

Management of Gout

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Abstract

Gout is an important health concern for old age people. People who are affected this disease are mostly at 40 or older. Physicians prescribed many drugs for the management of gout i.e. Uric acid lowering agent, NSAIDs etc. This study was designed to develop best medication plan to manage the gout. This study was carried out from May 2014 to September 2014. For this purpose I visited many hospitals and clinics to check the patients record and medication prescribed, also ask to patients which drug response to best and read different literatures. Then I made a plan of medication for the management of gout which is effective and economic for the patients.

Keywords: Gout, Management/Treatment

1. Introduction

Gout is an arthritis caused by an excess of uric acid.

It is characterized by sudden, severe attacks of pain, redness and tenderness in joints, often the joint at the base of the big toe.

Gout — a complex form of arthritis — can affect anyone.

Men are more likely to get gout, but women become increasingly susceptible to gout after menopause. An acute attack of gout can wake you up in the middle of the night with the sensation that your big toe is on fire. The affected joint is hot, swollen and so tender that even the weight of the sheet on it may seem intolerable.

It is a medical condition usually characterized by recurrent attacks of acute inflammatory arthritis: A red, tender, hot, swollen joint. The metatarsal phalangeal at the base of the big toe is the most commonly affected (approximately 50% of cases).

However, it may also present as:

Gouty arthritis, Tophi, Urate Nephropathy

1.1 Causes for Gout

Gout is caused by a build-up of uric acid in the blood. Uric acid is a waste product made in the body every day and excreted mainly via the kidneys. It forms when the body breaks down chemicals in the cells known as purines. If you produce too much uric acid or excrete too little when you urinate, the uric acid builds up and may cause tiny crystals of sodium urate to form in and around joints. These hard, needle-shaped crystals build up slowly over several years. You will not know this is happening.

Eventually, when there is a high concentration of crystals in your joints, the crystals may cause two problems:

- some may spill over from the joint cartilage and inflame the soft lining of the joint (synovium), causing the pain and inflammation of an acute attack of gout
- some pack together to form hard, slowly expanding lumps of crystals (tophi), which can cause progressive damage to the joint cartilage and nearby bone; this eventually leads to irreversible joint damage, which causes pain and stiffness when the joint is being used.

1.2 Characteristics of the Disease

Gout usually affects the large joint of your big toe called Podagra, but it can occur in your feet, ankles, knees, hands and wrists. The pain is likely to be most severe within the first 12 to 24 hours after it begins.

- In almost all first attacks, single distal joint is affected.
- Attacks might go away, but might return and last longer next time.
- The affected joint or joints become swollen, tender and red.
- After a first attack there will be no symptoms.

Typical attacks have the following characteristics:

- Extremely rapid onset, reaching maximum severity in just 2–6 hours, often waking the patient in the early morning
- severe pain, often described as the ‘worst pain ever’
- Extreme tenderness, the patient is unable to wear a sock or to let bedding rest on the joint
- Marked swelling with overlying red, shiny skin.

- Self-limiting over 5–14 days, with complete return to normality.

1.3 Treatment regime

There is no cure but it is treated by shot of corticosteroid and other medicines can prevent reoccurring of attacks. Doses shrink as symptoms fade. Relief is commonly found within 24hours. Prescription of medicines to reduce uric acid buildup in your blood suppress future attacks. Some people take the medicine for their entire life.

Medications to treat gout attacks

Drugs used to treat acute attacks and prevent future attacks include:

Non-steroidal anti-inflammatory drugs (NSAIDs):

NSAIDs may control inflammation and pain in people with gout. Your doctor may prescribe a higher dose to stop an acute attack, followed by a lower daily dose to prevent future attacks. NSAIDs include over-the-counter options such as ibuprofen (Brufen, Motrin) and naproxen (Aleve, Nopain), as well as more-powerful prescription NSAIDs such as indomethacin (Indocin). NSAIDs carry risks of stomach pain, bleeding and ulcers.

Colchicine:

If you're unable to take NSAIDs, your doctor may recommend colchicine (Colcrys), a type of pain reliever that effectively reduces gout pain — especially when started soon after symptoms appear. The drug's effectiveness is offset in most cases, however, by intolerable side effects, such as nausea, vomiting and diarrhea.

After an acute gout attack resolves, your doctor may prescribe a low daily dose of colchicine to prevent future attacks.

Corticosteroids: Corticosteroid medications, such as the drug prednisone, may control gout inflammation and pain. Corticosteroids may be administered in pill form, or they can be injected into your joint. Your doctor might inject a corticosteroid medication during the same visit as a joint fluid test — where he or she withdraws (aspirates) fluid from your joint with a needle. Corticosteroids are generally reserved for people who can't take either NSAIDs or colchicine.

Uric Acid– Lowering Agents:

Indications for initiating uric acid– lowering therapy include recurrent frequent acute gouty arthritis, polyarticular gouty arthritis, tophaceous gout, renal stones, and cytotoxic therapy prophylaxis. Should not start during an attack. Initiation can precipitate an acute flare; consider concomitant PO colchicine 0.6 mg q.d until uric acid 5.0 mg/dL, then discontinue.

Allopurinol: Decreases uric acid synthesis by inhibiting xanthine oxidase. Must be dose-reduced in renal insufficiency. Have significant side effects and drug interactions.

Uricosuric drugs (probenecid, sulfinpyrazone): Increases uric acid excretion by inhibiting its tubular reabsorption; ineffective in renal insufficiency; should not be used in these settings: age 60, renal stones, tophi, increased urinary uric acid excretion, cytotoxic therapy prophylaxis.

Xanthine oxidase inhibitors may trigger a new, acute attack if taken before a recent attack has totally resolved. Taking a short course of low dose colchicine before starting a xanthine oxidase inhibitor has been found to significantly reduce this risk.

2. Materials & Method

2.1 Study Design : The whole data was collected from different hospitals of Punjab majorly

- DHQ Teaching Hospital Gujranwala
- DHQ Hospital Sheikhpura
- National Hospital & Medical Centre DHA, Lahore Cantt
- Al-Rehmat Arthropadic Hospital Phool Nagar, Kasur
- General Hospital Lahore

The selected hospitals were among the major hospitals of Punjab where majority of patients rush. The study was conducted on 50 patients, few of them were in the OPD or in the emergency and few were from close relatives and friends.

Patients of age groups 40-75 year are included in the study.

50 case reports were collected that include patient profile, patient medical history, lab diagnosis, medication given and pharmacist management. The project incorporated a questionnaire and a systematic review which were carried out from May 2014 to September 2014.

HOSPITALS	NUMBER OF CASE
DHQ Teaching Hospital Gujranwala	8
DHQ Hospital Sheikhpura	5
National Hospital & Medical Center DHA, Lahore Cantt	10
Al-Rehmat Arthropadic Hospital Phool Nagar, Kasur	15
General Hospital Lahore	12

2.2 Procedures

There was no discrimination about the race and age. The patients along with their relatives were interviewed in order to gather the information.

Reviewed literature (systematic review) related to a gout.

Interviewed people using a structured questionnaire.

Questionnaire was designed according to ethics and mainly contains the general questions about the life style of patients, usual medications taking in gout etc.

3. Observation & Results

Sample size (n): 50

Q: 1 From which type of gout you suffering?

a) Mild gout b) Moderate gout c) Severe gout

Mild gout	Moderate gout	Severe gout
35%	46%	19%

Most of people had suffered from mild and moderate gout.

Q: 2 Treatment follow up?

a) Regular b) Seldom

Regular	Seldom
60%	40%

Most of people had followed regular treatment for gout.

Q: 3 Gout attacks?

a) continuous b) episodic c) occasionally

Continuous	Episodic	Occasionally
11%	28%	61%

Most of people had suffered from gouty attacks occasionally

Q: 4) Attacks appears at?

a) Day b) Night c) Any time

Day	Night	Anytime
20%	56%	24%

Mostly gouty attacks appeared at night.

Q:5) Does you have any mild or severe kidney failure in life?

a) Yes b) No

Yes	No
32%	68%

Most of people said that there is no mild or severe kidney failure.

Q: 6) Which lab tests were performed for diagnosis of gout?

a) Blood Uric acid Test b) X-ray
 c) Synovial fluid test d) Urine Test

Blood Uric acid test	X-ray	Synovial fluid tests	Urin test
52%	31%	10%	7%

Most of people said that their gout had been diagnosed with blood uric acid test.

Q: 7) Gender which affects the most?

Men	Women
70%	30%

Mostly men are affected by gout.

Q:8) Which drugs you taking to control gouty attacks?

Drugs	Strength
Ibuprofen	400 mg
Allopurinol	300 mg
Prednisolone	5 mg
Colchicine	0.5mg

Ibuprofen	Allopurinol	Colchicine	Prednisolone
32%	30%	24%	14%

Most of people had been using tablet Ibuprofen and Allopurinol for management of gout.

Q: 9) Does your family have a history of gout ever?

a) yes

b) no

Yes	No
22%	78%

Most of people said that there is no family history of gout.

Q: 10) From how long you had been suffering from gout?

a) Less than 1 year

b) Less than 2 year

c) More than 2 year

d) Immediate

Less than 1 year	Less than 2 year	More than 2 year	Immediate
24%	28%	42%	6%

Most of people suffering to gout for more than 2 year.

Q: 11) Would you like to go for surgery for treatment of gout?

a) yes

b) no

Yes	No
22%	78%

Most of people do not want to go for surgery.

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