

## MANAGEMENT OF PSORIASIS VULGARIS



Ministry of Health Malaysia



Dermatological Society of Malaysia



Academy of Medicine Malaysia

## Case Discussion: *Mild Psoriasis*

Clinical Practice Guidelines  
Management of Psoriasis  
Development Group

# History

- 47/C/lady
- C / O skin rash on both elbows, knees and hands for the past 6 months
- Associated with mild itch
- No arthropathy
- No past medical / surgical history
- Not on any treatment
- Housewife
- No family history of skin disease



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# Questions

- 1) What is your clinical diagnosis?
  - Chronic Plaque Psoriasis
- 2) What are the important assessment?
  - i. Assessment of disease severity
    - Extent of lesions
    - Effect on quality of life
  - ii. Assess for arthropathy
  - iii. Assess for co-morbidities (Metabolic syndrome, CVS disease, depression)-BP, BMI,FSL, FBS, ECG

# Assessment of severity – tools available

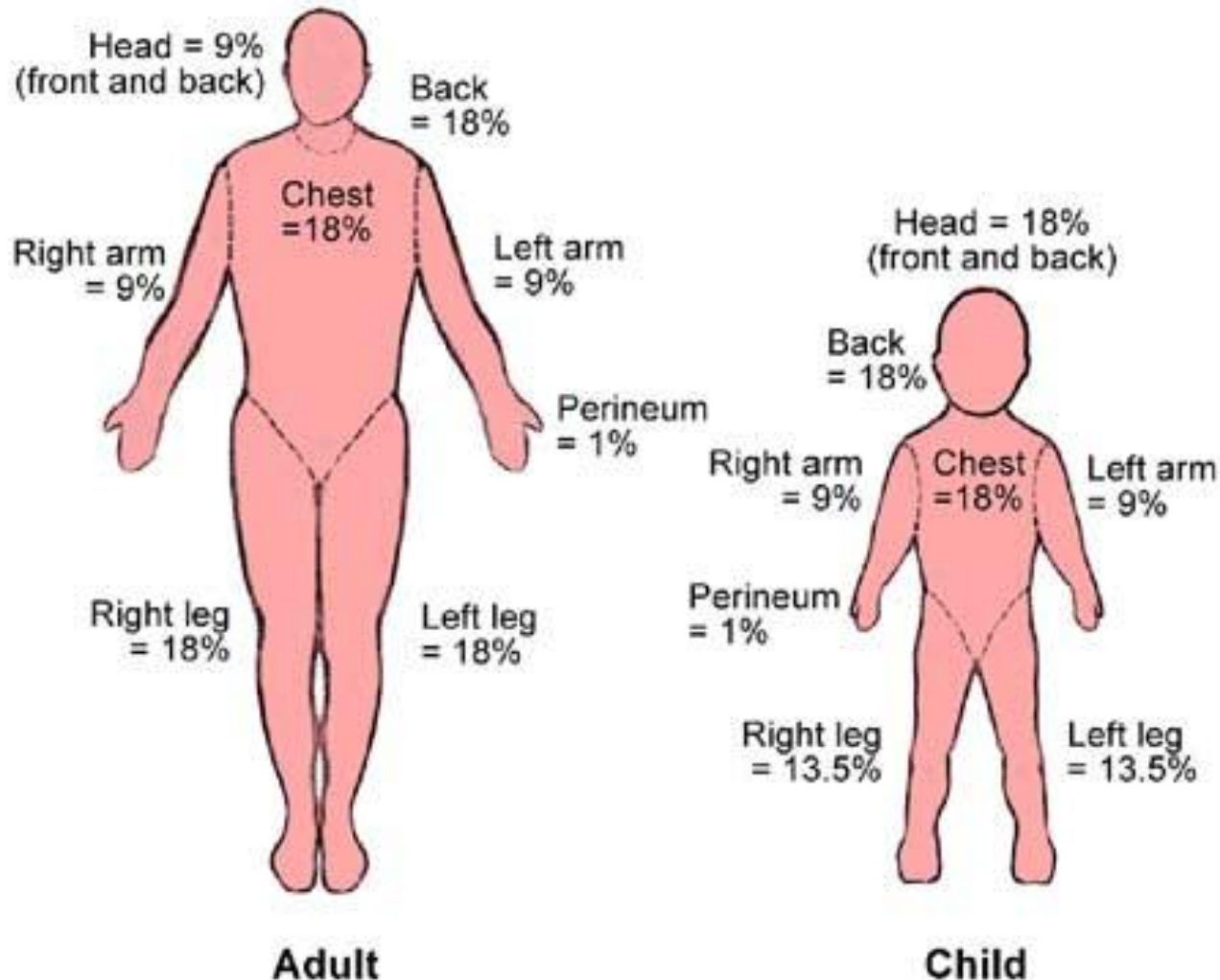
## A. Extent of lesions

1. Body surface area (BSA)
2. Psoriasis Area Severity Index (PASI)

## B. Effect on quality of life

- Dermatology Life Quality Index (DLQI)

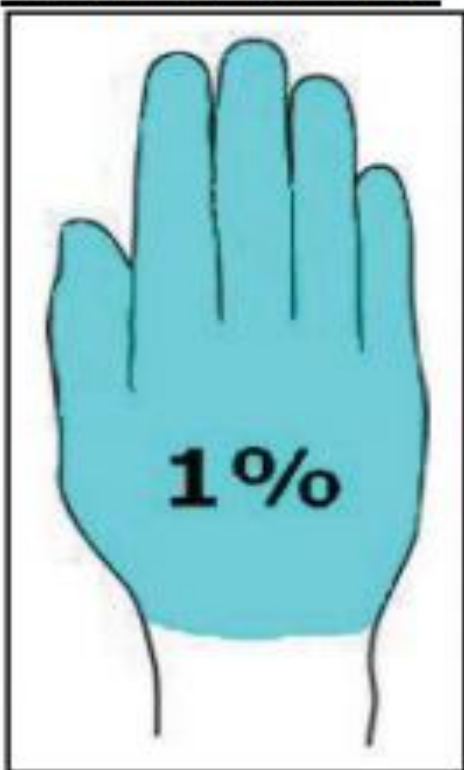
# 1) Body surface area: Rule of Nine





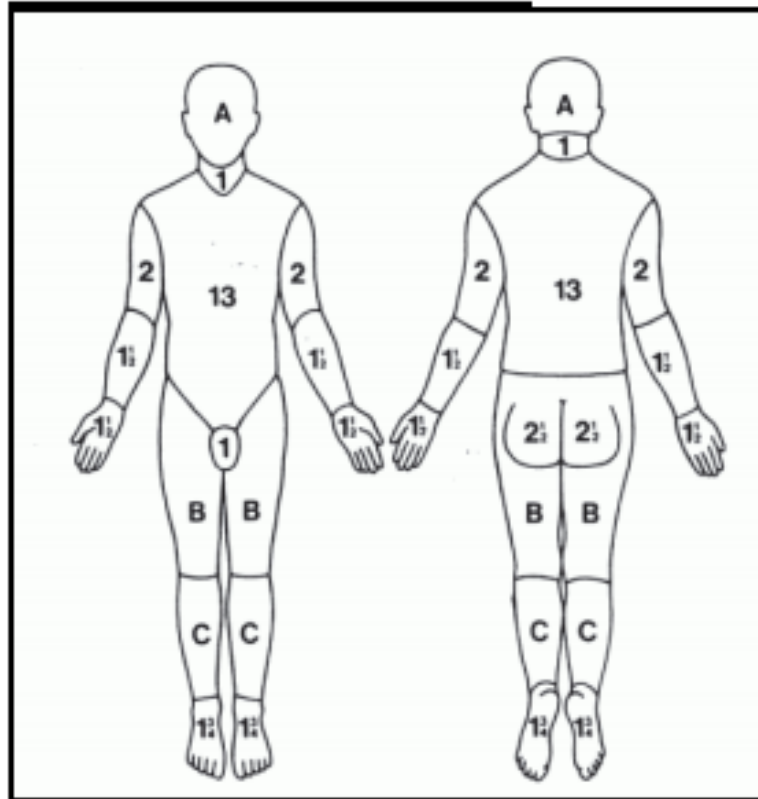
# Body surface area: other methods

Or Hand Method



Palm and fingers  
of the patient =  
1% TBSA

Or Lund & Browder Chart



Age	0	1	5	10	15	Adult
A	9.5	8.5	6.5	5.5	4.5	3.5
B	2.75	3.25	4	4.5	4.5	4.75
C	2.5	2.5	2.75	3	3.25	3.5

## 2) PASI

=**P**сориаз **A**rea and **S**everity **I**ndex

- A tool used to measure the severity and extent of psoriasis
- Widely used in clinical research
- PASI combines the assessment of the severity of lesions and the area affected into a single score
  - Score : 0 (no disease) to 72 (maximal disease)

# Psoriasis Area and Severity Index (PASI\*): assessment

Patient's name .....UR/Patient no. ....

Date .....Time .....

Assessor.....

$$\text{Head: } 0.1 \times \boxed{\text{Area}} \times \left( \boxed{\text{Erythema}} + \boxed{\text{Scaliness}} + \boxed{\text{Thickness}} \right) = \boxed{\phantom{000}}$$

$$\text{Trunk: } 0.3 \times \boxed{\text{Area}} \times \left( \boxed{\text{Erythema}} + \boxed{\text{Scaliness}} + \boxed{\text{Thickness}} \right) = \boxed{\phantom{000}}$$

$$\text{Legs: } 0.4 \times \boxed{\text{Area}} \times \left( \boxed{\text{Erythema}} + \boxed{\text{Scaliness}} + \boxed{\text{Thickness}} \right) = \boxed{\phantom{000}}$$

$$\text{Arms: } 0.2 \times \boxed{\text{Area}} \times \left( \boxed{\text{Erythema}} + \boxed{\text{Scaliness}} + \boxed{\text{Thickness}} \right) = \boxed{\phantom{000}}$$

Minimum PASI score = 0; Maximum PASI score = 72

Total  
PASI score

\*Fredriksson T, Pettersson U. Severe psoriasis – oral therapy with a new retinoid. *Dermatologica* 1978; 157: 238–44.

Score	Area	Erythema	Scaliness	Thickness
0	No psoriasis involvement for the region			
1	<10%	Slight pink	Fine scale	Slight plaque elevation
2	10<30%	Pink	Coarse scales with most lesions partially covered by scale	Moderate elevation with rounded or sloped edges
3	30<50%	Red	Coarse scales with almost all lesions covered and a rough surface	Marked elevation with marked sharp edges
4	50<70%	Dark red/purple	Very coarse thick scales covering all lesions, very rough surface	Very marked elevation with very hard sharp edges
5	70<90%			
6	90-100%			



# 3) Dermatology Life Quality Index

## DERMATOLOGY LIFE QUALITY INDEX

Hospital No: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name: \_\_\_\_\_ DLQI  
 Address: \_\_\_\_\_ Score:

The aim of this questionnaire is to measure how much your skin problem has affected your life OVER THE LAST WEEK. Please tick ☐ one box for each question.

- |  |                                     |                                       |
|--|-------------------------------------|---------------------------------------|
| 1. Over the last week, how itchy, sore, painful or stinging has your skin been?  | Very much <input type="checkbox"/>  |                                       |
|  | A lot <input type="checkbox"/>      |                                       |
|  | A little <input type="checkbox"/>   |                                       |
|  | Not at all <input type="checkbox"/> |                                       |
| 2. Over the last week, how embarrassed or self conscious have you been because of your skin?                           | Very much <input type="checkbox"/>  |                                       |
|  | A lot <input type="checkbox"/>      |                                       |
|  | A little <input type="checkbox"/>   |                                       |
|  | Not at all <input type="checkbox"/> |                                       |
| 3. Over the last week, how much has your skin interfered with you going shopping or looking after your home or garden? | Very much <input type="checkbox"/>  |                                       |
|  | A lot <input type="checkbox"/>      |                                       |
|  | A little <input type="checkbox"/>   |                                       |
|  | Not at all <input type="checkbox"/> | Not relevant <input type="checkbox"/> |
| 4. Over the last week, how much has your skin influenced the clothes you wear?   | Very much <input type="checkbox"/>  |                                       |
|  | A lot <input type="checkbox"/>      |                                       |
|  | A little <input type="checkbox"/>   |                                       |
|  | Not at all <input type="checkbox"/> | Not relevant <input type="checkbox"/> |
| 5. Over the last week, how much has your skin affected any social or leisure activities?                               | Very much <input type="checkbox"/>  |                                       |
|  | A lot <input type="checkbox"/>      |                                       |
|  | A little <input type="checkbox"/>   |                                       |
|  | Not at all <input type="checkbox"/> | Not relevant <input type="checkbox"/> |

- |  |                                     |                                       |
|--|-------------------------------------|---------------------------------------|
| 6. Over the last week, how much has your skin made it difficult for you to do any sport?   | Very much <input type="checkbox"/>  |                                       |
|  | A lot <input type="checkbox"/>      |                                       |
|  | A little <input type="checkbox"/>   |                                       |
|  | Not at all <input type="checkbox"/> | Not relevant <input type="checkbox"/> |
| 7. Over the last week, has your skin prevented you from working or studying?   | Yes <input type="checkbox"/>        |                                       |
|  | No <input type="checkbox"/>         | Not relevant <input type="checkbox"/> |
| If "No", over the last week how much has your skin been a problem at work or studying?   | A lot <input type="checkbox"/>      |                                       |
|  | A little <input type="checkbox"/>   |                                       |
|  | Not at all <input type="checkbox"/> |                                       |
| 8. Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives?                      | Very much <input type="checkbox"/>  |                                       |
|  | A lot <input type="checkbox"/>      |                                       |
|  | A little <input type="checkbox"/>   |                                       |
|  | Not at all <input type="checkbox"/> | Not relevant <input type="checkbox"/> |
| 9. Over the last week, how much has your skin caused any sexual difficulties?  | Very much <input type="checkbox"/>  |                                       |
|  | A lot <input type="checkbox"/>      |                                       |
|  | A little <input type="checkbox"/>   |                                       |
|  | Not at all <input type="checkbox"/> | Not relevant <input type="checkbox"/> |
| 10. Over the last week, how much of a problem has the treatment for your skin been, for example by making your home messy, or by taking up time? | Very much <input type="checkbox"/>  |                                       |
|  | A lot <input type="checkbox"/>      |                                       |
|  | A little <input type="checkbox"/>   |                                       |
|  | Not at all <input type="checkbox"/> | Not relevant <input type="checkbox"/> |

Please check you have answered EVERY question. Thank you.

# Definition of Psoriasis Severity:

Psoriasis Severity	Definition		
	BSA	PASI	DLQI
Mild	$\leq 10\%$	$\leq 10$	$\leq 10$
Moderate	$>10\% - 30\%$	$>10-20$	$>10-20$
Severe	$>30\%$	$>20$	$>20$

# Questions

- 3) How do you manage this patient ?

i) Assess severity:

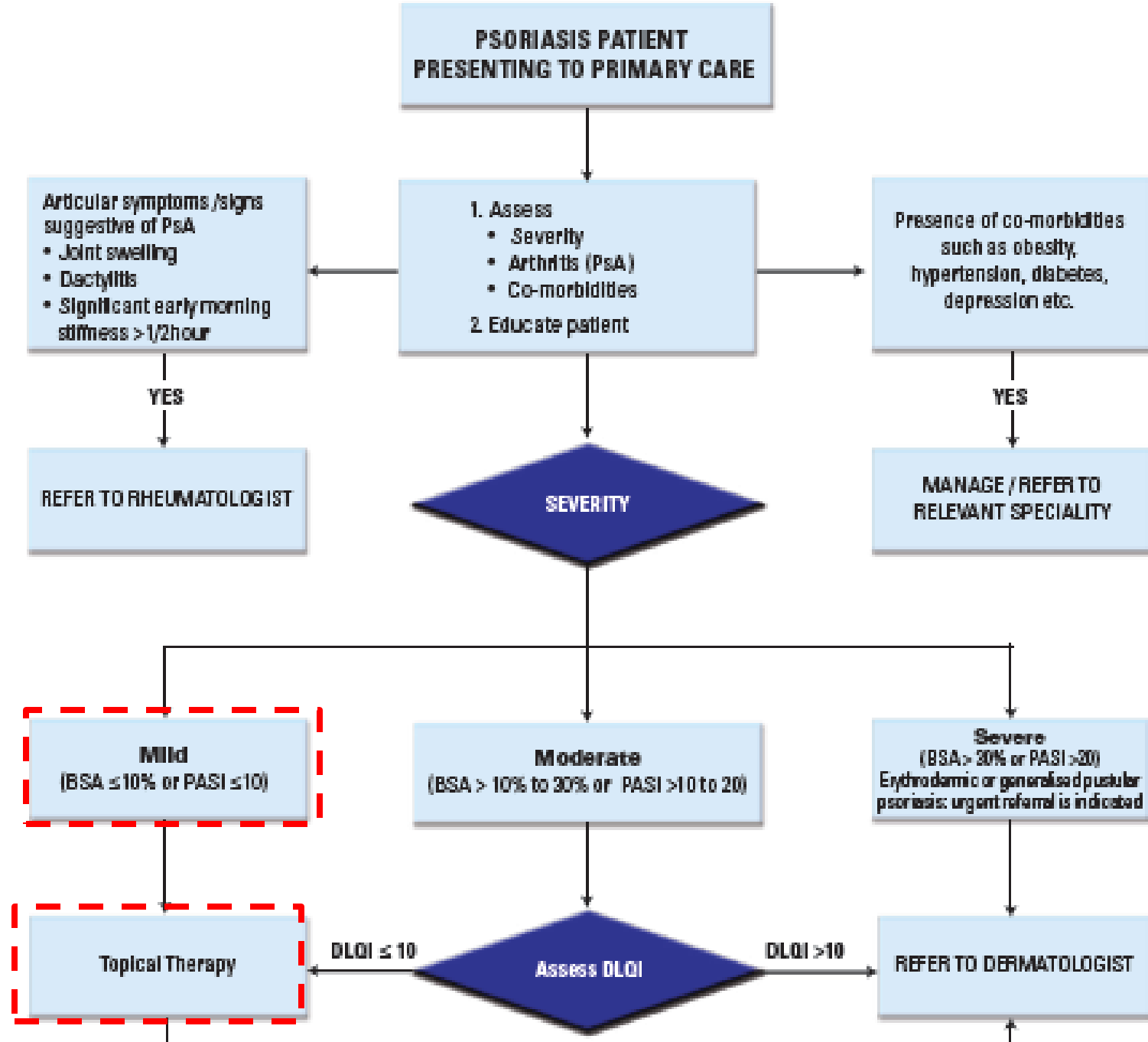
- BSA: 3% → Mild psoriasis
- DLQI : not compulsory

***Imp: Mild Psoriasis***

ii) Treatment:

- ***1<sup>st</sup> line : Topical treatment:***





# Treatment

Topical Rx	Phototherapy	Systemic Rx
Coal Tar	NB-UVB	Methotrexate
Topical steroids	Oral PUVA	Acitretin (Retinoid)
Vit D <sub>3</sub> analogues	Bath PUVA	Cyclosporin
Keratolytics	Topical PUVA	Sulphasalazine
Dithranol (anthralin)	308nm Excimer laser	Hydroxyurea
Emollients		Biologics
Topical retinoid		

# 1) Coal tar

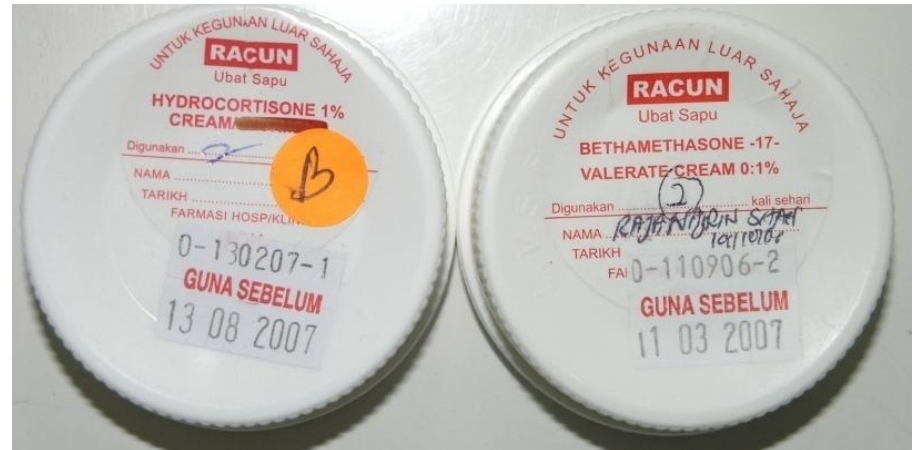
- Used for approximately 100 years in the treatment of psoriasis
- Used as first line treatment in Malaysia
- Adverse effects
  - Poorly tolerated because of staining of clothes and the tar odor
  - Irritant contact dermatitis
  - Folliculitis





## 2) Topical corticosteroids

- Cornerstone of treatment in the majority especially those with limited disease
- Mechanisms of action
  - anti-inflammatory
  - antiproliferative
  - immunosuppressive
  - vasoconstrictive



# Topical Steroids – potency ranking (UK)

Potency	Steroid	Relative Potency
Mild	Hydrocortisone 1%	1
Moderate	Clobetasone butyrate Betamethasone valerate 0.025% (1:4)	2.0 – 2.5
Potent	Betamethasone valerate 0.1% Mometasone furoate	3.0 – 10
Super-potent	Clobetasol propionate	4 - 50

# Appropriate choice of steroid

- Consider:
  - disease severity
  - location being treated
  - age of the patient
- Lower potency corticosteroids :
  - Face, intertriginous areas, genitals
- Mid or high-potency agents
  - Used as initial therapy body and limbs
- Thick, chronic plaques
  - require the higher potency corticosteroids

# Appropriate choice of steroid

- Limit use of super potent corticosteroid to < 30gm/week
- Limit use of potent corticosteroid to < 60gm/week
- Continuous use of potent corticosteroid should not exceed 4 weeks
- Continuous use of super potent corticosteroid should not exceed 2 weeks

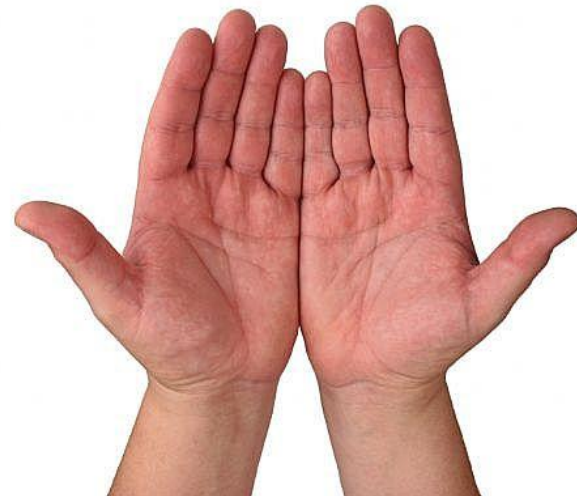


# Finger tip unit

*FTU = amount of topical corticosteroid needed to squeeze a line from the tip of an adult finger to the first crease of the finger*

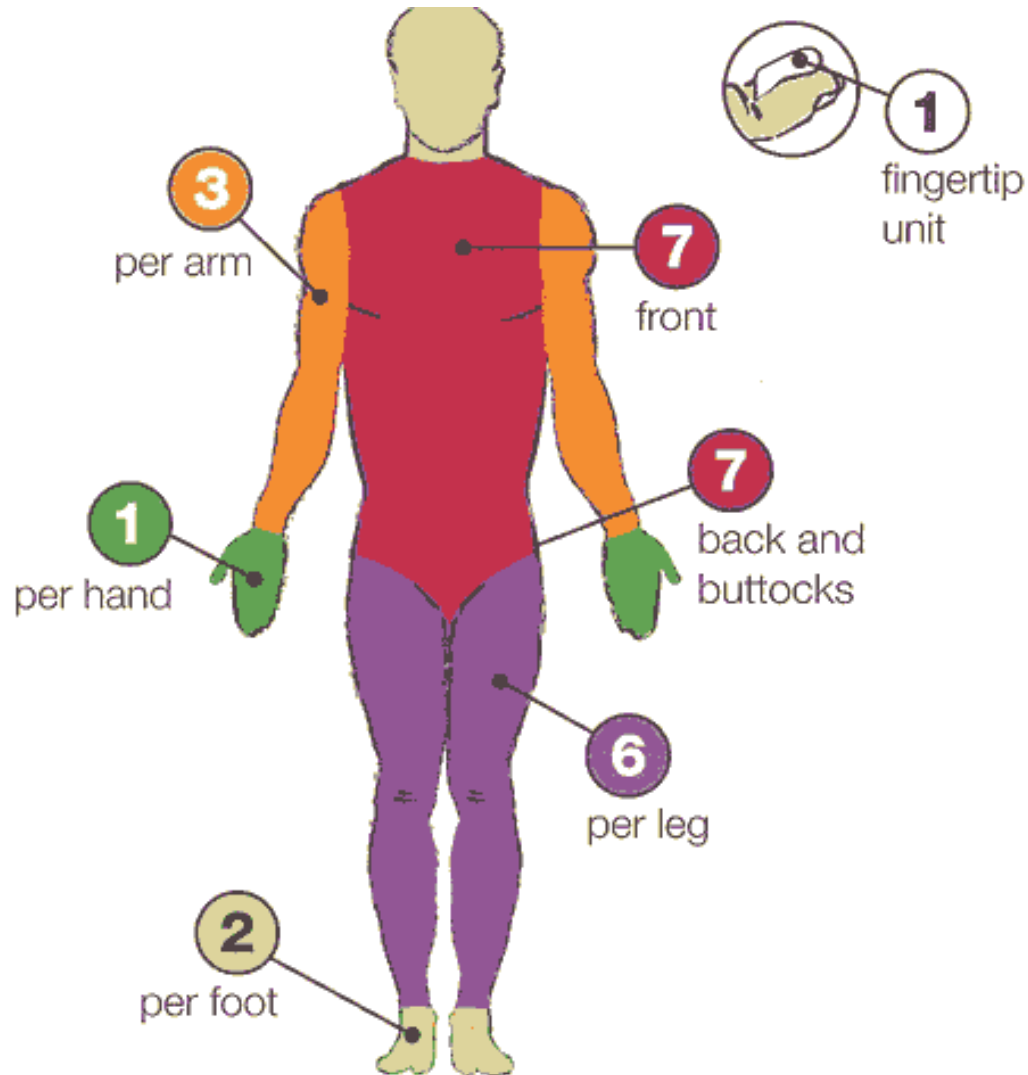
**One fingertip unit = 0.5 g of cream or ointment**  
**= two hand (palm) Surfaces**  
**= 2% BSA**

**Whole body per application = 30 g**



*The fingertip unit*

# How much to apply?



## Side effect of topical steroids



Striae



# Side effect of topical steroid



Skin Atrophy with easy bruising



Acneiform eruption



Hypopigmentation



Folliculitis

# 3) Vitamin D analogues

- Example:
  - Calcipotriol (Daivonex) cream bd
  - Calcipotriol/ betamethasone dipropionate ointment (Daivobet) ON
- Their potential to function as a corticosteroid- sparing agent is an important advantage of the vitamin D analogues
- should not exceed >100g/week
- S/E: hypercalcemia, skin irritation





## 4) Tacrolimus and Pimecrolimus

- Topical calcineurin inhibitors
  - Pimecrolimus, tacrolimus
- Not licensed for psoriasis in Malaysia
- May be used in thinner skin areas such as facial and intertriginous psoriasis with no evidence of resultant skin atrophy



## 5) Salicylic acid

- Topical keratolytic used for many years
- May reduce keratinocyte -to-keratinocyte binding
- Leads to reduced scaling and softening of psoriatic plaques
- Used on thick and scaly lesion
- Can be used in combination with topical steroid



## 6) Dithranol (Anthralin)

- Commonly used as short contact (20-30 minutes) therapy onto thick scaly plaque
- Side effect: Irritation, staining



## 7) Non-medicated topical moisturizers

- Standard adjunctive therapy in treatment of psoriasis:
- Goal of treatment
  - provide moisture
  - retain moisture



Choice of topical agents according  
to the site of involvement



# Body / limb

1. Super potent / Potent topical corticosteroid
  - E.g. Clobetasol propionate
  - Betamethasone valerate 0.1%
2. Topical Tar
  - Preferred to be used at night (due to cosmetic reason)
  - e.g: Liquor picis carbonis (1%, 3%, 6% and 9%)
3. Topical vitamin D analogue
4. Topical salicylic acid (usually used in combination)
5. Topical Dithranol (Anthralin)
  - in patients with a few large thick plaques

# Scalp

1. Tar shampoo (Polytar, Sebitar) 2 to 3 times per week
2. Ung Coccois Co ON
3. Beprosalic (steroids & salicylate acid) bd
4. Steroid scalp solution dly / bd
5. Calcipotriol scalp solution bd
6. Calcipotriol/betamethasone dipropionate gel on



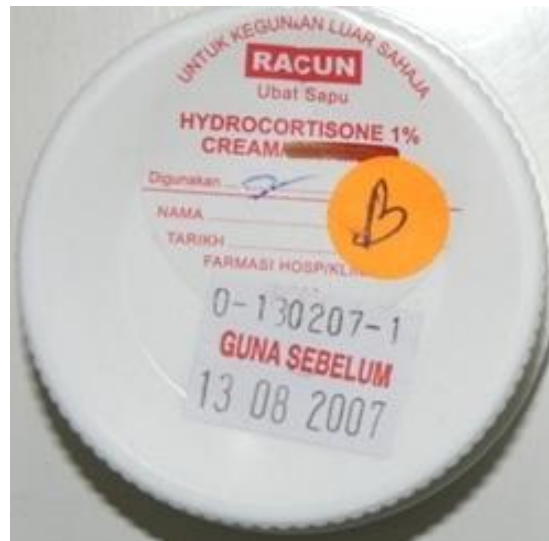
# Face / Flexural Psoriasis

1. Mild topical corticosteroid e.g:  
Hydrocortisone 1%
2. Moderate topical corticosteroid e.g:  
Clobetasone butyrate
3. Topical calcineurin inhibitors e.g: Tacrolimus  
/ Pimecrolimus



# Genitalia

1. Mild topical corticosteroid e.g:  
Hydrocortisone 1%
2. Moderate topical corticosteroid e.g.  
Clobetasone butyrate







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# In this case.....

## i)Treatment:

- ***1<sup>st</sup> line : Topical treatment:***
  - Clobetasol propionate/BVC 0.1% daily
  - 3% LPC at night
  - Aqueous cream as emollient
- ***Reassess 6 weeks later.....***

# Treatment Goals

**TABLE: TREATMENT GOALS OF VARIOUS MODALITIES**

TREATMENT	MINIMAL TARGETS	TIME FOR EVALUATION (WEEKS)	SUBSEQUENT EVALUATION (MONTHS)
Topical therapy	$\downarrow$ BSA $\geq 50$ or PASI $\geq 50$ or DLQI $\leq 5$	6	6 – 12
Phototherapy	$\downarrow$ BSA $\geq 75$ or PASI $\geq 75$ or DLQI $\leq 5$	6	6
Methotrexate		16	
Cyclosporine		16	
Acitretin		12	
Infliximab	PASI $\geq 75$ OR PASI 50 to $<75$ plus DLQI $\leq 5$	10	6
Adalimumab		16	
Ustekinumab		16	
Etanercept		24	

# Questions

- 4) 6 weeks later, patient came for follow up.....What is your next step?

Reassess severity: BSA: 1%

Treatment goal achieved!!!!

Remember to reassess efficacy of treatment every 6 months!!!