

Criteria to Suspect and Refer
ACROMEGALY
Patients from Primary Care
Centre to Dedicated
Endocrine Centres



A collaborative effort between Malaysian Endocrine & Metabolic Society (MEMS) and Family Medicine Specialist Association (FMSA) of Malaysia. © Copyright 2019.

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Effective Date: 20.July.2019

Review Date: NA

1. PURPOSE

The purpose of this SOP is to define and standardize the criteria to suspect and detect acromegaly condition in patients presented at Primary care centres with various clinical manifestations, in order to improve their healthcare outcomes by early referral to Endocrinology centres.

This SOP may also serve as a guide for Primary Care Physicians and Endocrinologists to establish an effective referral system at their respective practice.

2. INTRODUCTION

Acromegaly is a hormonal disorder that results when a tumour in the pituitary gland produces excess growth hormone (GH). It most commonly affects middle-aged adults and can result in serious illness and premature death. Once recognized, acromegaly is treatable in most patients, but because of its slow and often insidious onset, diagnosis is often delayed. Some patients may have symptoms or develop signs of acromegaly for 4–10 years (and sometimes longer) before finding out that they have the condition.

Currently, the diagnosis rate in Primary care centres in Malaysia is significantly low. This SOP may serve as a guide to increase the index of suspicion to identify and refer suspected patients for early treatment.

3. SCOPE

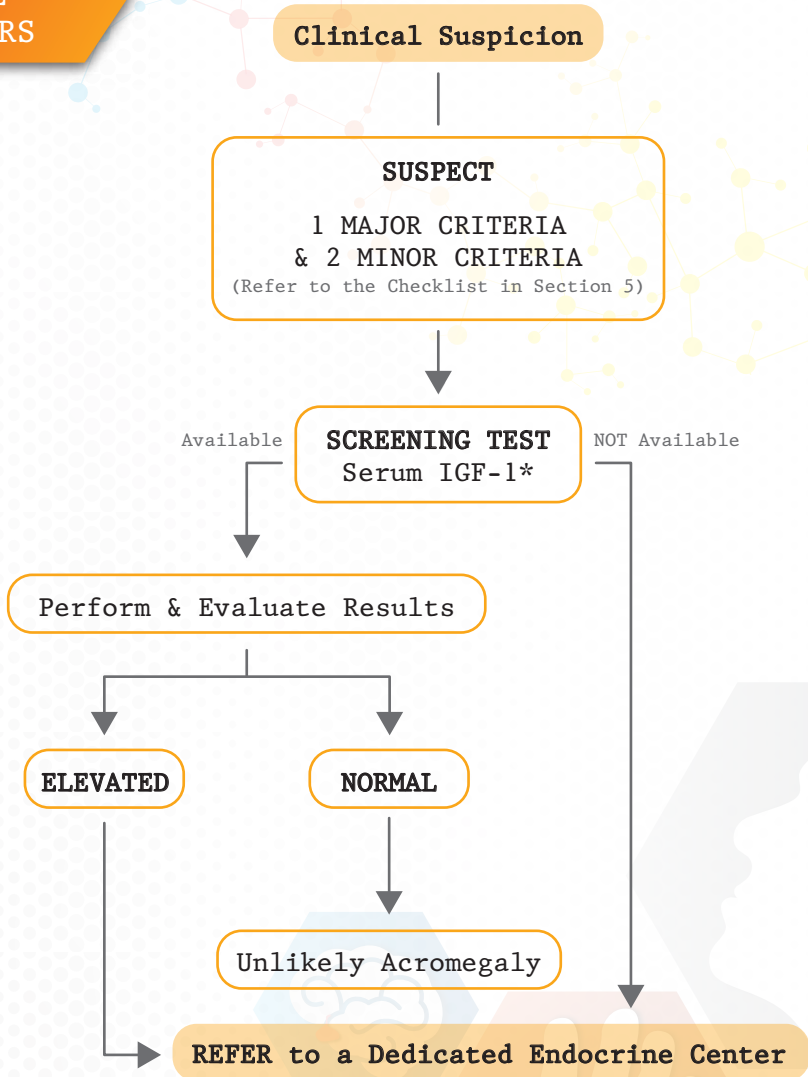
This SOP is applicable to all the members of

- Family Medicine Specialists Association of Malaysia (FMSA)
- Malaysian Endocrine and Metabolic Society (MEMS)
- Any qualified healthcare provider with interest in diagnosing and/or treating Acromegaly patients



4. DIAGNOSTIC ALGORITHM FOR ACROMEGALY

**PRIMARY
CARE
CENTERS**



*IGF-1 (Insulin like Growth Factor-1) testing is not generally accessible in Primary care centres. However it is available upon request from Institute for Medical Research (IMR), Malaysia and should be performed if it is accessible and/or affordable by the patient.

4. DIAGNOSTIC ALGORITHM FOR ACROMEGALY

**DEDICATED
ENDOCRINE
CENTER**

REFERRAL from Primary Care Center

SCREENING TEST
Performed before receiving referral

YES

NO

SCREENING TEST
Serum IGF-1*

ELEVATED

NORMAL

CONFIRMATORY TEST
(75g OGTT with GH measurement)

Unlikely
Acromegaly

GH level >0.4 mcg/L
at 60 or 120min

GH level <0.4 mcg/L
at 60 or 120min

Confirmed Acromegaly

Unlikely Acromegaly

OGTT (Oral Glucose Tolerance Test); GH (Growth Hormone); mcg (microgram)

*IGF-1 (Insulin like Growth Factor-1) testing is not generally accessible in Primary care centres. However it is available upon request from Institute for Medical Research (IMR), Malaysia and should be performed if it is accessible and/or affordable by the patient.

5. CHECKLIST TO SUSPECT ACROMEGALY AT PRIMARY CARE CENTERS

MAJOR CRITERIA (At least 1 ACRAL & FACIAL FEATURES)		
Over the past 5-15 years:	✓	✗
1. Increase in shoe size		
2. Increase in the size of hands (Example: patient needed to buy bigger gloves or noticed an increase in ring size and others)		
3. Any abnormal facial features (compared to old photographs) (Example: Swollen lips and tongue, enlarged nose, protruding forehead, protruding lower jaw and others)		
3. Any abnormal facial features (compared to old photographs) (Example: Swollen lips and tongue, enlarged nose, protruding forehead, protruding lower jaw and others)		
MINOR CRITERIA (At least 2 or more acromegaly associated comorbidities)*		
1. History of or existing Cardiac disease (including biventricular hypertrophy and diastolic or systolic dysfunction)		
2. Carpal tunnel syndrome		
3. Colonic polyps		
4. Diaphoresis (excess perspiration or oily sweating)		
5. Diffuse arthralgia (large joint pains)		
6. Fatigue		
7. Persistent Headaches		
8. Visual field defects		
9. New-onset or uncontrolled diabetes		
10. New-onset or difficult-to-control hypertension		
11. Amenorrhea		
12. Misalignment of Teeth/bite or progressive teeth spacing		
13. Sleep apnoea syndrome (excessive snoring)		
14. Multiple skin tags		

*Adapted from The American Association of Clinical Endocrinologists (AACE) guidelines 2011 for the treatment and diagnosis of acromegaly.

6. LIST OF DEDICATED ENDOCRINE CENTERS IN MALAYSIA

Wilayah Persekutuan

- Hospital Kuala Lumpur
- Hospital Putrajaya
- University Malaya Medical Centre
- Pusat Perubatan Universiti Kebangsaan Malaysia

Kedah

- Hospital Sultanah Bahiyah, Alor Setar
- Hospital Sultan Abdul Halim, Sg Petani

Selangor

- Hospital Tengku Ampuan Rahimah, Klang
- Hospital Selayang
- Hospital Sungai Buloh
- Hospital Shah Alam
- Hospital Serdang
- Hospital Kajang
- Hospital Ampang

Penang

- Hospital Pulau Pinang

Kelantan

- Hospital Raja Perempuan Zainab II, Kota Bharu
- Hospital Universiti Sains Malaysia

Negeri Sembilan

- Hospital Tuanku Ja'afar, Seremban

Terengganu

- Hospital Sultanah Nur Zahirah, Kuala Terengganu

Melaka

- Hospital Melaka

Pahang

- Hospital Tengku Ampuan Afzan, Kuantan
- Hospital Sultan Haji Ahmad Shah, Temerloh

Johor

- Hospital Sultanah Aminah, Johor Bahru

Sarawak

- Hospital Umum Sarawak, Kuching

Perak

- Hospital Raja Permaisuri Bainun, Ipoh

Sabah

- Queen Elizabeth II Hospital, Kota Kinabalu

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1. Hussein Z et al. Consensus statement for the diagnosis and management of acromegaly – a Malaysian perspective. JAFES 2019 (ahead of publication)
2. Katznelson L, Atkinson J, Cook D, Ezzat S, Hamrahian A, Miller K. American Association of Clinical Endocrinologists medical guidelines for clinical practice for the diagnosis and treatment of acromegaly: 2011 update. Endocr Pract. 2011;17:1-44.
3. <https://emedicine.medscape.com/article/925446-overview#a3>

CHANGE HISTORY

SOP no.	Effective Date	Significant Changes	Previous SOP no.
FMS.ENDO.ACRO.01.2019	20.07.2019	New SOP	NA

The development of this standard operating procedure was supported by Novartis Corporation (Malaysia) Sdn. Bhd.

