Tk. 78.00/35 ml Conaz (Orion), Cap., 150 mg, Tk. 22.08/Cap.; 50 mg, Tk. 8.03/Cap. Defungi (Nipro JMI), Cap., 150 mg, Tk. 22.09/Cap.; 50 mg , Tk. 8.04/Cap. **Derma** (*Alco*), Cap. , 150 mg, Tk. 20.00/Cap.;50 mg, Tk. 8.00/Cap. **Dermicon** (*Asiatic*), Cap. , 150 mg , Tk. 22.00/Cap. ;50 mg, Tk. 8.00/Cap.

Diflu (Aristo), Susp., 50 mg/5 ml, Tk. 78.00/35 ml; Cap., 150 mg, Tk. 22.00/Cap.; 200 mg, Tk. 25.00/Cap.; 50 mg, Tk. 8.00/Cap. Fluact (*Leon*), Cap. , 50 mg, Tk. 8.00/Cap.; 150 mg, Tk. 22.00/Cap.;Susp., 50 mg/5 ml , Tk. 78.00/35 ml Flucanex (RAK), Cap., 150 mg, Tk. 22.00/Cap.;50 mg, Tk. 8.00/Cap. Flucoder (Eskayef), Cap, 150 mg, Tk. 22.00/Cap.; 200 mg, Tk. 25.00/Cap.; 500mg , Tk. 8.10/Cap.; Susp., 50 mg/5 ml , Tk. 78.00/35 ml Flucolet (Amulet), Cap., 150 mg, Tk. 20.00/Cap; 50 mg, Tk. 8.00/Cap; Susp.,50mg/5 ml , Tk. 75.00/35 ml Flucon (Opsonin), Cap., 150 mg, Tk.16.60/Cap.; 200 mg,Tk. 18.80/Cap.; 50mg, Tk. 6.04/Cap. Fluconal (Acme), Tab., 150 mg, Tk. 22.08/Tab.; 50 mg, Tk. 8.04/Tab.;Susp., 50 mg/5 ml, Tk. 78.30/35 ml Fluconazole (Albion), Susp.., 50 mg/5 ml, Tk. 78.00/35 ml;Cap., 150 mg, Tk. 22.00/Cap.; 50 mg, Tk. 4.00/Cap. Flucostan (Ziska), Cap., 50mg, Tk. 5/Cap. Fluderm (Benham), Cap., 50 mg, Tk.11.53/Cap. Flufun (Astra), Cap., 150 mg, Tk. 22.00/Cap.; 50 mg, Tk. 8.00/Cap. Flugal (Square), Susp., 50 mg/5 ml , Tk. 78.30/35 ml;Cap. , 150 mg, Tk. 22.08/Cap.; 200 mg , Tk. 25.10/Cap. ; 50 mg, Tk.8.04/Cap. Flugard (*Pharmasia*), Cap. , 150 mg, Tk. 22.00/Cap. ; 50 mg, Tk. 8.00/Cap. Flujale (*Central*), Cap. , 50 mg, Tk. 8.00/Cap. Flukzol (*Sharif*), Cap. , 50 mg, Tk. 8.00/Cap. Flunac (Drug Int.), Cap., 150 mg, Tk.20.00/Cap.; 50 mg, Tk. 8.00/Cap.; Susp., 50mg/5 ml, Tk. 70.00/35 ml Flunapen (Concord), Cap., 150 mg, Tk.22.00/Cap.; 50 mg, Tk. 8.00/Cap. Flunol (Somatec), Cap., 150 mg, Tk. 24.09/Cap. ;50 mg, Tk. 7.03/Cap. ;Susp., 50mg/5 ml, Tk. 75.28/35 ml Flusaf (White Horse), Cap., 150 mg, Tk. 22.00/Cap.; 50 mg, Tk. 8.00/Cap. Flutinex (*Organic*), Susp., 50 mg/5 ml , Tk. 78.00/35 ml ;Cap. , 150 mg, Tk. 22.00/Cap.; 50 mg, Tk. 8.00/Cap. Fluvin-Od (GSK), Tab. , 150 mg, Tk. 17.66/Tab.; Tab. , 50 mg, Tk. 7.06/Tab. Fluzo (Pacific), Tab., 150 mg, Tk. 16.54/Tab.; 50 mg, Tk. 6.02/Tab. Fluzole (Globe), Tab., 50 mg, Tk. 8.00/Tab.; 150 mg, Tk. 22.00/Tab. Funcid (MST), Cap., 150 mg, TK. 22/Cap.; 50 mg, TK. 8/Cap. Fungamak (Maks), Cap., 50 mg, Tk. 8/Cap. Fungata (Biopharma), Susp., 50 mg/5 ml, Tk. 78.29/35 ml;Cap., 150 mg, Tk. 22.08/Cap.; 50 mg, Tk. 8.03/Cap.

Fungitrol (Rangs), Cap., 150mg, Tk. 22.00/Cap; 50mg, Tk. 8.00/Cap.; Powder for Suson., 50mg/5ml, Tk. 78.00/35 ml F-Zol (Popular), Cap., 200 mg, Tk. 25.00/Cap. 150 mg, Tk. 22.08/Cap.; 50 mg, Tk. 8.03/Cap. Galfin (*General*), Cap., 150 mg, Tk. 22.08/Cap.; 50 mg, Tk. 8.03/Cap. **lluca** (*lbn Sina*), Cap. , 150 mg, Tk. 23.00/Cap.; 50 mg, Tk. 9.00/Cap. Inj.(I.VInfusion), 200 mg/100 ml, Tk. 199.24/100 ml Leucodar (Chemist), Tab., 50 mg, Tk.12/Tab. Lucan R (Renata), Cap., 150 mg, Tk. 22.08/Cap.; 50 mg, Tk. 8.03/Cap.;Susp., 50 mg/5 ml, Tk. 78.30/35 ml; Lucon (Navana), Cap., 150 mg, Tk. 22.08/Cap; 50 mg, Tk. 8.03/Cap. Mycoder (Unimed), Susp.., 50 mg/5 ml , Tk. 70.00/35 ml; Tab. , 150 mg, Tk. 20.00/Tab.; 50 mg, Tk. 7.00/Tab. Nispore (Incepta), Cap., 150 mg, Tk. 22.00/Cap.; 200 mg, Tk. 25.00/Cap., 50 mg, Tk. 8.00/Cap.; Susp., 50 mg/5 ml , Tk. 78.00/35 ml Olif (Kemiko), Cap., 150 mg, Tk. 22.00/Cap.; 50 mg , Tk. 8.00/Cap. Omastin (Beximco), Cap., 50 mg, Tk. 8.00/Cap.; 150 mg, Tk. 22.00/Cap.; 200mg, Tk. 25.00/Cap.; lij.(I.VInfusion), 200 mg/100 ml, Tk. 200.00/100 ml; Susp., 50 mg/5 ml , Tk. 78.00/35 ml Trigal (Ad-din), Cap., 150 mg, Tk. 18/Cap.; 50mg, Tk. 7/Cap. Xeroder (Beacon), Cap., 150 mg, Tk. 22.00/Cap. ;, 50 mg, Tk. 8.00/Cap. Zolen (Apex), Cap., 150 mg, Tk. 18.00/Cap.; 50 mg, Tk. 8.00/Cap.

#### **GRISEOFULVIN**<sup>[ED]</sup>

(see section 1.2.2)

**Indications:** superficial fungal infections, especially tinea capitis. Griseofulvin is not used as a first-line therapy for fungal infections other than tinea capitis.

Cautions, Contraindications& Sideeffects: see section 1.2.1 Interactions: see Appendix-2

**Dose:** ADULT: 10 mg/kg/day, CHILD: 5–10 mg/kg/day, for tinea corporis: 2-4 weeks, for onychomycosis: over 1 year

#### **Proprietary Preparations**

Fulcinex (ACI), Susp, 125 mg/5 ml , Tk. 23.42/60 ml ; Tab. , 500 mg , Tk. 5.58/Tab. Griseofulvin (Albion), Tab. , 500 mg, Tk. 5.56/Tab. ; Susp, 125 mg/5 ml, Tk. 18.56/60

G-G VIN (Gonoshasthaya), Tab., 500 mg, Tk. 4.00/Tab.

**Grisovin FP** *(GSK),* Tab. , 500 mg, Tk. 4.91/Tab.

#### ITRACONAZOLE

(see section 1.2.1)

Indications: Onychomycosis, systemic mycoses such as blastomycosis, histoplasmosis, and aspergillosis, candidiasis, dermatophytoses (tinea) Cautions Contraindications& Sideeffects: see section 1.2.1 Interactions: see Appendix-2. Dose: see section 1.2.1

#### **Proprietary Preparations**

Itra (Square), Cap., 100 mg, Tk. 15.05/Cap. Iconal (Kemiko), Cap., 100 mg, Tk. 15.00/Cap. I-Zol (Popular), Cap., 100 mg, Tk. 15.06/Cap.

#### **KETOCONAZOLE**

(see section 1.2.1)

Indications: deep fungal infections , dermatophyte infections not responding to topical therapy (tinea pedis, tinea cruris, and tinea corporis), candidiasis, seborrhoeic dermatitis,and extensive pityriasis versicolor

Cautions, Contraindications, Side effects : see section1.2.1 under Ketoconazole Dose: Ketoconazole 2% cream: Apply 1-2 times daily

Ketoconazole 2% shampoo:

Apply daily for 5 consecutive days. As prophylaxis, apply at least 2-3 times a week, then monthly (see section1.2.1 under Ketoconazole)

#### Proprietary Preparations

Dancel (Incepta), Shampoo, 2%, Tk. 175.00/60ml; Tk. 230.00/100 ml Ketocon (Opsonin), Shampoo, 2%, Tk. 132.08/60ml; Tab., 200 mg, Tk. 6.04/Tab. Ketofun (Amico), Tab., 200 mg, Tk. 8.33/Tab. Ketoral (Square), Tab., 200 mg, Tk. 9.03/Tab. Ketozol (Aristo), Shampoo, 2%, Tk.175/60 ml Nizoder (Unimed), Shampoo, 2%, Tk. 230/100 ml; Cream, 2%, Tk. 50/15gm

#### MICONAZOLE<sup>[ED]</sup>

Indications: dermatophytoses, pityriasis

versicolor, mucocutaneous candidiasis Side-effects: irritation, burning, maceration, allergic contact dermatitis Dose: apply 1-2 times daily for 2-4 weeks

#### **Proprietary Preparations**

Miconazole Cream 2%,

Miconex (ACI), Cream, Tk. 35.13/10 gm; Tk. 60/15 gm; Tk. 100/30 gm, Tk. 60/15 gm Topicazole (Incepta), Cream, Tk. 35/10 gm Mitigal (Ad-din), Cream, 20mg/g, Tk. 30/10gm G-Miconazole (Gonoshasthaya), Cream, 2%, Tk. 18.25/5 gm; Tk. 34.50/10 gm Fungidal (Square), Cream, Tk. 35.14/10 gm Unigal (Opsonin), Cream, Tk. 45.27/10 gm Mic (Globe), Cream, 20 mg/1 gm, Tk.35/10gm

Miconazole with hydrocortisone steroid-responsive inflammatory dermatoses

Dose: apply 2 times daily for 2-4 weeks.

#### Proprietary Preparations

Miconazole 2%+ Hydrocortisone1% Fungidal-HC(Square),Cream,Tk.40.15/10gm MHC Cream (Sharif), Cream, Tk. 40/10 gm Mic HC (Globe), Cream, 20 mg + 10 mg/gm, Tk. 37.00/10 gm Micosone (ACl), CreamTk. 40.15/10 gm; Oint,Tk. 40.15/10 gm Myco-HC (Pharmasia),Cream,Tk.40.15/10gm Miconazole Plus (Albion), Cream, Tk. 40.15/10 gm Miki-H (Orion), Cream,Tk. 40.15/10 gm Topicazole Plus (Incepta), Cream,, Tk. 40.00/10 gm

MICONAZOLE GEL<sup>[ED]</sup>

Indications: Oropharyngeal candidiasis. Dose 5-10 ml after food 4 times a day. Retain near oral lesions before swallowing. Continue treatment until 48 hours until lesions have healed.

#### **Proprietary Preparations**

Miconazole Oral Gel 2% A-Migel (Acme), Oral Gel, Tk. 52/15 gm Candoral (Beximco), Oral Gel, Tk. 52/15 gm Dakrin (General, Oral Gel, Tk. 60/15 gm Fungidal (Square), Buccal Tab.10 mg, Tk. 5.01/Tab.

Gelora (Square), Oral Gel, Tk. 60/15 gm Micoderm (Drug Int.), Oral Gel, Tk. 50/15gm Micosina (Ibn Sina), Oral Gel, Tk. 60/15 gm Myco (Parmasia), Oral Gel, Tk. 50/15 gm Mycon (Aristo), Oral Gel, Tk. 60/15 gm OrageI-M (Unimed), Oral Gel, Tk. 50/15 gm Oramic (Alco), Oral Gel, Tk. 50/10 gm Oroconazol (Incepta), Oral Gel, Tk. 50/15 gm Orogurd (Eskayef), Oral Gel, Tk. 50/15 gm

#### NYSTATIN<sup>[ED]</sup>

**Indications:** Cutaneous and mucocutaneous candidiasis.

Cautions: pregnancy, lactation Side-effects: burning, pruritus, rash, eczema, rarely pain on application Dose:oral candidiasis (thrush): apply four to five times daily for 2 weeks Powder, cream, ointment, or gel: For cutaneous candidiasis: apply 2-4 times daily for 2 weeks

#### Proprietary Preparations

<u>Clobetasol Propionate 0.5mg + Neomycin</u> <u>Sulphate 5mg + Nystatin 1lac unit/gm</u>

Aclobet-N (Acme), Oint., Tk. 65.25/15 gm; Cream, Tk. 60/15 gm Clobeon (*RAK*), Cream, Tk. 60/10 gm Clovate-N (*ACI*), Cream, Tk. 65/10 gm; Oint. Tk. 70.00/15 gm Comol-NN (*Sanofi*), Oint., Tk. 65/15 gm; Cream, Tk. 65/10 gm Dermasol-N (*Square*), Cream, Tk. 60.22/15 gm; Oint., Tk. 65.25/15 gm Dermex-NN (*Opsonin*), Cream, Tk.41.51/10gm Exovate N (*Beximco*), Cream, Tk. 75/25 gm see also section 1.2.3

#### OXICONAZOLE

Indications: dermatophytoses, pityriasis versicolor

**Cautions:** pregnancy and breast feeding **Contraindications:** known hypersensitivity to oxiconazole

Side-effects: pruritus, burning, irritation, erythema, maceration, and fissuring Dose: 1% cream: apply once daily for 2-4 weeks.

#### **Proprietary Preparation**

Oxifun (Square) Cream 1% Tk.50/10gm

#### TERBINAFINE

(see section1.2.1)

Indications: Onychomycosis tinea capitis in children older than 4 years of

age, selected cases of tinea corporis, tinea pedis, or tinea cruris that are widespread, severe, or resistant to topical treatment and pityriasis versicolor **Cautions, Contraindications& Side** effects: see section 1.2.1

#### Interactions: see Appendix-2.

diarrhea, stomach upset, loss of taste, toxic epidermal necrolysis and erythema multiforme.

Dose: oral; see section1.2.1

Topical preparatio;For tinea pedis (interdigital): twice daily for 1 week For tinea pedis (plantar): twice daily for 2

weeks For tinea elsewhere: once or twice daily

for at least 1 week, up to 4 weeks

For pityriasis versicolor: once or twice daily for 2 weeks

#### **Proprietary Preparations**

Terbinafine 1%

Binafin (Amulet), Cream, Tk. 50.00/10 g Derbicil (Incepta), Cream, Tk. 50.00/5 g Derfin (Alco), Cream, Tk. 30.00/10 g Finater (Popular), Cream, Tk. 50.19/5 g Infud (Genera) Cream, Tk. 50.19/5; Tk. 30.11/5 g

Mycofin (*Eskayef*), Cream, Tk. 50.00/5 g ; Tab., Tk. 40.00/Tab.

Skinabin (ACI), Cream, Tk. 50.19/15 g Telfin (Unimed), Cream, Tk. 60.00/10 g; Terbex (Beximco), Cream, Tk. 35.00/5 g Terbifin(Aristo), Cream, Tk. 52.00/5 g; Termider (Biopharma), Cream, Tk. 50.19/10 gm; Tk. 30.11/5 g

Xfin (Square), Cream, Tk. 50.20/5 gm

#### TIOCONAZOLE

Indications: fungal nail infection, dermatophytoses, tinea versicolor Cautions: avoid contact with eyes and

mucous membrane.

**Contraindications:** pregnancy, known hypersensitivity to tioconazole **Interactions:** see Appendix-2.

Side-effects: occasional local irritation, local edema, dry skin, nail discoloration; periungual inflammation; rash; exfoliation.

**Dose:** apply to nails and surrounding skin twice daily.Pityriasis versicolor: up to 7 days.Tinea pedis: up to 6 weeks Dermatophytoses in other sites, candidiasis, erythrasma: 2-4 weeks

Onychomycosis: 6-12 months

#### **Proprietary Preparations**

Ticonazole 1% Conasyd (Renata), Cream, Tk. 63.00/10 gm Tycon (Acme), Cream, Tk. 47.72/10 g;

#### TOLNAFTATE

Indications: dermatophytosis and pityriasis versicolor. Contraindications: known sensitivity to

tolnaftate. **Side-effects:** itching, burning, rarely contact dermatitis.

**Dose:** apply twice daily for 2-4 weeks.

#### **Proprietary Preparations**

Tinaderm <sup>(I)</sup>(Schering), Solution 1%, Tk.158.81/bot Tinafate (Pharmadesh), Cream 1% Tk.25/10gm

#### **12.2.3 ANTIVIRALS**

A major antiviral drug, acyclovir is frequently used to treat cutaneous herpes simplex herpes zoster and chicken pox. Intralesional injection of interferon alfa-2b is administered for chondylomata acuminata. Improvement of psoriasis in AIDS patients with oral zidovudine has been reported.

#### ACYCLOVIR<sup>[ED]</sup>

(see section 1.4.1)

Indications: Herpes simplex, herpes zoster, recurrent erythema multiforme **Caution:** avoid contact with eyes and mucus membranes

**Contraindications:** renal impairment, pregnancy and breast-feeding

Side-effects: transient stinging or burning, occasionally erythema or drying of the skin

Oral or intravenous acyclovir:

Nausea, vomiting, diarrhea, headache, reversible renal impairment due to a crystalline nephropathy

**Dose:** Oral: see section 1.4.1 .Topical: Apply to lesions every 4 hours for 5-10 days; should be started at first sign of attack.

Proprietary Preparations: ACYCLOVIR 5%

Acirux (Albion), Cream, Tk. 40.00/5gm Simplovir (Incepta), Cream Tk. 40.00/5 gm Suclovir (Supreme), Cream, Tk. 40.00/5 gm Virux (Square), Cream, Tk. 40.15/5 gm;

#### DOCOSANOL

**Indications:** cold sores/fever blisters (herpes labialis)

**Cautions:** do not use in or near the eyes: avoid applying directly inside the mouth

Contraindications: known hypersensitivity to docosanol

**Side-effects:** headache, skin irritation, burning, dryness, itching, allergic reactions

**Dose:** apply 5 times a day at the first sign of recurrence of herpes simplex labialis for 5-7 days.

#### Proprietary Preparation

Lafrost (Incepta), Cream 10%, Tk. 50.00/5g

#### VALACICLOVIR

Indications: herpes simplex, herpes zoster

Cautions, Contraindications, Sideeffects & Dose: see section 1.4.1

#### **Proprietary Preparations** see section 1.4.1

**12.2.4 ANTIPARASITICS** 

All members of affected households should be treated. Drug should be applied to the whole body specially to the webs of the fingers and toes and brushing lotion under the ends of the nails In case of children, elderly and if there is treatment failure, application should be extended to the scalp, neck, face and ears. The itch of scabies persists for some weeks after the infestation has been eliminated and antipruritic treatment may be required. Oral administration of a sedating antihistamine at night may be useful. Head lice infestation is known as pediculosis should be treated using

lotion, liquid or cream rinse formulations. Over night treatment is recommended for lotions and liquids. In general, a course of treatment for head lice should be two applications of product 7 days apart to prevent lice emerging from any eggs that survive the first application. Malathion, permethrin may be used for head lice infestations.

#### BENZYL BENZOATE [ED]

#### Indication: scabies.

**Cautions:** avoid contact with eyes and mucous membrane. It should not be used on broken or secondary infected skin. Breast-feeding must be stopped till the product has been washed off. Drying effect in elderly.

**Contraindications:** broken or irritated skin, neonates, pregnancy

**Side-effects:** skin eruption, burning sensation, especially on genitalia and excoriation.

**Dose:** apply 3 times at 12 hourly intervals over the whole body below the neck. Wash off 12 hours after the last application.

#### **Proprietary Preparations**

Benzyl benzoate25%

Scabex (Supreme), Emulsion, Tk. 32/100 ml Scabimax (Maks), Emulsion, Tk. 18.50/60 ml Scabisol (Jayson), Emulsion, Tk. 35/100 ml Ascabio (Sanofi), Emulsion, Tk. 18.00/100 ml Ascabiol (Sanofi), Emulsion, Tk. 32.07/100ml Benzyl (Acme), Lotion, Tk. 126.12/450 ml Bensol (Amico), Emulsion, Tk. 30/100 ml G-B. Benzoate (Gonoshasthaya), Lotion, Tk. 25.00/100 ml

#### CROTAMITON

Indication: scabies.

Cautions: should not be applied in the eyes or mouth ; acutely inflamed skin or raw or weeping surfaces and pregnancy. Contraindications: known hypersensitivity to crotamiton, acute exudative dermatitis.

**Side-effects:** pruritus, contact dermatitis, rash, irritation, warm sensation.

**Dose:** ADULT:Apply 10% cream/lotion to the whole body from below the chin

first after bathing and drying. A second application is done after 24 hours. May need to be used once daily for 5 days for it to be effective.

Pruritic skin disorders:

ADULT: Apply 10% cream/lotion 2-3 times on skin.

CHILD < 3 years: Apply 10% cream/lotion onto the skin once daily for 3 days.

#### Proprietary Preparation

Cronix (Unimed) Lotion, 10%, Tk. 80/60 ml

#### IVERMECTIN

(see section 1.5.1.6)

Indications: scabies, filariasis caused by *Wuchereria bancrofti* (lymphatic filariasis), pediculosis (head lice), onchocerciasis, strongyloidosis and trichuriasis.

Cautions: bronchial asthma

**Contraindications:** bronchial asthma, known hypersensitivity to ivermectin, pregnancy

Side-effects:nausea, vomiting or decreased appetite, diarrhoea or constipation, muscle or joint pain, swelling of the lymph nodes, fever, tiredness, dizziness, tremor, itching, eyelid swelling or eye redness.

**Dose:** for scabies, strongyloidosis & head lice : 200 µg/kg single dose, repeat after 7-14 days if necessary.

Ivermectin should be administered as a single dose with a full glass (240 ml) of water on an empty stomach (1 hour before breakfast).

#### **Proprietary Preparations** see section 1.5.1.6

#### MONOSULFIRAM

#### Indications: scabies.

**Cautions :** avoid alcohol before and 48 hours after application.

**Side-effects:** dizziness, headache, fatigue and erythematous rash

**Dose:** monosulfiram is first diluted with 2-3 parts of water, and the solution is applied all over the body (except face and scalp) after a bath, and it should be

rubbed in well once a day on two or three consecutive days.

#### **Proprietary Preparation**

Tetrasol (ACI), Solution, 25%, Tk. 68/30 ml

#### PERMETHRIN

**Indication:** scabies and head lice, pediculosis pubis

#### Permethrin 5%

Arotrix (Aristo), Cream, Tk. 28.00/15 gm; Tk.50.00/30 gm Delice (Amico), Cream, Tk. 25.00/15 gm; Tk.40.00/30 gm

Deorix(Popular), Cream, Tk. 40.15/30 gm Elimate (Incepta), Cream, Tk. 40.00/30 gm Ermite (Jayson), Cream, Tk. 40.15/30 gm Licerin (Drug Int.,), Cream, Tk. 25.00/15 gm;

Tk. 40.00/30 gm Lorix (Opsonin), Cream,Tk.30.19/30 gm; Tk. 40.15/15 gm

Lotrix (GSK), Cream, Tk. 48.57/30 gm Mecabis (Asiatic), Cream, Tk. 25.00/15 gm;

Tk. 40.00/30 gm Neeper (Kemiko), Cream, Tk. 28.00/15 gm;

Tk. 40.00/30 gm Noscab (Beximco), Cream, Tk. 35.00/25 gm Perbix (Albion), Cream, Tk. 40.15/30 gm Perma(Alco), Cream, Tk. 24.00/15 gm; Tk. 35.00/30 gm

Permethi (*Pharmasia*), Cream, Tk. 25/15 gm Permin (*Acme*), Cream, Tk. 25.10/15 gm Permisol (*ACI*), Cream, Tk. 30.00/15 gm; Tk.45.00/30 gm

Perosa (Eskayef), Cream, Tk. 40.00/30 gm Scabex (Square), Cream, Tk. 30.00/15 gm; Tk.50.00/30gm

Scaper (Biopharma), Cream, Tk. 25.09/15 gm; Tk. 40.15/30 gm

Scarin (Ibn Sina), Cream, Tk.30.00/15 gm; Tk.45.00/30 gm

**Skilin** *(General),* Cream,Tk. 25.09/15 gm; Tk.40.15/30 gm

Triaon(Globe), Cream, Tk. 40.00/30 gm Unix (Unimed), Cream, Tk. 40.00/30 gm Zunex(Rephco), Cream, Tk. 40.00/30 gm; Tk.

30.00/15 gm

#### Permethrin + Crotamiton

Scabies with intractable pruritus. Cautions: avoid contact with eyes; it should not be used on broken or

secondary infected skin, pregnancy or lactation, history of asthma, **Side-effects:** burning, stinging, pruritus,

erythema, tingling, rarely rashes and oedema

Dose: scabies:

Apply over all skin surfaces from neck to toe (excluding head), and wash off after 8-12 hrs.

Adults and children > 12 years: a full 30 gm tube.

Children aged 6-12 years: up to 1/2 of a 30 gm tube

Children aged 1-5 years: up to 1/4 of a 30 gm tube

Children aged 2 months to 1 year: up to 1/8 of a 30 gm tube

Repeat after 7 days if necessary.

Head lice:Apply 30-60 ml of 1% lotion (cream rinse) to wash and towel-dried hair and allow to remain for 10 minutes. Rinse with water. Treatment may be repeated after 7-10 days if lice or nits are detected at hair-scalp junction.

Pediculosis pubis:Adult: apply sufficient amount of 1% lotion (cream rinse) or 5% cream to thoroughly saturate the pubic area. Allow to remain for 10 minute and then rinse with water.

#### Proprietary Preparations

Permethrin 5% & Crotamiton 10% Elimate Plus (Incepta), Lotion, Tk. 80/60 ml Lorix Plus (Opsonin), Lotion, Tk. 60.38/60 ml Unix-C (Unimed), Lotion, Tk. 100/60 ml

#### PRECIPITATED SULFUR

Indication: scabies, particularly in pregnancy

Cautions: avoid contact with the eyes. Side-effects: noxious odor and mild skin irritation. Dose:apply for 24 hours, then wash off,

and repeat daily for 5 days

**Proprietary Preparations** 

Coal Tar Solution 12%+ Salicylic Acid2% + Precipitated Sulphur4% Soritar (Unimed), Scalp Ointment, Tk.200/30 gm

#### 12.3 TOPICAL CORTICOSTEROIDS

Treatment of topical corticosteroids is not curative, and when treatment is discontinued a rebound exacerbation of the condition usually occurs. They may worsen secondary infected lesions. These should not be used indiscriminately in pruritus

#### CORTICOSTEROID (TOPICAL)

Indications : dermatitis and papulosquamous diseases:atopic dermatitis, diaper dermatitis, dyshidrotic eczema, erythroderma, lichen planus, lichen simplex chronicus, nummular dermatitis, pityriasis rosea, psoriasis (intertriginous), psoriasis (plaque or palmoplantar), seborrheic dermatitis Bullous diseases:

Bullous pemphigoid, cicatricial pemphigoid, epidermolysis bullosa acquisita, pemphigus foliaceus

Connective tissue diseases:dermatomyositis, lupus erythematosus

Other dermatologic uses:behçet's disease, pyoderma gangrenosum, alopecia areata, acne keloidalis nuchae, cutaneous T cell lymphoma (patchstage), granuloma annulare, lichen planopilaris, lichen sclerosis et atrophicus, morphea, pruritus (perianal, vulvar, scrotal), sarcoidosis, vitiligo

**Cautions:** if secondary infection occurs during treatment, appropriate systemic or local antimicrobials should be added. **Interactions:** see Appendix-2.

**Systemic side-effects:**suppression of hypothalamic-pituitary-adrenal axis, iatrogenic Cushing's syndrome, growth retardation in infants and children

Local side-effects:epidermal atrophy. steroid-induced acne, prominent vasculature, striae, purpura, allergic or irritant contact dermatitis, tachyphylaxis, glaucoma/cataracts, facial hypertrichosis, folliculitis, miliaria, genital ulceration, exacerbation or increased susceptibility to bacterial, fungal, and viral infections, reactivation of Kaposi's sarcoma, perioral dermatitis, rosacea, delayed wound healing, skin atrophy especially on thin skin areas such as the face or skin flexures. Absorption through the skin can cause pituitary adrenal axis suppression and Cushing's syndrome. Contraindications: infants under 1 year of age, known hypersensitivity to the topical corticosteroid, bacterial.

topical corticosteroid, bacterial, mycobacterial, fungal, viral infection,

infestation, ulceration **Dose:** apply 1-2 times daily.

#### BETAMETHASONE DIPROPIONATE[ED]

Indications: atopic eczema, nummular eczema, contact dermatitis, neurodermatitis, anogenital and senile pruritus, lichen planus and psoriasis Cautions: should not be used in or near

the eyes: see notes above Contraindications: Disorders of

calcium metabolism, children below 18 years of age, erythrodermic, exfoliative and pustular psoriasis, severe renal insufficiency, severe hepatic disorders, and it is not to be used in ophthalmic conditions; *see notes above* 

Interactions: see Appendix-2.

Side-effects: see notes above.

**Dose:** apply a thin film once or twice daily to cover completely the affected area

#### **Proprietary Preparations**

Betamethasone (as diproprionate) 0.1% + Clotrimazole 1% (Ointment)

Betamethasone (as diproprionate) 0.5% + Clotrimazole 0.1%, (Cream)

**Dose**:apply twice daily, tinea cruris/corporis: for 2 weeks, tinea pedis: for 4 weeks

Albevate-Cl (*Albion*), Oint., Tk. 29.31/10 gm Bet-Cl (*Acme*), Cream, Tk. 29.11/10 gm; Oint., Tk. 29.00/10 gm

Betavate-CI (*Drug Intl*), Oint., Tk. 29/10 gm Betnovate CI (*GSK*), Oint., Tk. 25.79/10 gm Betson-CI (*Opsonin*), Cream, Tk. 25.09/10 gm; Oint.Tk. 29.31/10 gm

Clozosone (Unimed), Cream, Tk. 25/10 gm Fungin-B (Ibn Sina), Cream, Tk.35/10 gm Oni (Square), Cream, Tk. 35/10 gm Topibet Cl (Eskayef), Oint., Tk. 30/10 gm

Betamethasone(as diproprionate) 0.05% + Salicylic Acid 2%

Prosalic (*Square*), Lotion, Tk. 150.00/25 ml Betamesal (*Incepta*), Scalp Lotion, Tk. 150.00/30 ml

**Diprosal** (*Aristo*), Lotion, , Tk. 150.00/30 ml **Dose:**apply twice daily

Betamethasone dipropionate + gentamicin: Betamethasone dipropionate + calcipotriol:

#### BETAMETHASONE VALERATE<sup>[ED]</sup>

#### Indications: see notes above Cautions, Contraindications, Sideeffects: see notes above

**Dose:** apply 2-3 times daily till remissions occur

#### **Proprietary Preparations**

Betamethasone (asValerate) Bet-A (Acme), Oint., 0.05%, Tk. 35.00/15 gm; Cream, 0.1%, Tk. 33.00/15 gm Betaderm (Incepta), Oint., 0.05%, Tk. 35.00/15 gm Betaval (Healthcare), Cream, 0.1%, Tk. 33.00/15 gm; Oint., 0.1%, Tk. 35.00/15 gm Betnelan (GSK.), Cream, 0.1%, Tk. 39.36/20 gm; Oint., 0.1%, Tk. 42.23/20 gm Betson (Opsonin), Cream, 0.05%, Tk. 33.56/15 gm; Oint., 0.05%, Tk 35.14/15 gm **Diprobet** (*Square*), Cream, 0.05%, Tk.33.56/15gm; Oint.,0.05%,Tk. 35.14/15gm Mexiderm (Biopharma), Cream, 0.05%, Tk.25.09/15gm; Oint.,0.05%, Tk.30.11/15 am Sinacort (Ibn Sina), Cream & Oint., 0.1%, Tk. 20.00/10 gm

Betamethasone (asValerate) 0.1% + Clotrimazole 1% (Oint)

#### Betamethasone (asValerate) 0.5% + Clotrimazole 1% (Cream)

Albevate-CI (*Albion*), Oint.,Tk. 29.31/10 gm Bet - CI (*Acme*), Cream, Tk. 29.11/10 gm; Oint., Tk. 29.00/10 gm Betavate-CI (*Drug Intl*), Oint., Tk. 29/10 gm Betnovate CI (*GSK*), Oint.,, Tk. 25.79/10 gm Betson - CI (*Opsonin*), Cream, Tk. 18.86/10 gm; Oint., Tk. 22.04/10 gm Clozosone (*Unimed*), Cream, Tk. 25/10 gm Fungin-B (*Ibn Sina*), Cream, Tk. 35/10 gm Oni (*Square*), Cream, Tk. 35.00/10 gm Topibet CI (*Eskayef*), Oint., Tk. 30.00/10 gm

Betamethasone (as valerate) 0.1% + <u>Neomycin sulphate 0.5%</u>: Albevate-N (*Albion*), Oint., Tk. 18.47/5 gm Aristobet-N (*Aristo*), Oint., Tk. 14.30/3 gm; Bactovate (*RAK*), Cream, Tk. 22/5 gm Betaderm N (*Incepta*), Oint., Tk. 125, gm Betamycin (*Supreme*), Oint., Tk.15.30/5 gm Betaval N (*Healthcare*), Oint., Tk.18.54/15gm; Cream, Tk. 18.51/5 gm Betavate-N (*Drug Intl*), Cream, Tk. 21.55/10 gm

Betnovate-N (GSK), Cream, Tk. 16.29/5 gm; Oint., Tk. 16.31/5 gm

Betson-N (Opsonin), Cream, Tk.18.51/5 gm Mexiderm-N (Biopharma), Cream, Tk. 15.06/5

gm; OintTk.16.06/5 gm **Neobet** (Acme), Cream, Tk. 22.08/10 gm; Oint., 0.1% + 0.5%, Tk. 22.63/5 gm **Neocort** (Ibn Sina), Oint., Tk. 18.53/15 gm **Relich** (Drug Int!), Oint., Tk. 30.00/15 gm

Betamethasone valerate 0.05% + Lidocaine Hydrochloride 2.5% + Phenylephrine Hydrochloride 0.1% rectal ointment Relief of symptoms of itching, irritation, discomfort or pain for local non-infective anal or perianal conditions associated with external haemorrhoids

**Proprietary Preparations** see section 2.7.2

#### **CLOBETASONE BUTYRATE**

## Indications, Cautions, Side-effects : see notes above.

**Dose:**apply to the affected area up to 4 times daily until improvement occurs, when the frequency of application may be reduced

#### **Proprietary Preparations**

Eumovate (GSK), Cream, 0.05%, Tk. 35.32/10 gm; Oint., 0.05%, Tk. 35.32/10 gm Ezex (Square), Cream, 0.05%, Tk. 75.28/25 gm; Oint., 0.05%, Tk. 75.28/25 gm Miclo (General), Oint., 0.05%, Tk. 40.15/10 gm; Cream, 0.05%, Tk. 40.15/10 gm

#### **CLOBETASOL PROPIONATE**

**Indications** : severe resistant inflammatory skin disorder ( recalcitrant psoriasis)

Cautions:see notes above

Contraindications:see notes above Side-effects:see notes above

**Dose:**apply sparingly to the affected area once or twice daily until improvement occurs. As with other highly active topical steroid

preparations, therapy should be discontinued when control is achieved.

If a longer course is necessary, it is recommended that treatment should not be continued for more than four weeks without the patient's condition being observed.

#### Clobetasol propionate scalp solution:

Apply required quantity of spray of clobetasol scalp solution once or twice

daily to the affected areas of the scalp and gently rub in. The total dose applied should not exceed 50 ml weekly. If necessary, the solution may be massaged into the scalp using the tips of the fingers. Therapy should be discontinued if no response is noted after one week or as soon as the lesion heals. It is advisable to use clobetasol propionate scalp solution for brief periods only.

#### **Proprietary Preparations**

Aclobet (Acme), Cream, 0.05%, Tk. 45.00/10 gm;, Oint.,0.05%, Tk. 50.00/10 gm Almovate (Albion), Oint., 0.05%, Tk. 68.26/10 gm Clobederm, (Drug int.), Cream 0.05%, Tk. 50.00/10 gm ; Clobenate (RAK ), Cream, 0.05%, Tk. 45.00/10 gm;Oint., 0.05%, Tk. 50.00/10 gm Clobesol (Aristo), Cream, 0.05%, Tk. 45.00/10 gm; Oint., 0.05% , Tk. 50.00/20 gm Clovate (ACI), Cream, 0.05%, Tk. 58.00/10 gm; Oint., 0.05%, Tk. 68.00/10 gm Cobesol (Pharmasia), Oint., 0.05%, Tk.50.00/10 gm ;Cream, 0.05%, Tk. 45.00/10 qm Comol (Sanofi), Cream, 0.05%, Tk. 58.00/10 gm ;Oint., 0.05%, Tk. 68.00/10 gm Dermacort (Ibn Sina), Cream, 0.05%, Tk. 50.00/10gm ;Oint., 0.05%, Tk. 52.00/10 gm Dermasol (Square), Oint., 0.05%, Tk. 50.20/10 gm; 0.05%, Tk. 75.28/20; Cream, 0.05%, Tk. 45.16/10 gm; Tk. 70.26/20 gm ; Dermex (Opsonin), Cream, 0.05%, Tk 33.06/10 gm;, Oint., 0.05%, Tk. 36.75/10 gm Dermovate (GSK), Cream, 0.05%, Tk. 51.21/10gm ; Oint., 0.05%, Tk. 60.04/10 gm; Dersole (Sharif), Cream, 0.05%, Tk. 45.00/10 gm; Oint., 0.05%, Tk. 50.00/10 gm Eclo (General), Cream, 0.05%, Tk. 45.17/10 gm;Oint., 0.05%, Tk. 50.19/10 gm Exovate, (Beximco), Cream, 0.05%, Tk. 45.00/10 gm; Oint., 0.05%, Tk. 50.00/10 gm Nyclobate (Incepta), Tk. 200.00/30 ml; Cream, 0.05%, Tk. 70.00/20 gm ;Tk. 45.00/10 gm; Oint., 0.05%, Tk. 50.00/10 gm; Tk. 75.00/20 gm

Protasol (Asiatic), Cream, 0.05%, Tk. 45.00/10 gm; Oint., 0.05%, Tk. 50.00/10 gm Synovate (Popular), Cream, 0.05%, Tk. 85.32/25 gm

Temovate (Healthcare), Cream, 0.05%, Tk. 58.00/10 gm Oint., 0.05%, Tk. 68/10 gm Topiclo (Eskayef), Cream, 0.05%, Tk. 45.00/10 gm; Cream, 0.05%, Tk.50/10gm Xderm, (Biopharma), Cream, 0.05%, Tk. 45.17/10 gm Oint., 0.05%, Tk. 50.19/10 gm Xenocort (Orion), Cream, 0.05%, Tk. 40.15/10 gm; Oint., 0.05%, Tk. 50.19/10 gm Xenovate (Unimed), Cream, 0.05%, Tk. 58/10 gm; Oint., 0.05%, Tk. 68/10 gm; Tk. 150/30 gm

Clobetasol propionate scalp solution 0.05% Clovate (ACI), Scalp Solu., 0.05%, Tk. 200.00/30 ml

**Dermasol** (*Square*), Scalp Solu, 50 mg/100 ml, Tk. 200.00/25 ml

Dermovate (GSK), Scalp Lotion,0.05%,Tk. 223.21/30 ml

**Nyclobate** (*Incepta*), Scalp Application, 50 mg/100 ml, Tk. 200.00/30 ml; Shampoo, 50 mg/100ml, Tk.350/60 ml

<u>Clobetasol propionate0.05% + 3% salicylic</u> acid ointment/cream

**Topiclo S** (*Eskayef*), Oint, 0.05% + 3%, Tk. 70.00/10 gm

#### DESONIDE

**Indications:** mild to moderate atopic dermatitis in patients 3 months of age and older

**Cautions:** use only externally and avoid contact with the eyes. It should not be used on the underarm or groin areas of pediatric patients.

pregnancy,

#### Contraindications:

lactation, known hypersensitivity Side-effects: see notes above Dose: gel should be applied as a thin layer to the affected areas two times

daily and rubbed in gently.

## Proprietary preparation

Desotop(ACI) Gel 0.5%,Tk. 50.19 /15gm

#### DIFLORASONE DIACETATE

#### Indications, Cautions, Contraindications, Side-effects: see notes above

**Dose:** apply to the affected areas as a thin film from 1-2 times daily depending on the severity of the condition

#### **Proprietary Preparations**

Eczena (Square), Cream, 0.05%, Tk. 70.26/10 gm ;Oint., 0.05%, Tk. 70.26/10 gm

#### **FLUCINOLONE ACETONIDE**

Indications: Inflammatory skin disorders such as eczema, psoriasis; also see

#### notes above

Cautions: Children, elderly, hepatic failure, prolonged use on the face, avoid contact with eyes Interactions: see notes above Contraindication: see notes above Side-effects: see notes above Dose:apply 2 times a day

12. SKIN

#### **Proprietary Preparations**

Skinalar (ACI), Oint., 0.03%, Tk. 38.00/5 gm ;Cream, 0.03%, Tk. 38.00/5 gm

#### Flucinolone+Neomycin

Skinalar-N (*ACl*), Cream, 0.025%+0.5% , Tk. 40.00/5 gm; Oint., 0.025%+0.5% , Tk. 40.00/5 gm

#### FLUTICASONE PROPIONATE

Indications: inflammatory skin disorder such as eczema and dermatitis; see notes above

Cautions, Contraindications, Sideeffects, Dose: see notes above

#### Proprietary Preparations

Cutisone (General), Oint., 0.005%, Tk. 50.19/10gm; Cream, 0.05%, Tk. 96.36/10 gm Cutivate (GSK), Oint., 0.005%, 0.005%, Tk. 66.98/10gm; Cream, 0.05%, Tk. 101.54/10gm Flupion (Amico) Oint., 0.005%, Tk. 50/10gm Flutivate(RAK), Cream, 0.05%, Tk. 96/10gm Flutate (RAK), Cream, 0.05%, Tk. 96/10gm Flutate (Opsonin), Oint., 0.005%, Tk. 90/10 gm Fluvate (Opsonin), Oint., 0.005%, Tk. 37.74/10 gm Lutisone(Incepta), Oint., 0.05%, Tk. 51/11gm; Oint., 0.005%, Tk. 50/10 gm Ticas (Square), Cream, 0.05%, Tk. 90.34/10 gm; Oint., 0.01%, Tk. 40.15/10 gm

**Ticason** (*Asiatic*),Oint., 0.005%,Tk. 40.00/10gm; Cream, 0.05%, Tk. 90/10 gm

#### HALCINONIDE

Indications: short-term treatment for severe resistant inflammatory skin disorder such as recalcitrant psoriasis (see also notes above) Cautions, Contraindications, Sideeffects: see notes above Dose: apply to the affected areas 2-3 times daily CHILD: use minimal amount necessary for effective therapy

#### **Proprietary Preparations**

**Cinon** (*Ambee*), Cream, 0.1 %, Tk.16/5 gm **Dermalog** (*Jayson*), Cream, 0.1 %, Tk. 30.34/10gm, **Zemalog** (*Gaco*), Cream, 0.1%, Tk. 18/5 gm

#### HALOBETASOL PROPIONATE

#### Indications, Cautions,

Contraindications, Side-effects: see notes above Dose: apply 1-2 times daily for 2 weeks

#### **Proprietary Preparations**

Halobetasol Propionate0.05% Halocort (ACI), Cream, Tk. 90/10 gm Oint., 0.05%, Tk. 90/10 gm Halobet (Square), Cream, Tk. 90/10 gm; Oint., Tk. 90/10 gm Ulticort (Incepta), Cream, Tk. 120/15 gm Habesol (Pharmasia), Oint., Tk. 90/10 gm

#### HALOMETASONE

#### Indications: see notes above

**Cautions:** continuous therapy should not exceed 2 to 3 weeks **Contraindications :** viral infection of the

skin, syphilitic skin affections, tuberculosis of the skin, acne vulgaris, known hypersensitivity to halomethasone **Side-effects:** burning sensation, itching and signs of inflammation at the site of

application

Dose: apply twice daily

#### **Proprietary Preparations**

Sicorten (Novartis), Cream 0.05%; Oint. 0.05%; Tk. 77/5 gm Sicorten Plus (Novartis), Cream. Halometasone + Triclosan 0.1%. Tk. 83/5 gm

<u>Halometasone + Triclosan 0.1%:</u> Steroid-responsive inflammatory dermatoses.

#### HYDROCORTISONE<sup>[ED]</sup>

Indications:Corticosteroid-responsive dermatoses

#### **Proprietary Preparations**

Hydrocortisone1% Cortider (Eskayef), Cream, Tk. 35.00/10 gm Cortimet (Medirnet), Cream, 1gm, Tk.28/10gm Genacort (General), Oint., Tk. 15.06/5 gm Hydrocort (Alco), Cream, Tk. 28.00/10 gm Intasone (Incepta), Cream, Tk. 30.00/10 gm Topicort (Square), Cream, Tk. 40.00/10 gm Zocort (ACI), Cream, Tk. 38.14/15 gm Hydrocortisone 1% + Miconazole 2%: Topical treatment of inflamted dermatoses, where inflammation coexists.

MHC Cream (Sharif), Cream, Tk. 40/10 gm Topicazole Plus (Incepta), Cream, Tk. 40/10 gm

Micosone (ACI), Cream, Tk. 40.15/10 gm ; Oint., Tk. 40.15/10 gm Myco-HC (*Pharmasia*), Cream, Tk.40.15/10

gm

Fungidal-HC (Square), Cream, Tk. 40.15/10 gm Gemison(General),Cream,Tk.40.15/10 gm Miconazole Plus (Albion), Cream, Tk. 40.15/10 gm Miki-H (Orion), Cream, Tk. 40.15/10 gm

Mic HC (Globe), Cream, , Tk. 37.00/10 gm

Hydrocortisone1%+Pramoxine2.5%cream:Inflammatoryandpruriticmanifestationsofcorticosteroid-responsivedermatoses,minorskinirritations,analitchingorhemorrhoids,insect bitesetchemorrhoids,

#### Proprietary Preparation

<u>Neomycin3.5 mg +Polymyxin B 10,000 IU</u> +Pramoxine HCI10mg Nepranol(Square) cream, Tk. 75.28/10gm

#### CLOTRIMAZOLE+HYDROCORTISONE

(see under clotrimazole in section 12.2.2.)

#### Indications, Cautions; Contraindications; and Side effects:

see notes above. Dose: apply 2-3 times daily on affected

and surrounding areas, for dermatophytoses: 3-4 weeks, candidiasis: 1-2 weeks

#### Proprietary Preparations

Clotrimazole 1% + Hydrocortisone 1% Clotison (Biopharma), Cream, Tk. 30.11/10

Neosten HC (Beximco), Cream, Tk. 3500/10 gm; Tk. 55.00/20 gm H-Trimazole (Opsonin), Cream, Tk. 35.63/10 gm Clori HC (Amulet), Cream, Tk. 35.00/10 gm Fusidic Acid 2% + Hydrocortisone 1%. Fusidate-H (Aristo), Cream, Tk. 125/10 gm Fortison (Incepta), Cream, Tk. 125/10 gm Fusitrim (Asiatic), Cream, Tk. 125/10 gm Fusibac-H (Drug Int.), Cream Tk. 125/10 gm Fusicort (Opsonin), Cream, Tk. 94.34/10 gm Facid HC (Eskayef), Cream, Tk. 125/10 gm Fusidic Plus (Beximco), Oint., Tk.125.47/10 gm

#### MOMETASONE FUROATE

Indications: severe inflammatory skin disorders such as eczemas unresponsive to less potent corticosteroid; psoriasis

Cautions, Contraindications, Sideeffects: see notes above

**Dose:** 1% cream/ointment: apply thinly once daily (to scalp in case of lotion). Do not use for more than 3 weeks in children.

#### **Proprietary Preparations**

Momentasone Furoate 0.1%

**Soneta** (*Aristo*), Cream, Tk. 100/5 gm; Oint., Tk. 100/5 gm **Momtec** (*Sanofi*), Cream, Tk. 100/5 gm; Tk.

180/10 gm Elocan (General), Oint., Tk. 100.38/5 mg

Momevate (*RAK*), Cream, Tk. 100/5 gm Momeson (*Incepta*), Cream, Tk. 100/5 gm Mometa (*Popular*), Cream, Tk. 80.68/5 gm, Tk.100.38/10gm

#### TRIAMCINOLONE ACETONIDE

**Indications:** short-term treatment only for severe resistant inflammatory skin disorder such as recalcitrant psoriasis; also *see notes above* 

Oral paste: mouth ulceration

**Dose:**apply onto lesion without rubbing until a thin film appears, apply 2-3 times a day preferably after meals

#### **Proprietary Preparations**

Triamcinolon Acetonide 0.1%. Aristocort(Aristo), Cream, Tk. 20/10 gm; Oint., Tk. 20/10 gm Cortefin (ACI), Cream, Tk. 25.09/10 gm; Oint., Tk. 25.09/10 gm Skinaderm (Kemiko), Oint, Tk. 20/10 gm Stelone (General), Oint., Tk. 25.09/10 gm

#### NYSTATIN+NEOMYCIN+GRAMICIDIN +TRIAMCINOLONE ACETONIDE:

Atopic eczema, contact eczema, follicular eczema, infantile eczema, anogenital pruritis (anal and vulval pruritis), nummular eczema, posttraumatic infective eczema, seborrhocic or flexural eczema, neurodermatitis, psoriasis.

**Dose:**apply 2-3 times daily for 2-4 weeks.

#### Proprietary Preparations:

Nystatin 10,000 units, Neomycin Sulphate 2.5mg, Gramicidin 0.25mg, Triamcinolone Acetonide 1mg/g

Tetracomb (Pharmasia), Cream, Tk. 22.00/5 gm; Tk. 35.00/10 gm ;Oint., Tk. 22.00/5 gm; Tk. 35.00/10 gm

Triamcinolone acetonide intralesional injection:</u>alopecia areata, discoid lupus erythematosus, keloids, localized hypertrophic, infiltrated, inflammatory lesions of granuloma annulare, lichen planus, lichen simplex chronicus (neurodermatitis), and psoriatic plaques; necrobiosis lipoidica diabeticorum. Cautions, Contraindications, Sideeffects: see notes above.

#### Proprietary Preparations

(see section 5.3.2)

Cinchocaine Hydrochloride + Esculin + Hydrocortisone + Neomycin Sulphate Internal and external haemorrhoids, anal fissure, anal pruritus, perianal eczema, preoperative and postoperative treatment haemorrhoidectomy, of postpartum haemorrhoidal conditions, prophylaxis in between and as haemorrhoidal attacks.

#### **Proprietary Preparations:**

(see section 2.7.2)

**Dose:** apply 2 times daily in the painful pruritic area and after each stool.

#### 12.4 SYSTEMIC CORTICOSTEROIDS

(see section 5.3.2)

#### **BETAMETHASONE**<sup>[ED]</sup>

Indications, Cautions, Contraindications, Side-effects: see section 5.3.2

**Proprietary Preparations:** see also section 5.3.2

#### DEFLAZACORT

Indications, Cautions, Contraindications, Side-effects: see section 5.3.2

Proprietary preparations see section 5.3.29

#### **DEXAMETHASONE**<sup>[ED]</sup>

Indications, Cautions, Contraindications, Side-effects: see section 5.3.2

**Proprietary preparations** see also section 5.3.2

#### HYDROCORTISONE<sup>[ED]</sup>

Indications, Cautions, Contraindications, Side-effects: see section 5.3.2

**Proprietary preparations** see section 5.3.2

#### METHYLPREDNISOLONE<sup>[ED]</sup>

Indications, Cautions, Contraindications, Side-effects: see section 5.3.2

**Proprietary preparations** see section 5.3.2

#### PREDNISOLONE<sup>[ED]</sup>

Indications, Cautions, Contraindications, Side-effects: see section 5.3.2 **Proprietary preparations** see section 5.3.2

#### TRIAMCINOLONE

Indications, Cautions, Contraindications, Side-effects: see section 5.3.2

#### 12.5 ANTIHISTAMINES, ANTIPRURITICS AND TOPICAL LOCAL ANAESTHETICS

(see also 4.8.1)

H<sub>1</sub> antihistamines are first-line therapy for chronic idiopathic and physical urticarias. They may be useful in treating other conditions with histamine-driven pruritus. Limited evidence supports the use of antihistamines in the treatment of atopic dermatitis. Certain special patient populations, including children, the elderly, and patients with renal or hepatic impairment, may require dosage adjustments when using H₁ antihistamines. H<sub>2</sub> antihistamines may be a useful adjunct to H1 antihistamine therapy in refractory cases of chronic idiopathic urticaria/angioedema and pruritus.

First (sedating) generation antihistamines consist of hydroxyzine, pheniramine, chlorpheniramine, cyproheptadine, diphenhydramine, promethazine, mebhydrolin and mepyramine. Second generation (lesssedative) are fexofenadine, cetirizine, levoceti-rizine, loratadine, desloratadine, ebastine, mizolastine, and rupatadine

Indications: acute urticaria, chronic idiopathic urticaria, physical urticarias and dermatographism, atopic dermatitis systemic mastocytosis, pruritus associated with other conditions

**Cautions:** patients taking benzodiazepines, other non psychiatric agents, older ages

Contraindications:knownhypersensitivity to antihistaminesInteractions: see Appendix-2Side-effects:firstgenerationantihistamines:significantsecondgeneratio:somnolenceand

cognitive impairment; hyperexcitability, dry mouth, constipation, dysuria, erectile dysfunction, tachycardia, blurred vision

#### CETIRIZINE

#### Indications, Cautions,

Contraindications, Side-effects: see notes above

Dose: ADULT: 10 mg once daily or 5 mg twice daily

Syrup: CHILD 12 years and above: 10 ml (2 teaspoonful) daily

CHILD 6 - 11 years: 5 ml (1 teaspoonful) dailv

CHILD 6 months - 5 years: 2.5 ml (1/2 teaspoonful) daily

#### **Proprietary Preparations**

Acitrin (ACI), Tab. , 10 mg, Tk. 3.00/Tab; Paed. drops, 2.5 mg/ml, Tk. 25.00/15 ml; Syrup, 5 mg/5 ml, Tk. 30.00/60 ml Alatin (Concord), Tab., 10 mg, Tk. 2.00/Tab. Alatrol, (Square), Paed.drop,125mg/1.25ml,Tk.25.00/15 ml; Syrup,5 mg/5 ml, Tk. 25.00/15 ml;Tab. ,10 mg, Tk. 3.00/Tab. Allernil (Kemiko), Syrup, 5 mg/5 ml, Tk. 25.00/60 ml ,Tab. ,10 mg, Tk. 2.50/Tab. Antrin (Central), Tab., 10 mg, Tk. 2.50/Tab. Arcet (JMI), Syrup, 5 mg/5 ml, Tk. 25.00/60ml; Tab. ,10 mg, Tk. 2.00/Tab. Asitrol (Asiatic), Syrup, 5 mg/5 ml, Tk. 16.00/60 ml Tab. ,10 mg, Tk. 2.00/Tab. Atrizin (Beximco,), Paed.drop, 2.5 mg/ml, Tk. 25.00/15 ml;Syrup, 5 mg/5 ml, Tk. 30.00/60 ml ;Tab. , 10 mg, Tk. 3.00/Tab. Beticin (Bios Pharma), Tab., 10 mg, Tk. 2.25/Tab.;Tab. , 10 mg, Tk. 2.25/Tab. Celozin (Leon), Tab., 10 mg, Tk. 2.50/Tab. Cetirizine (Albion), Syrup, 5 mg/5 ml, Tk. 16.00/60 ml ;Tab., 10 mg, Tk. 2.50/Tab. Cetirizine (APC ), Syrup, 5 mg/5 ml, Tk. 16.00/60 ml ;Tab., 10 mg, Tk. 2.50/Tab. Cetizin (*Acme*), Tab., 10 mg, Tk. 3.00/Tab. Cetriben (*Benham*), Tab.,10 mg, Tk. 2.50/Tab. Cetri-Mak (Maks ), Tab., 10 mg, Tk. 2.50/Tab. Cetrin (Drug ), Tab. ,10 mg, Tk. 3.00/Tab. Cetriz (Astra), Tab., 10 mg, Tk. 2.50 /Tab Cetrol (Doctor TIMS), Tab.,10 mg, Tk. 3.00/Tab. Citin (Opsonin), Syrup, 5 mg/5 ml, Tk.

18.80/60 ml;Tab., 10 mg, Tk. 1.89/Tab. CTZ (Delta), Tab. ,10 mg, Tk. 1.00/Tab. CZ (Organic), Tab. ,10 mg, Tk. 2.50/Tab. Dyno (Rephco), Tab. ,10 mg, Tk. 2.00/Tab. Dyzin (Amico ), Syrup, 5 mg/5 ml, Tk. 16.00/60 ml ;Tab. , 10 mg,Tk. 2.50/Tab. G-Cetirizine (Gonoshasthaya), Tab., 10 mg, Noler, (Alco ), Syrup, 5 mg/5 ml, Tk. 16.00/60 Mil; Tab. , 10 mg, Tk. 2.50/Tab. Nosemin (*Ibn Sina*), Syrup, 5 mg/5 ml, Tk. 20.00/60 ml ;Tab. , 10 mg, Tk. 3.00/Tab. Ontin (*Eskayef*), Syrup, 5 mg/5 ml, Tk. 20.00/60 ml ;Tab, 10 mg, Tk. 2.50/Tab.

Procet (Somatec), Syrup, 5 mg/5 ml, Tk. 20.00/60 ml ;Tab., 10 mg, Tk. 2.50/Tab. Rhinil (Aristo), Syrup, 5mg/5ml, Tk. 20.00/60ml ;Tab.,10 mg, Tk. 2.50/Tab. Rinzin (Globex), Tab. ,10 mg, Tk. 3.00/Tab. Riz (Orion Pharma), Syrup, 5 mg/5 ml, Tk. 20.00/60 ml ;Tab.,10 mg, Tk. 3.00/Tab. Sarcet (White Horse), Tab., 10 mg, Tk. 2.50/Tab. Setir (Amulet), Tab., 10 mg, Tk. 2.00/Tab. Sistin (Supreme), Syrup, 5 mg/5 ml, Tk.

16.00/60 ml;Tab.,10 mg, Tk. 2.50/Tab. Trizin (Navana), Syrup, 5 mg/5 ml, Tk. 16.00/60 ml;Tab., 10 mg, Tk. 1.00/Tab.

#### CHLORPHENIRAMINE<sup>[ED]</sup>

Tk. 2.00/Tab.

Indications, Cautions, Contraindications, Side-effects: see notes above

and see section 4.8.1. Dose: ADULT: 4 mg every 4-6 hourly Maximum 24 mg daily

#### **Proprietary Preparations**

Antista(Square), Syrup, 2 mg/5 ml, Tk. 21.78/100 ml Biocin (Biopharma), Syrup, 2 mg/5 ml, Tk. 21.78/100 ml ;Tab. ,4 mg, Tk. 0.20/Tab. Centagan (Central), Syrup, 2 mg/5 ml, Tk. 9.50/60 ml ;Tk. 12.00/100 ml Chlorpheniramine (Popular), Tab., 4 mg, Tk. 0.20/Tab. Clomin (Alco ), Syrup, 2 mg/5 ml, Tk. 13.00/100 ml Cloramin (Orion ), Syrup, 2 mg/5 ml, Tk. 21.78/100 ml Cytacin (Albion), Tab., 4 mg, Tk. 0.20/Tab. G-Antihistamine (Gonoshasthaya), Tab., 4 mg, Tk. 0.20 /Tab ;Syrup, 2 mg/5 ml, Tk. 17.00/100 ml; Tk. 11.70/60 ml Hisnul (Somatec), Syrup, 2 mg/5 ml, Tk. 21.78/100 ml Histacin (Jayson), Inj. 10 mg/ml, Tk. 3.34/Amp.;Syrup, 2 mg/5 ml, Tk. 14.90/60 ml ;Tk. 21.78/100 ml; Tab., 4 mg,Tk. 0.29/Tab. Histaco(Supreme), Syrup, 2 mg/5 ml, Tk. 11.70/60 ml; Tab. , 4 mg, Tk. 0.20/Tab.;Tab. , 4 mg,Tk. 0.20/Tab. Histal (Opsonin), Syrup, 2 mg/5 ml, Tk. 10 34/60 ml Histalex (Acme), Syrup, 2 mg/5 ml, Tk.

21.78/100 ml;Tab., 4 mg, Tk. 0.3/Tab. Histam (Maks ), Syrup, 2 mg/5 ml, Tk.

11.70/60 ml ;Tk. 21.75/100 ml Hitagen (General), Syrup, 2 mg/5 ml, Tk. 14.03/100 ml;Tk. 8.03/60 ml;Tab., 4 mg, Tk. 0.20/Tab. Penamin (APC), Tab., 4 mg, Tk. 0.20/Tab. ; Syrup, 2 mg/5 ml, Tk. 11.70/60 ml Pheramin , (Amico), Tab. , 4 mg, Tk. 0.20/Tab. Piriton (GSK), Syrup, 2 mg/5 ml, Tk. 19.13/100 ml ;Tab. 4 mg,Tk.0.18/Tab. Safamin (Benham), Syrup, 2 mg/5 ml, Tk. 21.00/100 ml Sinamin (Ibn Sina), Syrup, 2 mg/5 ml, Tk. 21.78/100 ml ; Tab., 4 mg, Tk. 0.20/Tab.

#### DESLORATADINE

#### Indications, Cautions, Contraindications, Side-effects: see

notes above and section 4.8.1 **Dose:** ADULT and CHILD over 12 years: Tablet:One tablet (5 m g) once daily. CHILD 2-5 years: Syrup: 2.5ml (1/2teaspoonful) daily.

#### **Proprietary Preparations**

Alertadin (Beacon), Tab., 5 mg, Tk. 2.50/Tab.; Tab., 5 mg, Tk. 2.50/Tab. Aslor (Drug int.), Tab., 5 mg, Tk. 2.50/Tab. Clarex (Asiatic), Tab., 5 mg, Tk. 2.50/Tab. Deen (Kemiko), Tab. , 5 mg, Tk. 2.50/Tab. Delosia (Pharmasia), Syrup, 2.5 mg/5 ml, Tk. 28.00/60 ml ;Tab. , 5 mg, Tk. 2.50/Tab. **Delot** *(Apex ),* Syrup, 2.5 mg/5 ml, Tk. 25.00/60 ml; Tab. , 5 mg, Tk. 2.00/Tab. Delotad (Organic), Tab. , 5 mg, Tk. 2.50/Tab. Derat (Pacific), Tab., 5 mg, Tk. 1.88/Tab. Des (Opsonin), Syrup, 2.5 mg/5 ml, Tk. 18.86/60 ml;Tab., 5 mg, Tk. 1.89/Tab. Desatrol (Navana), Tab., 5 mg, Tk. 2.51/Tab. Desgud (Leon), Tab., 5 mg, Tk. 3.00/Tab. Deslor (Orion ), Syrup, 2.5 mg/5 ml, Tk. 30.00/60 ml ;Tab., 5 mg, Tk. 3.50/Tab.; Deslor Kidz (Orion ), Paed. drops, 50 mg/100 ml, Tk. 25.00/15 ml

**Desloratadine** (*Albion*), Tab., 5 mg, Tk. 2.50/Tab.

Deslorin (ACI), Syrup, 2.5 mg/5 ml , Tk. 25.09/60 m;Tab. , 5mg , Tk. 2.50/Tab. Desodin (*Eskayef*), Tab, 5 mg, Tk. 3.00/Tab. Desolet (*Amulet*), Tab. , 5 mg, Tk. 2.50/Tab. Desta (*White Horse*), Tab. , 5 mg, Tk. 2.50/Tab.

**Destin** *(Unimed)*, Syrup, , Tk. 25.00/60 ml; Tab., 5 mg, Tk. 2.50/Tab.

Momento, (Beximco,), Syrup, 2.5 mg/5 ml, Tk. 25.00/60 ml; Tab., 5 mg, Tk. 2.50/Tab. Neocilor (Incepta), Syrup, 2.5 mg/5 ml, Tk. 25.00/50 ml; Tab., 5 mg, Tk. 2.50/Tab. Neolor (Supreme), Tab., 5 mg, Tk. 2.50/Tab. 

#### DIMETHOTHIAZINE MESYLATE

Indications: see notes above

**Cautions:** ELDERLY (above 65 years), hepatic and renal impairment. Also see notes above

Contraindications, Side-effects: see notes above

**Dose:** ADULT: 20 mg 3 times a day up to 120 mg daily in 3 divided doses

Generic Preparation Tablet, 20 mg

# DIPHENHYDRAMINE

#### Indications, Cautions, Contraindications, Side-effects: see notes above and see section 4.8.1.

**Dose:** allergic conditions are controlled with 25 to 50 mg (12.5 to 25 ml of syrup) 3 to 4 times a day. CHILD 6 to 12 years of age: 10 mg (5 ml of syrup) 3 to 4 times a day. CHILD 1 to 6 years of age: 5 mg (2.5 ml of syrup) 3 to 4 times a day. The maximum daily dose should not exceed 300 mg in adults and children.

#### Proprietary Preparations

Adryl (Square), Syrup, 10 mg/5 ml, Tk. 40.00/100 ml Cufnot (Maks ), Syrup, 10 mg/5 ml, Tk. 22.00/100 ml Diphenhydramine (Albion), Syrup, 10 mg/5 ml, Tk. 15.00/100ml Dorenta (Eskayef), Syrup, 10 mg/5 ml, Tk. 30.00/100 ml ;Tab, 50 mg , Tk. 2.50/Tab. Dytan (Supreme), Syrup, 10mg/5ml, Tk. 30.00/100ml Pedeamin (Beximco, Tongi), Syrup, 10 mg/5 ml, Tk. 38.00/100 ml Pedilar (Popular ), Syrup, 10 mg/5 ml, Tk. 45.17/100ml Pediphen (Somatec), Syrup, 10 mg/5 ml, Tk. 38.00/100 ml Phenadryl (Acme), Syrup, 10 mg/5 ml, Tk. 38 00/100 ml Rymin (Opsonin), Syrup, 10 mg/5 ml, Tk.

**Rymin** (*Opsonin),* Syrup, 10 mg/5 ml, 11 24.06/100 ml

#### EBASTINE

Indications: allergic rhinitis and chronic idiopathic urticaria

Cautions: should be exercised in patients with history of liver and kidney impairment, QT interval prolongation, during pregnancy and breastfeeding Side-effects : Headache, dry mouth, drowsiness. inflammation of pharynx/nose/sinus, abdominal pain, indigestion, weakness, nosebleed, nausea and sleeplessness Dose: 10 and 20 mg once-daily

#### **Proprietary Preparations**

Ebanex (Opsonin), Tab., 10mg, Tk. 4.51/Tab; Syrup, 5 mg/5 ml, Tk. 60.15/50 ml Ebaril (Incepta), Syrup, 5 mg/5 ml, Tk. 60.00/30 ml ;Tab. , 10 mg, Tk. 6.00/Tab. **Ebatin** *(Popular),* Syrup, 5 mg/5 ml, Tk. 60.00/30ml; Tk.80.00/50ml; Tab., 10mg, Tk. 6.02/Tab.

Ebatrol (Delta), Tab.,10 mg, Tk. 5.00/Tab. Rinobas (RAK), Tab., 10 mg, Tk. 6.0/Tab. Stiba (Eskayef), Syrup, 5 mg/5 ml, Tk. 60.00/30 ml ;Tab, 10 mg, Tk. 6.00/Tab. **Tebast** (*Square*), Syrup, 5 mg/5 ml, Tk. 80.00/50 ml ;Tab. 10 mg, Tk. 6.00/Tab.

#### **FEXOFENADINE**

#### Indications, Cautions,

Contraindications, Side-effects: see notes above and see section 4.8.1 Dose: Oral: 120 mg once daily in adults, 30 mg twice daily in children 6 - 11 vears

#### **Proprietary Preparations**

Alafree (Apex ), Tab., 180 mg, Tk. 8.00/Tab.; 120 mg, Tk. 6.50/Tab.

Alagra (Alco), Tab., 120 mg, Tk. 6.00/Tab.; Susp., 30 mg/5 ml, Tk. 48.00/50 ml ;Tab., 180 mg, Tk. 8.50/Tab. ; 30 mg, Tk.3.00/Tab.; 60 mg. Tk. 3.50/Tab.

Alanil (Acme), Susp., 30 mg/5 ml, Tk.48.00/50 ml ;Tab., 120 mg, Tk. 6.50/Tab.;180 mg, Tk. 8.00/Tab.

Alerfast (Biopharma), Tab., 120 mg, Tk.6/Tab. Axodin (Beximco), Susp., 30 mg/5 ml, Tk. 55.00/50 ml; Tab., 120 mg, Tk. 7.00/Tab. 180 mg, Tk. 9.00/Tab. ;60 mg, Tk. 5.00/Tab. Axofen (Aristo), Susp., 30 mg/5 ml, Tk. 48.00/50 ml; Tab., 180 mg, Tk. 9.00/Tab.; 120 mg, Tk. 7.00/Tab.

Dinafex (Eskayef), Susp., 30 mg/5 ml, Tk.

48.00/50 ml ;Tab., 60 mg , Tk. 3.50/Tab.; 180 mg, Tk. 8.00/Tab. ;120 mg, Tk. 6.50/Tab. Elfexo (Leon), Susp., 30 mg/5 ml, Tk.50/50 ml; Tab. 180 mg, Tk. 9/Tab.; 120 mg, Tk. 7/Tab.

Exova (MST), Tab., 120 mg, TK. 7/Tab. Fenadin (Renata), Susp., 30 mg/5 ml, Tk. 48.19/50 ml; Tab., 120 mg, Tk. 7.02/Tab.; 180 mg, Tk. 9.03/Tab. ;30 mg, Tk. 2.51/Tab.; 60mg, Tk. 3.50/Tab. Fenargic (Rangs), Tab., 120mg, Tk. 7/Tab.

Fenaxo (Kemiko), Tab., 120 mg, Tk. 7/Tab.; 180 mg, Tk. 9.00/Tab.;60 mg, Tk. 5/Tab. Fenofex (Incepta), Susp., 30 mg/5 ml, Tk. 48.00/50 ml; Tab., 120 mg, Tk. 7.00/Tab.; 180 mg, Tk. 9.00/Tab.; 60 mg, Tk. 3.50/Tab. Fexo (Square), Susp., 30 mg/5 ml, Tk. 48.19/50 ml;Tab., 60 mg, Tk. 3.51/Tab.; 180 mg, Tk. 8.04/Tab.; 120 mg, Tk. 6.53/Tab. Fexocon (Concord), Susp., 30 mg/5 ml, Tk. 48.00/50 ml; Tab., 120 mg, Tk. 6.50/Tab.; 180 mg, Tk. 8.00/Tab. Fexodin (Pacific), Susp., 30 mg/5 ml, Tk.

45.26/50 ml ;Tab., 120mg, Tk. 5.26/Tab. Fexofast (Drug Int.), Susp., 30 mg/5 ml, Tk. 48.00/50 ml; Tab., 120 mg, Tk. 7.00/Tab;. 180 mg, Tk. 9.00/Tab.

Fexofen (Somatec), Susp., 30 mg/5 ml, Tk. 48.18/50 ml;Tab., 60 mg, Tk. 6.02/Tab.;120 mg, Tk. 7.03/Tab.

Fexofenadine (Albion), Tab., 180 mg, Tk. 9.00/Tab.; 120 mg, Tk.7.00/Tab. Fexomin (Ibn Sina), Susp., 30 mg/5 ml, Tk. 48.00/50 ml; Tab., 120 mg, Tk. 7.00/Tab;. 60mg, Tk. 5.00/Tab. Fexon (Astra), Tab., 120 mg, Tk. 6.50/Tab.; Tab., 180 mg, Tk. 8.00/Tab. Fexona (Globe), Suspn. 30 mg/ 5 ml, Tk. 48.00/50 ml; Tab. 120 mg, Tk. 6.50/Tab.; 180 mg, Tk. 8.00/Tab.; 60 mg, Tk. 3.50/Tab. **Fexotab** (*Veritas*), Tab., 120 mg, Tk. 7.00/Tab.; 180 mg, Tk. 9.00/Tab. Fexten (Nipro JMI), Suspen., 30 mg/5 ml, Tk.48.00/50 ml; Tab., 120 mg, Tk. 6.03/Tab. Fixal (Opsonin), Susp., 30 mg/5 ml, Tk. 36.23/50 ml;Tab., 120 mg, Tk. 5.29/Tab.; 180mg, Tk. 6.79/Tab.;30 mg, Tk. 2.64/Tab.; 60mg, Tk. 3.77/Tab. Fixen (Sharif), Tab., 120 mg, Tk. 7.00/Tab.

Flufex (Doctor TIMS), Tab., 120 mg, Tk. 7/Tab. Furia (Organic), Susp., 30 mg/5 ml, Tk.48.00/50ml; Tab., 120 mg, Tk. 7.00/Tab.; 180 mg, Tk. 9.00/Tab.; 60 mg, Tk. 3.50/Tab. Nosedex (Orion), Susp., 30 mg/5 ml, Tk. 40.15/40 ml ;Tab., 120 mg , Tk. 6.53/Tab. Odafen (Navana), Susp., 30 mg/5 ml, Tk.

48.00/50 ml; Tab., 180 mg, Tk. 8.00/Tab.; 120mg, Tk. 6.50/Tab.

Rinofen (RAK), Tab., 120 mg, Tk.7.00/Tab.; 180 mg, Tk. 9.00/Tab.

Ritch (ACI), Susp., 30 mg/5 ml, Tk. 48.00/50 ml ;Tab., 60 mg , Tk. 5.02/Tab.; 180 mg , Tk.

9.03/Tab.; 120 mg, Tk. 7.03/Tab. Telfast (Sanofi), Susp., 30 mg/5 ml, Tk. 48.00/50 ml ;Tab., 180 mg, Tk. 10.00/Tab. ; 120 mg, Tk. 8.00/Tab.

Telfex (Pharmasia), Susp., 30 mg/5 ml, Tk. 48.00/50 ml ;Tab., 120 mg, Tk. 6.50/Tab. Vifas (*Healthcare*), Tab., 180 mg, Tk. 10.00/Tab.; 60 mg, Tk. 5.00/Tab.; 120 mg, Tk.

8.00/Tab. Xofast (Ad-din), Tab., 120 mg, Tk. 6.00/Tab.; 60 mg, Tk. 3.50/Tab.

Xofena (Asiatic), Tab., 120 mg, Tk. 7.00/Tab.; 180 mg, Tk. 9.00/Tab.

#### HYDROXYZINE

#### Indications, Cautions, Contraindications, Side-effects: see

notes above and see section 4.8.1 Dose: ADULT: 25mg at night, increased

if required up to 25mg 3-4 times daily CHILD 6 - 12 years: Initially 15-25 mg (11/2 teaspoonfuls - 21/2 teaspoonfuls) at night, increased if necessary to 50-100 mg daily in 3-4 divided doses

CHILD 6 months - 6 years: Initially 5-15 mg (1/2 teaspoonfuls - 11/2 teaspoonfuls) at night, increased if necessary to 50 mg daily in 3-4 divided doses

Proprietary Preparations Artica (ACI), Tab. , 25 mg , Tk. 2.00/Tab.; 10 mg , Tk. 1.25/Tab.; Syrup, 10 mg/5 ml, Tk. 40.15/100 ml

Xyril (Opsonin), Tab., 10 mg, Tk.0.77/Tab.; 25 mg, Tk. 1.32/Tab.; Syrup, 10 mg/5 ml, Tk. 26.41/100 ml

#### LEVOCETIRIZINE

#### Indications, Cautions, Contraindications, Side-effects: see

notes above and see section 4.8.1 Dose: Oral: ADULT: 5 mg once daily in the evening. Maximum dose 5 mg daily CHILD: 6-11 years: 2.5 mg once daily maximum dose 2.5 mg daily

#### **Proprietary Preparations**

Acitrin-L(ACI), Tab. , 5 mg, Tk. 3.00/Tab.; Syrup, 2.5 mg/5 ml, Tk. 40.00/60 ml Alcet *Healthcare)*, Syrup, 2.5 mg/5 ml, Tk. 50.00/60 ml; Tab, 5 mg, Tk. 4.00/Tab. Clarigen (Drug Int.), Tab., 5 mg, Tk. 2/Tab. Curin (Beximco), Tab., 5 mg, Tk. 3.50/Tab. Lecet (Pacific), Tab., 5 mg, Tk. 1.50/Tab. Lerex (Asiatic), Tab., 5 mg, Tk. 2.00/Tab.

Levocet (Alco), Tab., 5 mg, Tk. 2.00/Tab. Levorex (Popular), Tab., 5 mg, Tk. 2.01/Tab. Lozin (*Keniko*), Tab., 5 mg, Tk. 3.00/Tab. Lvc (*Organic*), Tab., 5 mg, Tk. 3.00/Tab. Purotrol (*Square*), Syrup, 2.5 mg / 5 ml, Tk. 35.14/50 ml ;Tab., 5 mg, Tk. 3.50/Tab. Rinocet (RAK), Tab., 5 mg, Tk. 4.00/Tab. Rinotin (Biopharma), Tab., 5 mg, Tk. 2.01/Tab. Seasonix (Incepta), Syrup 2.5 mg/5 ml, Tk. 40.00/60 ml ;Tab., 5 mg, Tk. 3.50/Tab. Sinacet (Ibn Sina), Syrup, 2.5 mg/5 ml, Tk. 50.00/60 ml Sinacet (Ibn Sina), Tab., 5 mg, Tk. 4/Tab. Verizin (Sharif), Tab. , 5 mg, Tk.2.00/Tab.

Vocet (Apex), Tab., 5 mg, Tk. 2.00/Tab.

#### LORATADINE

#### Indications, Cautions,

Contraindications, Side-effects: see notes above and see section 4.8.1 Dose: ADULT: 10 mg once daily CHILD: 2-5 years: 5 mg once daily

#### **Proprietary Preparations**

Alaron (ACI), Susp., 5 mg/5 ml, Tk. 30.11/60ml; Tab., 10 mg, Tk. 3.01/Tab. Aleze (Unimed), Tab., 10 mg, Tk. 2.50/Tab.;Susp., 5 mg/5 ml, Tk. 26.00/60 ml Eladin (Jayson), Susp., 5 mg/5 ml, Tk. 26.40/60 ml, Tab. 10 mg, Tk. 3.05/Tab. 26.40/60 ml ;Tab. 10 mg, Tk. 3.05/Tab. Encilor (*Incepta*), Tab. , 10 mg, Tk. 3/Tab. Itchlor (*Nipro JMI*), Susp., 5 mg/5 ml , Tk. 30.12/60 ml ; Tab. , 10 mg, Tk. 3.02/Tab. Kevil (Kemiko), Susp., 5 mg/5 ml , Tk. 30.00/60 ml ;Tab. 10 mg, Tk. 3.00/Tab. Lodin, (*Amico* ), Tab. , 10 mg, Tk. 3.00/Tab. Lora (*Opsonin*), Tab., 10 mg, Tk. 1.89/Tab.;Susp., 5 mg/5 ml , Tk. 22.64/60 ml Loradin (Aristo), Tab., 10 mg, Tk. 3/Tab. Lorat (Drug Int.), Tab., 10 mg, Tk. 3/Tab. Loratadine ,(Albion), Susp., 5 mg/5 ml , Tk. 30.00/60 ml; Tab., 10 mg, Tk. 3.00/Tab. Loratin (Square), Susp., 5 mg/5 ml, Tk. 30.11/60 ml ; Tab. , 10 mg, Tk. 3.01/Tab. Loratin Fast (Square), ODT Tab., , 10 mg, Tk. 3.01/Tab. Loratin (Techno), Tab., 10 mg, Tk. 3/Tab. Lorfast (Biopharma), Tab., 10 mg, Tk. 3.01/Tab.; Susp., 5 mg/5 ml, Tk. 26.10/60 ml Lorin (General), Susp., 5 mg/5 ml , Tk. 30.11/60 ml;Tab. 10 mg, Tk. 3.01/Tab. Oradin (Eskayef), Susp., 5 mg/5 ml, Tk. 30.00/60 ml; Tab, 10 mg, Tk. 4.00/Tab. FT Tab., 10 mg, Tk. 4.00/Tab. Orin (Acme), Tab., 10 mg, Tk. 3.00/Tab.; Susp., 5 mg/5 ml , Tk. 40.00/100 ml; Tk 26.1/60 ml Pretin(Beximco), Tab., 10 mg, Tk. 3.00/Tab. Silora (Ibn Sina), Tab., 10 mg, Tk. 2.50/Tab.

#### MEBHYDROLIN

#### Indications, Cautions,

Contraindications, Side-effects: see notes above and section 4.8.1 Dose: ADULT and CHILD over 10 years: 2-6 tablets daily Syrup:CHILD 2-6 years: 5 ml (1

teaspoon full) once daily or 2.5 ml (half teaspoon full) twice daily CHILD 6 months to less than two years:

2.5 ml (half teaspoon full) once daily

#### **Proprietary Preparations**

Aexidal (Albion), Tab., 50 mg, Tk. 1.50/Tab. Bexidal (Beximco), Tab., 50 mg, Tk. 3/Tab. Mebastin (Incepta), Tab., 50 mg, Tk. 2/Tab. Mebidal (Eskayef), Tab., 50 mg, Tk. 2/Tab. Mebolin (Acme), Tab., 50 mg, Tk. 2.01/Tab. Medrolin (Opsonin), Tab., 50mg, Tk. 1.14/Tab

#### MEPYRAMINE (PYRILAMINE)

# Indications, Cautions, Contraindications, Side-effects: see notes above

**Dose:** apply to affected area 2 to 3 times daily for up to 3 days

#### Proprietary Preparation

Anthisan (Aventis), Cream 2% Tk.34.90/15g

#### MIZOLASTINE

#### Indications: see notes above

Cautions: CHILD under 12 years, pregnancy, lactation, see notes above Contraindications, Side-effects: see notes above Dose: ADULT and CHILD above 12

years: 10 mg once daily

#### **Proprietary Preparations**

Mastel (*ACl*), Tab., 10 mg, Tk. 5.02/Tab. Rhinor (*Opsonin*), MR Tab., 10 mg, Tk. 3.77/Tab.

#### PHENIRAMINE

#### Indications, Cautions,

**Contraindications, Side-effects:** see notes above and section 4.8.1

12. SKIN

**Dose:**Syrup:ADULT: 2 teaspoonful (10 ml) 3-4 times daily

CHILD up to 1 year: ½ teaspoonful (2.5 ml) twice daily

CHILD (1-5 years): ½ - 1 teaspoonful (2.5-5 ml) thrice daily

CHILD > 5 years: 1-2 teaspoonful (5-10 ml) 3-4 times daily

Oral:ADULTS: 1-2 times daily, up to 45 mg 3 times a day; Maximum dose 3mg/kg/day.

#### **Proprietary Preparations**

Aerovil (Beximco), Syrup, 15 mg/5 ml, Tk. 20.07/100 ml Alervil (Incepta), Syrup, 15 mg/5 ml, Tk. 25.00/75 ml Amarin (Opsonin), Syrup, 15 mg/5 ml, Tk. 15.09/100 ml;Tab., 22.7 mg, Tk. 0.35/Tab.Inj., 45.5 mg/2 ml, Tk. 5.65/Amp. Avil (Sanofi), Tab., 22.7 mg, Tk. 1.51/Tab; Tab., 22.7 mg, Tk. 1.51/Tab.; Syrup, 15 mg/5 ml, Tk. 20.08/100 ml; Tk. 25.00/75 ml Inj., 45.5 mg/2 ml, Tk. 7.53/amp.; RE Tab., 75 mg, Tk. 2.01/Tab.

#### PROMETHAZINE<sup>[ED]</sup>

#### Indications, Cautions,

Contraindications, Side-effects: see notes above and section 4.8.1 Dose: ADULT: 25-50 mg daily IM or slow IV. Maximum 100 mg daily CHILD 2-5 years: 5-15 mg daily in 1-2 divided doses CHILD 5-10 years: 10-25 mg daily in 1-2 divided doses

#### **Proprietary Preparations**

Allergin (Bios Pharma), Syrup, 5 mg/5 ml, Tk. 10/60 ml Cural (Sonear), Syrup, 5 mg/5 ml, Tk. 14.36/100 ml Histavil(Pacific), Elixir, 5 mg/5 ml, Tk. 7.52/60 ml Otosil (Opsonin), Tab., 10 mg, Tk. 0.23/Tab.;Tab., 10 mg, Tk. 0.33/Tab.;Elixir, 5 mg/5 ml, Tk. 16.83/100 ml Phenerex (Jayson), Syrup, 5 mg/5 ml, Tk. 23.96/100 ml; Inj., 25 mg/ml, Tk. 3.37/Amp. Inj., 25 mg/ml, Tk. 4.16/Amp. Phenergan (Sanofi)Elixir, 5 mg/5 ml, Tk. 27.97/125 ml; Tab., 25 mg, Tk. 0.44/Tab.; 10 mg, Tk. 0.68/Tab. Promezin (Beximco), Syrup, 5 mg/5 ml, Tk.

15.50/100 ml

#### RUPATADINE

Indications: allergic rhinitis and chronic urticaria in adults and children over 12 vears

Side Effects: somnolence, headaches and fatigue

Dose: ADULT and CHILD above 12 years: 10 mg once daily

#### **Proprietary Preparations**

Dipa (Drug Int.), Tab., 10 mg, Tk. 6/Tab. Minista (Radiant), Tab., 10 mg, Tk. 12/Tab. **Paftrol** (*Navana*), Tab., 10 mg, Tk. 12/Tab. **Rufast** (*Opsonin*), Tab., 10 mg, Tk. 7.52/Tab. Rupa (*Aristo*), Tab., 10 mg, Tk. 10/Tab. Rupadin (*Beacon*), Tab., 10 mg,Tk. 10/Tab. Rupafen (Somatec), Tab., 10 mg, Tk. 10/Tab. Rupanex (Sharif), Tab., 10 mg, Tk.10/Tab. **Rupastar** (*Leon*), Tab., 10 mg, Tk. 10/Tab. **Rupastin** (*Acme*), Tab., 10 mg, Tk.10/Tab. Rupatid (Nipro JMI), Tab., 10 mg, Tk. 10/Tab. Rupatrol (Square), Tab., 10 mg, Tk. 10/Tab. Rupex (Incepta), Tab., 10 mg, Tk. 10/Tab. Rupin (Ziska), Tab. 10 mg, Tk. 10/Tab.

#### ANTIPRURITICS AND TOPICAL LOCAL ANAESTHETICS

Pruritus may be caused by systemic disease such as drug hypersensitivity, obstructive jaundice, endocrine disease, malignant disease as well as by skin diseases e.g psoriasis, eczema, urticaria and scabies. An emollient may be of value where the pruritus is associated with dry skin.

#### CALAMINE

Indications : topical soothing relief of itching, pain, and discomfort due to minor skin irritations, such as those caused by eczemas, prickly heat (miliaria), sunburn, napkin rash. cosmetic rashes, pruritis of dry skin including as well as symptomatic relief of itchiness in Chickenpox viral infection

Cautions: Avoid contact with the eyes and other mucous membranes such as mouth, nose and genital region. Do not apply to abraded, blistered, inflamed, raw or oozing areas of the skin. Do not use on open wounds or burns **Contraindications:** known

hypersensitivity to calamine Dose: apply sparingly to the affected parts and surrounding skin areas 2-3 times daily

#### **Proprietary Preparations**

Calamilon (United Chem), Lotion, Tk. 20/100 ml

<u>Calamine+Zinc Oxide</u> Calamine (Amico), Lotion, 0.15g/ml, Tk. 19.50/100ml

#### CAPSAICIN

postherpetic neuralgia, Indications: diabetic neuropathy, reflex sympathetic dystrophy. Raynaud phenomenon, nostalgia paresthetica, arthralgias, plantar warts, diabetic neuralgia, and hemodialysis-related pruritus

#### Cautions: pregnancy

Contraindications: broken skin, known hypersensitivity

Side-effects: burning sensation. pruritus, erythema, coughing, and sneezing, superficial erosions Dose: apply 3-5 times daily for a

maximum of 4-6 weeks.

#### **Proprietary Preparation**

Ostocin (General), Cream, Tk. 50.19/20g

#### CROTAMITON

(see section 12.2.4)

#### DOXEPIN

Indications: short-term (up to 8 days) management of moderate pruritus in adult patients with atopic dermatitis or lichen simplex chronicus

Cautions: children and elderly

Contraindications: known hypersensitivity to doxepin

Side-effects: local burning, stinging, irritation, tingling, sedation, allergic contact dermatitis

Dose: ADULT and CHILD over 12 years: apply thinly 3-4 times daily; usually a maximum of 3 g per application; total maximum dose is 12 g daily; coverage should be less than 10% of body surface area.

#### **Proprietary Preparations**

Adnor (Apex), Cap. , 75 mg, Tk. 5.00/Cap. Doxiderm (Incepta), Cream, 5% Tk. 120.00/30 gm

#### DIPHENHYDRAMINE

**Indications:** temporarily relief of pain and itching associated with insect bites, minor burns, sunburn, minor skin irritations, minor cuts, scrapes, rashes due to poison ivy, poison oak, and poison sumac.

Indications, Cautions, Contraindications and Side-effects: see section 4.8.1

**Dose:** ADULT & CHILD above 2 years: apply to the affected area 3 to 4 times daily

#### Proprietary Preparations

Adryl (Square), Syrup, 10 mg/5 ml, Tk. 40.00/100 ml

**Pedeamin** *(Beximco),* Syrup, 10 mg/5 ml, Tk. 38.00/100 ml

Pedilar (Popular ), Syrup, 10 mg/5 ml, Tk. 45.17/100ml

Dorenta (*Eskayef*), Syrup, 10 mg/5 ml, Tk. 30.00/100 ml; Tab, 50 mg, Tk. 2.50/Tab. Cufnot (*Maks*), Syrup, 10 mg/5 ml, Tk. 22.00/100 ml

Rymin (Opsonin), Syrup, 10 mg/5 ml, Tk. 24.06/100 ml

Pediphen (Somatec), Syrup, 10 mg/5 ml, Tk. 38.00/100 ml

Phenadryl (Acme), Syrup, 10 mg/5 ml, Tk. 38.00/100 ml

Diphenhydramine (Albion), Syrup, 10 mg/5 ml, Tk. 15.00/100ml

Dytan (Supreme), Syrup, 10mg/5ml, Tk. 30.00/100ml

#### Diphenhydramine Hydrochloride 2% + Zinc Acetate 0.1%

Bendil (Alco), Cream, 10 gm, Tk. 35.00/10 gm; Tk. 55.00/30 gm; Tk. 20.00/5 gm Togent(Square), Cream, 10 gm, Tk. 35.14/10 gm

#### **TOPICAL LOCAL ANAESTHETICS**

Indications: Topical anaesthesia of the skin prior to minor superficial cosmetic procedures, postherpetic neuralgia, pruritus

Cautions: local anesthetic ointments are absorbed through the rectal mucosa,

#### 12. SKIN

therefore its excessive application should be avoided. These preparations should not be used for more than 3 days. Not suitable for young children

**Contraindications:** hypersensitivity to lidocaine or preservatives, pregancy, significant hepatic or renal impairment, myasthenia gravis, hyperthyroidism **Side-effects:** erythema, edema, abnormal sensation, allergic reaction **Dose:** Up to 2 g for a minimum of 1 hour, maximum of 5 hours

#### **Proprietary Preparation**

Jasocaine (Jayson) Gel lidocaine, 2% Tk. 80.00/30g

12.6 PREPARATIONS FOR ECZEMA AND PSORIASIS

Eczema is a cutaneous reaction, which is characterized by itching and inflammation. Atopic eczema is the most common form of eczema and it requires regular application of an emollient with short courses of topical corticosteroid. For mild and moderate type of eczema topical corticosteroid use should be restricted. Itching eczema requires a sedating antihistamine by mouth. Dry, fissured, scaly lesions treated with bland emollients, which is necessary to remove irritation and permit healing. Weeping eczema can be treated with topical corticosteroids. These eczema are usually due to secondary infection and after culture and sensitivity test topical or oral antibiotics must be used. Coal tar can be used in chronic type eczema. Ciclosporine can be used for severe psoriasis and for severe eczema.

Methorexate may be used for severe psoriasis, the dose should be adjusted according to severity of the condition and haematological and biochemical measurment.

Psoriasis is characterized by epidermal thickening and scaling. In severe cases local application of **salicylic acid, coal tar** and **dithranol** may have a beneficial effect. Salicylic acid may be used in hyperkeratotic and scaling condition. **Coal tar** is more effective than salicylic acid. Thicker the patch of psoriasis, the

stronger the concentration of coal tars required. Mild coal tar preparations may be suitable for treating the face. When lesions are extensive coal tar baths are useful. **Dithranol** is very effective in Psoriasis.

**Pimecrolimus** by topical application is used in mild to moderate atopic eczema. For short term use to treat sign and symptoms and for intermittent use to prevent flares. **Tacrolimus** is used in moderate to sever atopic eczema. Both drugs whose long term safety and place in therapy is still being evaluated and they should not usually be considered first line treatments unless there is a specific reason avoid or reduce the use of topical corticosteroids.

## General Principle of Topical Corticosteroid therapy in Psoriasis:

Topical corticosteroids are most useful for localized psoriasis or psoriasis of the Localized plaque psoriasis scalp. generally requires a high-potency or superpotent topical corticosteroids twice daily, followed by a maintenance regimen, to obtain and preserve remission. Regardless of the choice of topical corticosteroid, psoriasis usually recurs after discontinuation of corticosteroid treatment. (see under section 12.3)

#### ANTHRALIN (DITHRANOL)

Indications: chronic plaque psoriasis, alopecia areata

**Cautions:** should not be used on the face or on acute eruptions or excessively inflamed areas. Care should be taken to avoid contact with normal tissue and the eves

Contraindications: pregnancy

Interactions: see Appendix-2

Side-effects: irritant contact dermatitis and staining of clothing, skin, hair, and nails

**Dose:**The most common approach is to start with a lower concentration of anthralin, such as 0.1% or 0.25%. The anthralin is left on the treatment area for 10–20 minutes daily. The contact time is

increased weekly until the total contact time prior to washing is 1 hour

#### **Proprietary Preparations**

Dermacure (Aexim), Cream Dithranol 0.5%+ Zinc Oxide 23%, Tk.25.00/10gm Miconal <sup>(1)</sup> (Bigolan), Cream 1%; Tk. 588.52/55g

Dithranol 0.1%+Boric 2%+ Salicylic Acid 1% Gacozema (Gaco), Oint. Tk. 25.00/6 gm Ring Fight (*Millat*), Oint Tk, 10.00/12 gm

#### AZATHIOPRINE

(see also section 14.2.1)

Indications: organ transplantation, severe rheumatoid arthritis, immunobullous dermatoses, SLE, DLE, psoriasis

Caution: renal impairment

**Contraindications:** Pregnancy, known hypersensitivity to azathioprine, active clinically significant infections. Allopurinol use: the dose of azathioprine should be reduced significantly

Interactions: see Appendix-2

Side-effects: bone marrow suppression, neutropenia, rarely agranulocytosis and pancytopenia; human papilloma virus, herpes simplex, scabies

Transaminase elevation, hepatotoxicity Teratogenecity

**Dose:**1–2 mg per kg body weight per day, often concurrent with high-dose prednisone.

#### **Proprietary Preparations** see section 14.2.2

CALCIPOTRIOL

(Vitamin D<sub>3</sub> analogue)

Indications: mild to moderate plaque psoriasis affecting up to 40% of skin area

**Cautions:** more than 100 mg should not be applied to the body considering the risk of hyperpigmentation, should not be used on the face, in children under 6 years of age

Contraindications: known hypersensitivity to calcipotriol, patients with known disorders of calcium

metabolism.

#### Interactions: see Appendix-2

Side-effects: pruritis, skin irritation (especially if accidentally transferred to face), burning and stinging sensation, dry skin, erythema, rash, hypercalcemia Dose: ADULT: Apply to the affected area once to twice daily. Application of the cream can be reduced to once daily when appropriate. Maximum weekly dose should not exceed 100 g. CHILD over 12 years: apply to the

affected area twice daily. Maximum weekly dose should not exceed 75 g. CHILD aged 6 to 12 years: apply to the affected area twice daily. Maximum weekly dose should not exceed 50 g.

#### **Proprietary Preparations**

Planex (Incepta), Oint, 0.05% Tk.200.00/10g Dyvon (Square), Cream, 0.005 %, Tk.350.00/20g

Daivonex (1) (Leo), Cream 50 microgram/g; Tk.1517.65/30g; Oint. 50 microgram/g Tk. 1517.65/30q;

Calcipotriol0.005 %, + Betamethasone Dipropionate 0.05%

apply once daily to the affected areas. Treatment on the body may be continued for up to 8 weeks. Treatment on the scalp may be continued for up to 4 weeks. The maximum daily dose is 15 g per day, or 100 g per week, in total of all products containing calcipotriol.

#### Proprietary Preparation

Dyvon plus (Square), Solu. Tk. 550/25 ml; Oint., Tk. 380/20 gm

#### COAL TAR

Indications: chronic psoriasis, either alone or in combination with exposure to ultraviolet light, atopic dermatitis. seborrheic dermatitis

Cautions: coal tar preparations should not be applied to the inflamed, broken or infected skin

Contraindications: known hypersensitivity to tar preparations, pregnancy Interactions : see Appendix-2

Side-effects: staining of clothing, tar folliculitis, acneiform eruptions, irritant dermatitis, burning, and stinging, allergic contact dermatitis, atrophy, telangiectases, pigmentation, exfoliative

dermatitis, and keratoacanthomas. Dose:Goeckerman technique: A 2-5% tar preparation is applied to the skin, and a tar bath is taken at least once a day Ingram technique: a daily coal tar bath in a solution such as 120 mL liquor carbonis detergens to 80 L of warm water. This is followed by daily exposure to UV light for increasing periods.

#### **Proprietary Preparation**

Soritar (Unimed), Cream, 10%, Tk.300/50 gm

#### **CYCLOSPORINE**

Indications: treatment resistant psoriasis, disabling psoriasis; lichen planus, severe atopic dermatitis Cautions monitored regularly serum creatinine, blood pressure, oedema, hypertension, and immuno-suppression. Contraindications: impaired renal function, uncontrolled hypertension, hypersensitivity to cyclosporine, pregnancy and lactation, Interactions: see Appendix-2. Side-effects:nausea, vomitina. abdominal discomfort, diarrhea;nephrotoxicity;Hypertension ;tremor, headache, paresthesia, hyperesthesia, hypertrichosis, gingival hyperplasia, myalgia, lethargy, arthralgia, hyperkalemia, hyperuricemia hypomagnesemia, hyperlipidemia

#### **Proprietary Preparations**

see section 14.2.2

#### METHOTREXATE<sup>[ED]</sup>

(see also section 14.1.3)

Indications: extensive, severe plaque psoriasis not responsive to conventional psoriasis. ervthrodermic therapy psoriatic arthritis not responsive to conventional therapy, lack of response to phototherapy cutaneous lupus erythematosus, immunobullous dermatoses see also section 9.1.3 and 14.1.3 Cautions:renal impairment; diabetes mellitus

Contraindications:pregnancy, lactation

(see also section 14.2.2)

Dose: 2.5 to 5 mg/kg/day.

hepatic impairment,

Side-effects:nausea, vomiting

megaloblastic anemia, neutropenia, thrombocytopenia, bone marrow suppression, stomatitis, acute pneumonitis, reactivation of TB, teratogenecity

**Dose:** baseline laboratory investigations before starting methotrexate include a complete blood cell count (CBC); platelet count; liver function testing; serologic assessment for hepatitis A, B, and C antibodies, renal function assessment; pregnancy and HIV screening (where indicated), chest X-ray

Initiation of methotrexate therapy typically involves use of a single 5- to 10mg test dose. If the test dose is tolerated and laboratory studies are satisfactory, weekly therapy may commence using a typical starting dose of 7.5-10 mg/week, depending on the severity of disease, overall health, and ideal body weight of the patient. The dose may be increased by 2.5-5.0 mg every 4-8 weeks until adequate control is achieved or toxicity When improvement has ensues. stabilized, the dose may be tapered in 2.5-mg decrements to a point at which disease activity increases slightly.

**Proprietary Preparations** see section 14.1.3

#### METHOXSALEN

Indications: idiopathic vitiligo, severe, disabling, psoriasis not adequately responsive to conventional topical therapy; selected cases of atopic eczema and polymorphic light eruptions Cautions: diseases associated with light sensitivity such as porphyria, liver diseases

**Contraindications:** aphakia, melanoma or a history of melanoma, and invasive squamous cell carcinoma, children

Side-effects: nausea, mental effects including insomnia, nervousness, and depression Other effects include oedema, dizziness, headache, vesiculation, bulla formation, onycholysis, acneiform eruption, and severe skin pain Dose: it is given both by mouth and applied topically. To repigment, vitiliginous areas, methoxalen is given in a dose of up to 600 microgram per kg body-weight by mouth 2 to 4 hours before measured periods of exposure to UVA twice a week, at least 48 hours apart. To be applied topically to repigment small, well-defined vitiliginous lesions, preparations containing up to 1% have been used but dilution to 0.1 or 0.01% may be necessary to avoid cutaneous effects. The adverse surrounding skin should be protected by an opaque sunscreen.

For the treatment of psoriasis a similar schedule is use to that outlined above for vitiligo. A dose of up to about 600 microgram per kg by mouth 2 hours before UVA is usually given twice a week. It may also be use tropically with UVA exposure for the treatment of psoriasis.

#### **Proprietary Preparations**

Meladinine <sup>(h)</sup> (*CLS Pharma*), Tab. 10mg Tk.14.14/Tab. Paint 1% Tk. 599.58/24ml **Oxsoralen** <sup>(h)</sup> (*ICN*), Cap., 0.367g, Tk.25.67/Cap. Lotion, 1% + 1.19%, Tk.909.35/bottle Vitilen Lotion(*Ziska*) Lotion 1% Tk. Tk. 398.00/30ml

#### PIMECROLIMUS

Indications: atopic dermatitis in patients over 2 years of age, Cautions: UV light exposure, erythroderma, immunosuppression Contraindications: known hypersensitivity to pimecrolimus. Interactions : see Appendix-2 Side-effects: burning sensation, pruritus, skin infection ,folliculitis , herpes simplex, molluscum contagiosum; Dose: apply a thin layer of cream only to the affected skin areas twice daily,

#### Proprietary Preparation

Elidel<sup>(I)</sup> (*Novartis*), Cream, 10 mg/gm, Tk. 1406.7/15 gm

#### TACROLIMUS

Indications: moderate to severe atopic

#### dermatitis

Cautions: UV light exposure

**Contraindications**:pregnancy and breast feeding, known sensitivity to tacrolimus

Interactions : see Appendix-2

**Side-effects:**burning, pruritus, allergic reactions, anaphylactoid reaction, angioedema, anorexia.

**Dose:**apply a thin layer of ointment to the affected skin twice daily. Stop using when signs and symptoms of atopic dermatitis resolve.

#### Proprietary Preparations

Tacrolimus 0.03% Remus (Square), Oint. Tk. 80/5g, Tacrol (Acme), Oint., Tk. 150/10g, Tk. 80/5g Tacrolim (Incepta), Oint. Tk. 80/5g,

#### SYSTEMIC RETINOIDS

Retinoids are synthetic derivatives of vitamin A. These include: acitretin, isotretin, etretinate, tazarotene, adapalene, bexarotene etc.

Indications: Psoriasis (severe plaquetype, generalized or localized pustular psoriasis), combination therapy in psoriasis with UVB or PUVA, or with cyclosporine or with biologic therapies, Disorders of keratinization e.g., Darier's disease, pityriasis rubra pilaris, ichthyosis spectrum, keratodermas

**Cautions:** care should be taken to avoid contact with eyes, mucus membranes and open sores

**Contraindications:** pregnancy or woman who is likely to become pregnant, nursing mothers, leukopenia, hypothyroidism, hyperlipidaemia, hepatic or renal dysfunction

Side-effects: hair loss, dry skin and lips, hypertriglyceridemia, burning, stinging, Interactions: see Appendix-2

#### ACITRETIN

Indications: see notes above Side-effects: see notes above Contraindications: see notes above Dose: Initiate at 25–50 mg daily and escalate and titrate to response. Proprietary Preparations Soritec (ACI), Cap. 10mg, Tk. 45.00/Cap.; 25mg, Tk. 85.00/Cap.

#### SYSTEMIC ISOTRETINOIN

Indications: see section 12.7 Cautions, Contraindications & Side-effects: see notes above Dose: see section 12.7

**Proprietary Preparations** see section 12.7

#### 12.7 ACNE AND ROSACEA

Treatment of acne should be started as early as possible to prevent scarring. Patients counseling are very important because improvement may not be seen for a couple of months. The choice of treatment depends on its severity, whether it is inflammatory or comedonal. Mild to moderate acne is usually treated with topical preparations where as systemic treatment with oral antibiotics is used for severe acne. Severe acne unresponsive to prolong courses of oral antibiotics, scaring or acne associated with psychological problems may be treated with isotretinoin. Rosacea is not usually comedonal but sometimes it may exist with acne. Pustules and papules of rosacea can be treated with oral administration of tetracycline or erythromycin.

#### TOPICAL RETINOIDS

Indications: acne, photoaged skin, and melasma, tazarotene in psoriasis involving less 20% of body surface area, bexarotene in cutaneous T-cell lymphoma

Known

Cautions:pregnancy Contraindications: hypersensitivity to topical retinoids

Side-effects: erythema, peeling, dryness, tightness, and burning sensation Interactions: see Appendix-2

*Note:* it should not be applied near the eyes, the mouth, paranasal creases of the nose, and mucous membranes

#### ADAPALENE

#### Indications: mild to moderate acne Cautions, Contraindications & Sideeffects: see notes above

**Dose:** applied to the affected areas of skin, once daily at night-time

#### **Proprietary Preparations**

Aclene (Drug Intl), Cream, 0.1%, Tk. 60/10gm Adapel (Healthcare), Cream, 0.1%, Tk. 60/10 gm

Adgar (ACI), Gel, 0.1%, Tk. 60/10 gm; 0.30%, Tk. 80/10 gm

Apalene (*Incepta*), Tab. 0.1%, Tk. 60/10 gm Fona (*Square*), Gel, 0.3%, Tk. 80.30/10 gm; Cream, 0.1%, Tk.60.22/10 gm Adapalene 0.1%+ Benzoyl Peroxide 2.5% Acnegel (*Acme*), Gel, Tk. 160/10gm Adaben Duo (*Incepta*), Gel, Tk. 200/10gm Fona Plus (*Square*), Gel, Tk. 160/10g Freshlook Gel(*Ziska*) Gel, Tk. 160/10g Nomark (*Opsonin*), Gel, Tk. 120.30/10gm

#### AZELAIC ACID

Indications:mild-to-moderate

inflammatory acne vulgaris, postinflammatory hyperpigmentation **Cautions:**pregnancy, breast feeding; **Contraindications:** Known hypersensi-

tivity to azelaic acid **Side effects:**pruritus, burning, stinging, erythema, dryness, rash, peeling, irritation, dermatitis, and contact dermatitis

**Dose:** apply a thin film gently but thoroughly into the affected areas twice daily, in the morning and evening for 4 weeks

#### **Proprietary Preparations**

Azelec (Acme), Cream, 20%, Tk. 75/10g; Tk. 40/5g

#### **BENZOYL PEROXIDE**

**Indications:** mild to moderate acne vulgaris, more effective on non-inflamed lesions

Cautions: open sores or broken skin Contraindications: known hypersensitivity to benzoyl peroxide or any components of the preparation Interactions: see Appendix-2 **Side-effects:**irritant contact dermatitis **Dose:**apply once daily to affected areas of face after washing. Treatment is usually started with 2.5% or 5.0% preparations. The frequency of application is then gradually increased as the initial irritant reaction subsides

#### **Proprietary Preparations**

Brevoxyl (1)(GSK), Cream, 4%, Tk.332.41/40 gm

Caress (*Renata*), Cream, 2.5%, Tk.45/15 gm Oxigel (*Unimed*), Gel, 2.5%, Tk. 150/20 gm; 5%, Tk. 200/20 gm; Solu, 5%, Tk. 300/50gm

Clindamycin1% + Benzoyl peroxidel5%: Duac <sup>(I)</sup>(Stiefel), Gel,TK.697.85/25gm

#### **CLINDAMYCIN (Topical)**

Indications: acne vulgaris characterized by inflammatory lesions such as papules and pustules, erythrasma, rosacea, periorificial dermatitis, folliculitis Cautions:do not apply to from eyes, nose, mouth and other mucous membranes

Contraindications:Known

hypersensitivity to clindamycin Interactions: see Appendix-2. Side-effects:erythema, desquamation, burning sensation, eye irritation, tenderness, dryness, contact dermatitis

**Dose:** apply a thin film to the affected areas twice daily, in the morning and in the evening for 6 weeks

#### **Proprietary Preparations**

Clindamycin Cream 2%, Lotion 1% Clocin (Healthcare), Cream, Tk.70.00/20gm; Clindax (Opsonin),lotionTk.125.47/25ml Daclin (ACI), Lotion, Tk. 125/25 ml Clinex (Aristo), Lotion, Tk. 125/25 ml Lindamax (Eskayef), Lotion, Tk. 125/25 ml Clindacin (Incepta), Lotion, Tk. 125/25 ml

Clindamycin 1.2% + Tretinoin0.025%. Cinamycin Plus(*Ibn Sina*),Gel, Tk.150/15gm Clinacyn T (*Beximco*), Gel, Tk.150/15gm Clindacin Plus (*Incepta*), Gel, Tk.150/15gm ClindaxPlus(*Opsonin*),Cream,Tk.90.56/10g Clinex Plus (*Aristo*), Gel, Tk. 150.00/15 gm Clinface (*Square*), Gel, Tk. 150.00/15 gm Dalacin Plus (*Drug int.*), Gel, Tk.150.00/15 g Lindamax Plus (*Eskayef*),Gel,Tk. 120/15gm

#### **ERYTHROMYCIN** (Topical)

Indications: mild to moderate acne vulgaris, bacterial skin infections susceptible to erythromycin Contraindications: Known hypersensitivity to erythromycin Interactions: see Appendix-2 Side-effects: erythema, desquamation, burning sensation, eye irritation, tenderness, dryness, oily skin Dose: apply to the affected areas twice daily in the morning and evening. Before applying thoroughly wash with warm water and soap, rinse and pat dry all areas to be treated

#### **Proprietary Preparations**

A-Mycin (Aristo), Lotion, 3%, Tk.120/25 ml Eromycin (Square), Lotion, 3%, Tk.120/25ml Macrocin (Sanofi), Solu., 20 mg/ml, Tk. 200/100 ml

#### **ISOTRETINOIN (Topical)**

## Indications; Cautions, Side- effects and Dose: see under Tretinoin.

#### **Proprietary Preparations**

<u>Isotretinion 0.05%</u> Isotrex <sup>(I)</sup> (*Stiefel*), Gel, Tk. 265.13/10gm Retigel (*Unimed*), Gel, Tk. 200/20gm

#### **ISOTRETINOIN (Systemic)**

**Indications:** Acne: nodulocystic acne, recalcitrant acne, especially if there is any scarring tendency

Cautions, Contraindications, Sideeffects: see section 12.6 under systemic retinoids

**Dose**:0.3 to 0.5 mg/kg/day initially, then 0.5 to 1.0 mg/kg/day, for at least 4-6 months. A lag period of 1–3 months may occur before the onset of the therapeutic effect. A flare-up of disease during the first few weeks of treatment and the evolution of acne cysts into lesions resembling pyogenic granuloma may be observed

#### **Proprietary Preparations**

**Roaccutane**<sup>(1)</sup> (*R.P. Scherer*), Cap., 10 mg, Tk. 96.54/Cap.; 20 mg, Tk. 167.06/Cap.

Isotretinion<sup>(I)</sup> (*Pharmathen*), Cap., 10 mg, Tk. 21.66/Cap.; 20 mg, Tk. 34.95/Cap.

#### TAZAROTENE

**Indications:**stable plaque psoriasis mild to moderate acne

#### Cautions, Contraindications & Sideeffects: see notes above.

**Dose:** For psoriasis:Apply once a day, in the evening, for at least 8-12 weeks. For acne:apply a thin film gel 0.1% in the evening once a day for 6-8 weeks.

#### **Proprietary Preparations**

Tazarotena 0.10% Soritene (Beximco),Cream, Tk. 151/25 gm Tazoskin (Incepta), Cream, Tk. 140/20 gm

## TRETINOIN (ALL-TRANS RETINOIC ACID)

Indications: acne vulgaris in which comedones, papules and pustules predominate, hyperpigmentation, roughness and fine wrinkling of photodamaged skin due to chronic sun exposure

Cautions, Contraindications, Sideeffects: see notes above

**Dose:** once daily, before retiring, to the skin where lesions appear, using enough to cover the entire affected area lightly. The therapeutic effects will not usually be observed until after 6-8 weeks of treatment

#### **Proprietary Preparations**

Cosmotrin(Beximco), Cream, 0.025%, Tk. 45.00/10 gm Nilac(Square), Gel, 0.03%, Tk. 45.16/10 gm Retin-A (Sanofi), Cream, 0.5%, Tk. 65/15 gm; Tk.100/30 g;Tk. 26.40/5 gm Tretinoin (Albion), Cream, 0.025%, Tk. 45/10 gm Trena (ACI), Gel, 0.03%, Tk. 45.17 /10 gm

#### ORAL ANTIBIOTICS FOR ACNE

**Tetracycline**:see section 1.1.6. Initially 250–500 mg 1–4 times a day, with gradual reduction of the dose, depending on clinical response **Doxycycline**: see section 1.1.6. 50–100 mg once or twice a day, depending on

the disease severity.

**Minocycline:** see section 1.1.6. 50–100 mg once or twice a day, depending on the severity of disease.

**Erythromycin:** see section 1.1.5 initial dose is 250–500 mg 2–4 times a day, reduced gradually after control is achieved.

**Clindamycin:** see section 1.1.5 the initial dose is 150 mg three times a day, reduced gradually as control is achieved.

#### HORMONAL TREATMENT FOR ACNE

**CO-CYPRINDIOL** (a mixture of cyproterone acetate with ethinyl estradiol)

**Co-cyprindiol** Some women with moderately severe hirsutism acne vulgaris in women, unresponsive to systemic antibiotics

**Cautions:** pregnancy, predisposition to thrombosis and as for combined oral contraceptives; *see also section 6.3* 

Contraindications, Side-effects:seeundercombinedoralcontraceptives.See section 6.3Dose:1tabletdaily for 21 days starting

on day 1 of menstrual cycle and repeated after a 7 day interval, usually for several months; withdraw when acne or hirsutism remits.

#### Generic preparation

Tablet Co-cyprindiol 2000/35 (cyproterone acetate 2 mg, ethinylestradiol 35 microgram).

12.8 MISCELLANEOUS SKIN PREPARATIONS

#### ALUMINIUM CHLORIDE HEXAHYDRATE

Indications:palmoplanter hyperhidrosis Cautions: for external use only. Do not apply to broken, irritated or recently shavedd skin. Avoid contact with eyes, mouth, nose and lips. Avoid direct contact with clothing and polished metal or jewellery surfaces Contraindications: known

hypersensitivity to aluminium chloride

#### hexahydrate

**Side-effects:** skin irritation: burning, stinging, redness, swelling, tingling or itching of treated skin areas

**Dose:** apply at night after drying the affected areas carefully. Wash off in the morning. Do not re-apply the product during the day. Initially the product may be applied every night until sweating stops during the day. The frequency of application may be reduced to twice a week or less, if excess sweating is stopped during the day.

#### **Generic Preparation**

solution 20%

#### **FINASTERIDE**

(see section 5.4.3)

Indications:male pattern hair loss (androgenetic alopecia) in men only. Cautions:hepatic impairment

**Contraindications:** Known hypersensitivity to finasteride, women and paediatric patients.

Interactions: see Appendix-2

Side-effects:decreased libido, erectile dysfunction, ejaculation disorder and decreased volume of ejaculate. Dose: 1 mg once daily. In general, daily use for three months or more is necessary before benefit is observed. Continued use is recommended to sustain benefit. Withdrawal of treatment leads to reversal of effect within 12 months

**Proprietary Preparations:** see section 5.4.3

#### L-LYSINE

Indications: treatment and prevention of infection in cuts, wounds abrasion, surgical incisions and burns. For the treatment of decubitus or stasis ulcers, advance chronic wounds, infected traumatic lesions etc Contraindications: known hypersensitivity to L-lysine. Side-effects: slight itching sensation Dose:apply as often as required, preferably at an interval of 24, 48, 72 hrs. The affected areas should be cleaned with normal saline and/or surgically if necessary till the wound bed looks red/few bleeding points appear in the cleaned wound bed. Then gel should be applied liberally. The areas may be covered with a moist dressing and/or a bandage.

#### Proprietary Preparations

Colagel (Incepta) ,Gel 15%,Tk.80/25g

#### MINOXIDIL

**Indications:** androgenetic alopecia in men and women aged between 18 and 65.

**Cautions:** before using Minoxidil, the user should determine that the scalp is normal and healthy. Patients with known cardiovascular disease or cardiac arrhythmia should contact a physician before using Minoxidil. Minoxidil contains alcohol, which will cause burning and irritation of the eye. In the event of accidental contact with sensitive surfaces (eye, abraded skin and mucous membranes) the area should be bathed with large amount of cool tap water

**Contraindications:** Known hypersensitivity to minoxidil, pregnancy.

**Side-effects:** hypertrichosis (unwanted non-scalp hair including facial hair growth in women), local erythema, itching, dry skin/scalp flaking, and exacerbation of hair loss have been reported commonly

**Dose:**hair and scalp should be thoroughly dry prior to topical application of Minoxidil. A dose of 1 ml Minoxidil cutaneous solution should be applied to the total affected areas of the scalp twice daily. The total dosage should not exceed 2 ml. If fingertips are used to facilitate drug application, hands should be washed afterwards. It should be used twice daily for four months or more before evidence of hair growth can be expected

#### Proprietary Preparations

Regain (*Renata*), Solu, 2%,Tk.500/60 ml; 5%, Tk. 600/60 ml Splendora (*Square*), Solu, 2%,Tk.500/60 ml; 5%, Tk. 600/60 ml **Trugain**(*(Ziska) )*, Solu, 2%, Tk. 348.00/60ml; 5%, Tk. Tk. 398.00/60ml **Xenogrow** (*Incepta*),Solu,2%,Tk. 500/60 ml; 5%, Tk. 600/60 ml

#### PARAFFIN

Light Liquid Paraffin + White Soft Paraffin Indications:prevention & treatment of itchy, irritating dry skin conditions, eczema & psoriasis Cautions:not to be used in eye Contraindications:Known hypersensitivity to paraffin Dose:apply to the affected area and rub in well. It is especially effective after washing body areas because the sebum content of the stratum corneum may be

content of the stratum corneum may be depleted after washing resulting in excessive moisture loss

#### Proprietary Preparations

Emolent (Square), Cream, Tk. 100/25 gm

#### PODOPHYLLOTOXIN

Indications: anogenital warts Contraindications: pregnancy, known hypersensitivity to podophyllotoxin Side-effects: Erythema, erosions, and tenderness

**Dose:** apply with a protective inert ointment to surrounding skin and wash off 4–6 hours after application. Treatment is generally at weekly intervals

#### Generic Preparation Cream 0.15%

Cream 0.15%

#### PRIMROSE OIL

Indications:atopic dermatitis, premenstrual syndrome symptoms (PMS), cyclical mastalgia Contraindications:known hypersensitivity to primrose oil Side-effects: diarrhea, abdominal pain Dose: one or two capsules two to three times daily

#### Proprietary Preparation

Eprim (Square), Cap. Tk.5.00/Cap

#### SALICYLIC ACID [ED]

Indications:chronic atopic dermatitis, lichen simplex, psoriasis, seborrhoeic dermatitis, ichthiosis,warts, corns and calluses

#### Salicylic acid + Urea ointment:

Debridement and promotion of normal healing of hyperkeratotic surface lesions, particularly where healing is retarded by local infection, necrotic tissue, fibrinous or purulent debris or eschar. Urea is useful for the treatment of hyperkeratotic conditions such as dry, rough skin, dermatitis, psoriasis, xerosis, ichthyosis, eczema, keratosis pilaris, keratosis palmaris, keratoderma, corns and calluses

**Cautions:**surrounding skin to be protected; avoid broken skin; not suitable for application to face, anogenital region or large areas. Avoid contact with eyes, do not inhale vapors

**Contraindications:**diabetes, poor peripheral blood circulation, irritated skin or any area that is infected or reddened, known hypersensitivity

Side-effects:skin irritation, prolonged use may cause salicylism

Dose: for viral warts and calluses:

Wash the affected area, the wart/callus may be soaked in water for 5 minutes. Dry thoroughly and apply one drop at a time with applicator to sufficiently cover each wart/callus, then let dry again. Selfadhesive cover-up discs may be used to conceal warts. Repeat procedure once or twice daily as needed (until wart/callus is removed) for up to 12 weeks

#### Proprietary Preparations

Duofilm <sup>(i)</sup> (*Stiefel*), Liquid salicylic acid 16.70%, lactic acid 16.70% Tk. 296.94/15ml <u>Salicyclic acid</u>

Acnecare(General), Gel,0.5%,Tk.100/10 gm Kerasol (Incepta), Cream,12%,Tk. 90/30 gm Kerasol (Incepta), Cream, 6%, Tk. 50/30 gm Salidex (Eskayef), Cream, 6%, Tk. 42/15 gm

#### UREA

Indications: ichthyosis and dry skin conditions, eczemas, psoriasis Cautions: not to be used in eyes

Contraindications: Known hypersensitivity to urea

Side-effects:burning and irritation, if applied to inflamed, broken or exudative skin eruptions, local irritation and oedema

**Dose:**wash affected areas well, rinse off all traces of soap, dry, and apply sparingly twice daily

#### **Proprietary Preparations** Urea10%

Equra (Square), Cream, Tk. 30.11/15 gm Eukrim (Beximco), Cream, Tk. 30.00/15 gm Eudrate(Incepta), Cream, Tk. 30.00/15 gm Eucera (Unimed), Cream, Tk. 75.00/30 gm

#### 12.8.1 DISINFECTANTS AND CLEANSERS

Disinfectant is a chemical agent, which can destroy or inhibit growth of pathogenic microorganisms. It does not necessarily kill all organisms but reduces them to a level, which does not harm health. They are used to control and prevent infection and also to be used to disinfect skin and other tissues prior to surgery.

Selection of disinfectants and cleanser for the treatment of skin conditions is very much important. Disinfectant and cleanser which do not irritate the skin should be used. An antiseptic is a type of disinfectant, which destroys or inhibits growth of microorganisms on living tissues without causing injurious when applied to surfaces of the body or to exposed issue. Most of the antiseptics are usually applied to the skin or mucous membranes, to burn and to open wounds to prevent sepsis by removing microbes from these areas. Povidoneiodine is effective against bacteria, fungi, viruses, protozoa, cysts, and spores. It significantly reduces surgical wound infections. The solution of . Povidone-iodine releases iodine on contact with the skin. Chlorhexidine has a wide spectrum of bactericidal and bacteriostatic activity and is effective against both Gram-positive and Gramnegative bacteria although it is less effective against some species of

*pseudomonas* and *proteus* and relatively inactive against *mycobacteria*. Ethanol has bactericidal activity and is used to disinfect skin prior to injection, venepuncture or surgical procedures.

Soaps or detergent is used with water to cleanse intact skin; preparation such as aqueous cream and emulsifying ointment can be used as soap substitute for hand washing and in bath. Scaling disorders are best treated with emulsifying ointment. Cetrimide is useful disinfectant for skin cleansing and has detergent properties. Potassium has permanganate solution aot astringent properties and is useful for oozing eczematous reactions.

Sodium chloride solution (0.9%) is suitable for general cleansing of skin and wounds. Alcohol (70% ethanol) is a very good cleanser and disinfectant of intact skin. Potassium permanganate solution has got astringent properties and is useful for oozing eczematous skin. Hydrogen peroxide (20% solution) is useful for cleansing and disinfecting deep dirty wounds. EUSOL (Edinburgh University solution) is used to clean and chemically deride surgical wounds with necrotic tissue Acriflavin solution is useful to clean healthy granulating wounds.

#### ALCOHOL (70%)

Indication: skin preparation before injection

**Cautions:** flammable, patients suffering from severe burns. Avoid broken skin **Contraindications:** broken skin

#### CHLORHEXIDINE SALTS

Indications: for cleansing and disinfecting wounds and burns. In obstetrics and gyneacological cases, it is used as an antiseptic and lubricant.It may be used in the management of common infections in the bladder

**Cautions:** avoid contact with eyes, meninges and middle ear. Not for use in body cavities

Side-effects: Occasional sensitivity

#### CHLORHEXIDINE GLUCONATE [ED]

**Indications:** for the disinfection of clean and intact skin. For pre-operative surgical hand disinfection, hand disinfection on the ward prior to aseptic procedures or after handling contaminated materials. For disinfection of the patients' skin prior to surgery or other invasive procedures.

Cautions: external use only.

Dose:ADULT:pre-operative surgical hand disinfection: Dispense 5 ml of solution and spread thoroughly over both hands and forearms, rubbing vigorously. When dry apply a further 5 ml and repeat the procedure. Antiseptic hand disinfection on the ward: Dispense 3 ml of solution and spread thoroughly over the hands and wrists rubbing vigorously until dry. Disinfection of patients skin:prior to surgery apply the solution to a sterile swab and rub vigorously over the operation site for a minimum of 2 minutes. Chlorhexidine Gluconate is also used for preparation of the skin prior to procedures invasive such as venepuncture.

#### **Proprietary Preparations**

Hexiscrub (ACI), Skin Cleanser, 4%, Tk. 250.00/250 ml Handiwash (General), Solu, 0.5%, Tk. 80.30/200 ml;Tk. 30.11/50 ml;Tk. 105.40/250

ml Hexasia (Pharmasia), Hand Rub, 0.5%, Tk. 30.00/50 ml; Tk. 105.00/250 ml

Hexitane(ACI),Obs.,5%Cream,Tk68.00/60ml

 Chlorhexidine Gluconate+ Isopropyl Alcohol

 Handirub (Eskayef), Hand Rub Solution,Tk.

 40.00/50 ml; Tk. 100.00/200 ml

 Hexisol (ACI), Hand Rub,(with dispenser)

 0.50%, Tk. 140.00/250 ml; 0.50%, Tk.

 130.00/250 ml; 0.50%, Tk. 40.00/50 ml

 ;Tk30/10ml

 Xisol (Ariso), Hand Rub Solution, Tk.30.00/50 ml

 ml: Tk. 105.00/250 ml

#### CHLORHEXIDINE HCI [ED]

see also section 11.3.3

#### CHLOROXYLENOL

Indications:For application to the skin

for use in cuts, bites, stings, abrasions, and for use as an antiseptic hand cream. **Contraindications:** allergic skin reactions, dermatitis, eczema or other skin complaints.

#### **Proprietary Preparations**

Dettol (*Reckitt & Colman*), Liquid 4.80%, Tk.24/100ml Saftol (*Skylab*), Liquid 5%, Tk.10.40/50ml; Tk.13.60/100ml

#### CETRIMIDE

Usually used in combination with other antiseptics such as chlorhexidine **Indications:** skin disinfection. **Cautions:** avoid contact with eyes, avoid use in body cavities. **Side-effects:** skin irritation.

#### Proprietary Preparations

Cetrimide + Chlorhexidine Gluconate G-Antiseptic (Gonoshasthaya), Solu., 3% + 0.3%, Tk.20.00/100 ml Kevilon (Opsonin), Cream, 5 mg + 1 mg/gm, Tk. 18.80/30 gm Savlon (ACl), Cream, 1.25g+0.1g/100ml, Tk.25.00/30g; Tk.34/60g; Solu., 7.50ml+1ml/100ml; Tk.125.00/500ml; Tk.220.00/1000ml; Tk.710.00/5000ml; 37.50ml+7.50ml/100ml; Tk.1740.00/500ml

#### GENTIAN VIOLET[ED]

**Indications:** fungal skin infections, e.g., oral candidiasis (oral thrush), vulvovaginal candidiasis (vaginal thrush), superficial bacterial skin infections such as infected eczema, boils, and chronic (long-standing) leg ulcers

**Cautions:** avoid contact with eyes, avoid use in body cavities.

Side-effects: irritation of mucous membranes if used at high concentrations, staining of clothes

#### **Proprietary Preparation**

Viola (*Hudson*), Solution, 2%, Tk.12.00/60ml. Tk.22.00/100ml

#### HYDROGEN PEROXIDE

Indications: skin disinfection, particulate

cleansing and deodorizing wounds and ulcers

Cautions: large or deep wounds, avoid normal skin

Contraindications: deep wounds

#### POVIDONE-IODINE<sup>[ED]</sup>

**Indications:**Solution:pre-operative and post-operative skin disinfection of surgical sites, as an antiseptic of hydrotherapy equipments, for the treatment of acne vulgaris of the face and neck and pyogenic skin conditions, bacterial and myotic skin infections.

Ointment:treatment and prevention of infections in cuts and abrasions, minor surgical procedures, and other topical lesion, as an adjunct to systemic therapy, in the treatment of primary or secondary topical infections, decubitus or stasis ulcer, pyoderms and infected traumatic lesions.

Gargle and Mouth-Wash:for infected inflammatory conditions of the mouth and pharynx caused by bacterial infections and in dental surgery

**Cautions:** application of povidone iodine to large wound or severe burns may produce systemic adverse effects such as metabolic acidosis, hypernatraemia, pregnancy, breast-feeding and renal impairment

**Contraindications:**avoid regular use in patient with thyroid disorders or those receiving lithium therapy and who shows hypersensitivity to iodine

**Side-effects:**idiosyncratic mucosal irritation and hypersensitivity reactions rarely, may interfere with thyroid-function tests

**Dose:**solution:apply the full strength as often as required as a paint or wet soak. For minor wounds and infection apply directly to the affected area. The site may be covered with gauze or adhesive bandage

ointment:apply ointment directly to the affected area after being cleaned and dried. May be covered with a dressing or bandage

#### Proprietary Preparations

Arodin (Aristo), Oint., 5%, Tk.20/10 gm;

Tk.30/25gm ;Solu., 10%, Tk.80/100 ml ; Tk. 450.00/1 Litre; Tk. 1425.00/5 Litres Betadine (*Mundipharma*), Oint., 5%, Tk. 75.00/15 gm; Tk. 196.00/125 gm; Surgical Scrub, 7.5%, Tk. 100.00/50 ml; Tk.165.00/100

ml; Tk. 650.00/500 ml Solu., 10%, Tk. 110.00/50 ml; Tk. 190.00/100 ml; Tk. 550/500 ml; Tk. 1000.00/1 Litre ; 5%, Tk. 100.00/50 ml; Tk. 150.00/100 ml; Tk.

450.00/500ml; Tk. 800.00/1 Litre Cleanser (*General*), Solu., 10%, Tk. 18.00/30 ml; Tk. 60/100 ml; Tk.550/1 Litre

**Donadin** (*Ibn Sina*), Cream, 6%, Tk.26/20gm **Piodin** (*Pharmasia*), Oint., 6%,, Tk. 35.00/25 gm

Povidine (Alco), Oint., 5%,Tk. 34.00/15 gm Povidone (Amico), Solu.10%,Tk.55/100 ml Povin (Opsonin), Oint., 5%,Tk. 11.32/10 gm Liquid, 500 mg/5 ml, Tk. 16.60/60 ml;Tk. 33.08/100 ml

**Povisep** (*Jayson*), Surgical Scrub, 7.5%, Tk. 5,000.00/5 Litres ;Solu, 10%, Tk. 100.00/100 ml ; Tk. 700.00/1 Litre; Tk. 3250.00/5 Litres;Tk. 55.00/30 ml; 5%, Tk. 25.00/20 ml; Tk. 80.00/100 ml;Powder, 5%, Tk. 30.00/10 gm **Povisep**, (*Jayson*), Cream, 6%, Tk. 22.00/5

gm; Tk. 50.00/25 gm Povisep , (*Jayson*), Surgical Scrub, 7.5%, Tk.

325.00/250 ml; Tk. 600.00/500 ml **Provia** (*Asiatic*), Solu.,10%, Tk. 30/100 ml **Viodin** (*Square*), Solu.,10%, Tk. 60/100 ml; Tk. 15.00/15 ml; Tk. 341.28/1 Litre ;Oint., 5% Tk. 40/20 qm

#### ZINC OXIDE

Indications:treat or prevent skin irritations (e.g., burns, bed sore, cuts, poison ivy, diaper rash). Protects chafed skin due to diaper rash and helps seal out wetness

**Cautions:**for external use only. Avoid contact with the eyes

Contraindications:Known

hypersensitivity to any component of the preparation

Side-effects:usually well-tolerated. Extremely low frequency of hypersensitivity reaction

**Dose:**apply thin layer topically every 8 hourly. Change wet and soiled diapers, promptly cleanse the diaper area, allow to dry and apply ointment liberally as often as necessary, with each diaper change, especially at bedtime or any time when exposure to wet diapers may be prolonged

#### Proprietary preparations Zinc Oxide 40%

De-rash (Square), Oint., Tk. 50.20/25 gm Napguard (Incepta), Oint., Tk. 50.00/25 gm Q-Rash (Beximco), Oint., Tk. 50.00/25 gm Rashguard (Popular), Oint., Tk. 40.15/20 gm Softi (Eskayef), Oint., Tk. 90.00/50 gm

12.8.2 SUNSCREENS, DEPIGMENTING AGENTS, CAMOUFLAGERS, SHAMPOOS AND OTHER SCALP PREPARATIONS

#### SUNSCREENS

Solar ultraviolet irradiation may be very much harmful to the skin and is responsible for many disorders e.g. polymorphic light eruption, solar urticaria and various cutaneous porphyrias. It can also aggravate the disorders like rosacea and lupus erythematosus. Solar ultraviolet irradiation may also cause photosensitivity in patients who are taking drugs like demeclocycline, phenothiazines or amiodarone.

Exposure over longer periods may cause more serious problems like melanoma and non-melanoma skin cancer. Solar ultraviolet irradiation may also provokes attacks of recurrent herpes labialis, sunscreen preparations contain substances that protection against ultraviolet irradiation.

For intermittent, casual daily use, an SPF 15 sunscreen is sufficient. For prolonged recreational exposures, an SPF 30 is more desirable, particularly for fair-skinned individuals.

Indications: photodermatoses including radiotherapy, caused by those photosensitisation, solar urticaria, acute dermatitis, solar drug-induced photosensitivity, acute lupus erythematosus, cutaneous albinism, vitiligo, polymorphic light eruption

**Cautions:**application to broken skin should be avoided. Contact with the eyes and other mucous membranes should be avoided.

#### Contraindications:known

hypersensitivity to any of the sunscreen components, children under the age of 6

#### months

**Dose:**sunscreen should be applied 15– 30 minutes before sun exposure to allow sufficient time for the protection to develop, and reapplied every 2 hours. Sunscreen should be reapplied after prolonged swimming or vigorous activity leading to sweating. If swimming or perspiring heavily, a water-resistant or waterproof product should be used.

#### **Proprietary Preparations**

Padimate O 8% + Avobenzone 2% + Oxybenzone 3% + Titanium dioxide 2% SolaScren(Incepta) lotion SPF 28, Tk. 400.00/60ml

#### AZELAIC ACID

see section 12.7.

#### HYDROQUINONE

**Indications:** melasma, freckles, senile lentigines and other unwanted areas of melanin hyperpigmentation

<u>Fluocinolone acetonide 0.1 mg +</u> <u>Hydroquinone 40 mg + Tretinoin 0.5 mg</u> **Cream:** moderate to severe melasma of the face, in the presence of measures for sun avoidance, including the use of sunscreen

**Cautions:** Where there is itching or vesicle formation or excessive inflammatory response, further treatment is not advised. If no bleaching or lightening effect is noted after 2 months of treatment, the medication should be discontinued. Contact with the eyes and lips should be avoided. Hydroquinone should not be applied to cut or abraded skin

**Contraindications:** known hypersensitivity to hydroquinone

Side-effects:Irritant dermatitis, contact dermatitis, postinflammatory pigmentation, and cutaneous ochronosis.

**Dose:**hydroquinone should be applied to the affected area and rubbed in well twice daily. Most discolorations begin to lighten after 4 weeks of treatment but it may take longer <u>Hydroquinone + Octyldimethyl P-</u> <u>aminobenzoate + Dioxybenzone +</u> <u>Oxybenzone:</u> apply once or twice daily, preferably at night

<u>Fluocinolone acetonide 0.1 mg +</u> <u>Hydroquinone 40 mg + Tretinoin 0.5 mg</u> <u>cream:</u>

Apply once daily at night. It should be applied at least 30 minutes before bedtime. A thin film of the cream should be applied to the hyperpigmented areas of melasma including about ½ inch of normal appearing skin surrounding each lesion. Cream is for short-term (up to 8 weeks) treatment of moderate to severe melasma of the face. It is not for longterm (more than 8 weeks) or maintenance (continuous) treatment of melisma

#### **Proprietary Preparations**

Melatrin (Ziska), cream Fluocinolone Acetonide 0.01%, Hydroquinone 4%, Tretinoin 0.05% Tk. 200.00/30g

Spotclen (Incepta), Cream; Hydroquinone 4% Tk. 50/10g

Spotclen Plus (Incepta), Cream; Hydroquinone 4%, octyldimethyl Paminobenzoate 8% Dioxybenzone 3%, oxybenzone 2% Tk. 80/10g

#### CAMOUFLAGERS

Disfigurement of the skin can be very distressing to patients and have a very marked psychological effects. These preparations can be very effective in concealing scars and birthmarks. The patches in vitiligo are very disfiguring and thus dermablend cover cream, dermacolour camouflage cream and kermomask masking powder are of great cosmetic value.

#### SHAMPOOS AND SOME OTHER SCALP PREPARATIONS

Dandruff is a mild form of seborrhoeic dermatitis. This can be treated with frequent use of a mild detergent shampoo, generally once or twice weekly. Shampoos containing antimicrobial agents such as pyrithion

zinc and selenium sulphide have beneficial effects. Ketaconazole shampoo is most effective. Corticosteriod gels and lotions can also be used. Shampoos containing coal tar and salicylic acid are useful. Infants may be treated with olive oil or arachis oil (groundnut oil, peanut oil). Applications must be followed by shampooing, keratolytic agents e.g. lactic acid, glycolic acid and salicylic acid are employed to treat multiple hyperkeratotic and scaling cutaneous eruptions. Lactic acid and salicylic acid are applied topically for the treatment of hyperkeratotic skin disorders. Glycolic acid is used for the treatment of xerosis, ichthymosis and photo-aging

#### Proprietary Preparations

Dancel (Incepta), Shampoo Ketoconazole 2%, Tk. 150/60ml

Nizoral<sup>(I)</sup> (Janseen-Cilag), Shampoo Ketoconazole 2% Tk. 230/60ml

CLOBETASOL PROPIONATE SHAMPOO

Indications:moderate to severe forms of scalp psoriasis in subjects 18 years of age and older

**Cautions:**treatment should be limited to 4 consecutive weeks because of the potential for the drug to suppress the hypothalamic-pituitary-adrenal axis. The total dosage should not exceed 50 g per week; breast feeding

**Contraindications:**pregnancy, children younger than 18 years of age

Side-effects:burning/stinging, pruritus, edema, folliculitis, acne, dry skin, irritant dermatitis, alopecia, urticaria, skin atrophy, Systemic absorption can cause reversible HPA axis suppression

**Dose:** apply into the dry (not wet) scalp once a day in a thin film to the affected areas only, and leave in place for 15 minutes before lathering and rinsing

#### Proprietary Preparations

**Dermovate** (*GSK*), Scalp Application 0.5%, Tk. 250/30ml

Nyclobate (Incepta), Shampoo, Tk. 350/60 ml