

# PROJECT WORK REPORT

“HOSPITAL REPORT ON RHEUMATOID ARTHRITIS”

Submitted To Gujarat Technological University



IN

**B. PHARMACY**

SEMESTER-VIII

BY

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# Declaration

I hereby declare that thesis entitled “HOSPITAL REPORT ON RHEUMATOID ARTHRITIS” is a bonafide and genuine carried out by me. The results or observational data presented in this report are original.

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“Knowledge is in the end based on acknowledgement.”

I wrap up this project; I take this opportunity to express my thanks to all who helped to complete the task.

I take this opportunity to express my deep sense of gratitude to my guide MISS.REENA KORAT,M.PHARM., assistant professor of shree h.n.shukla institute of pharmaceutical education and research, for her guidance, valuable suggestions and liberal encouragement to complete this work successfully entitled “HOSPITAL REPORT ON RHEUMATOID ARTHRITIS”

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## CERTIFICATE

This is to certify that Mr/~~Ms.~~ Umbhad Trishare C.  
Enrollment No. 1750420002, a student of 8<sup>th</sup>  
semester in shree h.n.shukla institute of pharmaceutical education & research.  
He/~~She~~ worked under my supervision during his/~~her~~ project work at our  
hospital. I am pleased to state that he/~~she~~ worked hard in preparing this project  
report. He/~~She~~ has been able to present a good picture of the concerned work.  
The information and finding presented in the report seems to be authentic.

Mr/~~Ms.~~ Umbhad Trishare C. possesses a  
good moral character, hardworking and pleasing personality. I wish him/her  
every success in life.

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# RHEUMATOID ARTHRITIS

## 1.INTRODUCTION

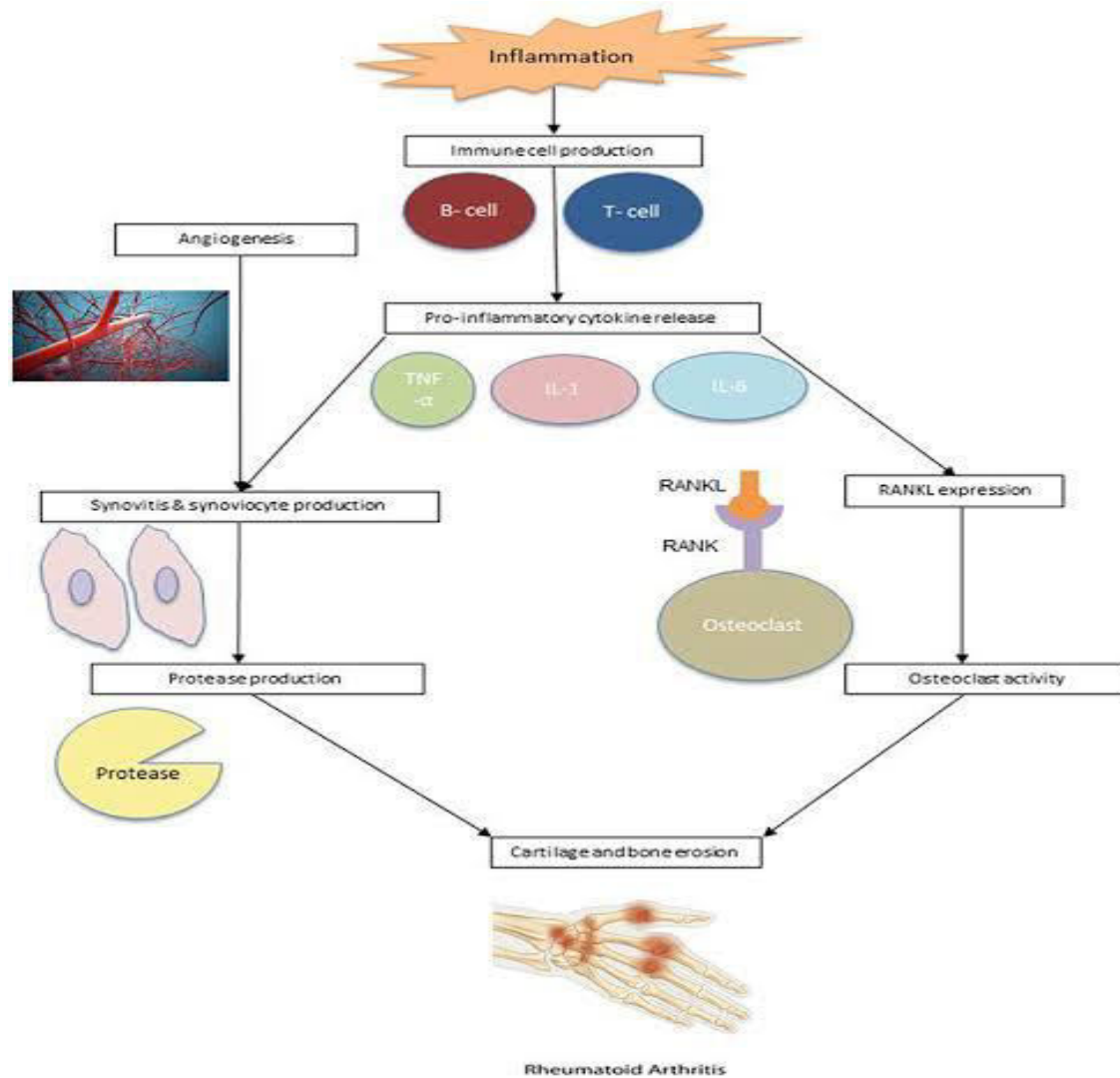
Rheumatoid arthritis is an autoimmune condition characterised by chronic inflammation, granulation and joint destruction. It is a chronic systemic inflammatory polyarthritis that primarily affects small diarthroidal joints of the hands and feet in a symmetrical pattern.[1] Prevalence of RA is 1 % worldwide and is increasing with population growth.[2] In present, lifestyle changes including bad food habits, physical inactivity, and wrong body posture, disturbed biological clock leads to the manifestation of several diseases.[3] Similar type of a etiology also gives rise to disease called Amavata.[4]

Rheumatoid arthritis is an autoimmune and systemic inflammatory disorder mainly affecting the synovial joints. Sometimes, Rheumatoid arthritis patients have extra-articular manifestations, such as rheumatoid vasculitis (RV). The concept of rheumatoid vasculitis started to evolve in the 1960s when vasculitis with significant clinical manifestations was described in rheumatoid arthritis patients.[5,6] The clinical manifestations of vasculitis are varied and include weakness, weight loss, skin rashes, cutaneous ulcerations, gangrene, peripheral neuropathy, and visceral infarction; approximately 90% of rheumatoid arthritis patients with rheumatoid vasculitis have skin manifestations. [7,8]

The inflammatory process is characterized by infiltration of inflammatory cells into the joints, leading to proliferation of synoviocytes and destruction of cartilage and bone.

The current treatment of rheumatoid arthritis is intended to minimize the associated pain and inflammation using non-steroidal anti-inflammatory drugs (NSAIDs) as well as to decelerate the progress of the disease by using disease modifying anti-rheumatic drugs (DMARDs). DMARDs suppress the immunological processes involved in the progression of rheumatoid arthritis. Drugs that have the effects of both

DMARDs and NSAIDs may be more effective in the treatment of rheumatoid arthritis, but there is a scarcity of such drugs acting through multiple mechanisms. Hence, the treatment of rheumatoid arthritis involves the combined use of NSAIDs and DMARDs [1]. Due to chronic nature of rheumatoid arthritis, advanced age of the patients and adverse reactions of the NSAIDs and DMARDs, the arthritic patients tend to search for alternative treatments that are effective and less toxic and reduce the pill burden. Hence, they commonly prefer complementary and alternative medicines [2].



## 2. Case

There was total 8 patient admitted to the hospital from which 2 patient were suffering from non healing ulceration of the ankle and lower limb. Joint pain was associated with fever. Decreased urine output,



yellowish discoloration of urine was observed.

Total 35-40 patients was considered during the work from which 10 patient were having arthritic pain, 15-17 patient was of joint pain with inflammation, 8-10 patient was of back pain.

### 3. History of present illness:

- Patient was admitted with non healing ulceration of the ankle.
- Joint pain was associated with fever.
- No residual joint deformity was seen.

### 4. Patient medical history:

Pain was developed apparently before 10-15 months. There was no history of hypertension, diabetes mellitus, jaundice, coronary artery disease. There was no post medical history.

### 5. Physical examination:

- On general examination patients was conscious and oriented.
- Pulse rate: normal (there was no patient of hypertension)
- Bp: normal range (there was no patient of hypertension)
- Respiration: 12/min
- Respiratory system: air entry is bilaterally equal, clear
- CVS: S1 and S2 sound are normal
- CNS: No functional neurological disorder
- Alimentary system: Soft non tender, no hepatomegaly, no splenomegaly

✓ On physical examination there was no any abnormality observed.

### 6. Laboratory investigation:

- **Urine:**

Sr no.	Test	Normal Range
1	Sugar	0-0.8 mmol/L
2	Albumin	<30 mg/g
3	Pus cell	1-2

- **Blood:**

Sr no.	Test	Normal Range
1	Serum bilirubin	1 mg/dl
2	Serum glutamic-oxaloacetic transaminase (SGOT)	8-45 unit/L
3	Serum glutamic pyruvic transaminase (SGPT)	7-56 unit/L
4	Alkaline phosphate (ALP)	44-147 unit/L
5	Superficial thrombophlebits (STP)	5.5-7.5 gm%
6	Serum albumin	3.4-5.4 g/dl
7	Random blood sugar (RBS)	80-120 mg/dl
8	Urea	5-20 mg/dl
9	Serum creatinine	0.6-1.3 mg/dl
10	Sodium	135-145 meq/l
11	Potassium	3.6-5 meq/l
12	Erythrocyte sedimentation rate (ESR)	<20 mm/hr
13	Rheumatoid factor (RF)	0-20 unit/ml

**Report :**

- Rf factor was found to be positive.
- Erythrocyte sedimentation rate (ESR) was found to be higher than normal range.
- The patients were generally having vitamin deficiency.
- Other blood and urine report was observed normal.

**7.Provisional diagnosis:**

- Rheumatoid arthritis
- Chronic ulcer
- Leg ischemia
- Fever was also seen in indoor patient.

**8.Assessment:**

1. Diagnosis:
  - Rheumatoid arthritis
  - Chronic ulcer

- Leg ischemia

2. Need of therapy:

- Elevated level of erythrocyte sedimentation rate indicates the presence of inflammatory condition.
- Pain reduction associated with rheumatoid arthritis.

3. Goal of treatment:

- Relieve pain and inflammation.
- Prevent joint destruction.
- Improve patient's functional ability.
- Maintain normal lifestyle.

4. Assessment of therapy: Drug prescribed to the patient's

a) Ranitidine:

- Drug class: H<sub>2</sub> receptor blocker
- Indication: As a gastro protective agent (As indomethacine can cause gastric ulcer)
- Brand name: Aciloc 150 Tab.

b) Cloxacillin:

- Drug class: penicillin Antibiotic
- Indication: To treat bacterial infection
- Side effect: Mouth sores, nausea, dsiarrhea
- Brand name: Neoclox 250 cap.

c) Ceftriaxone:

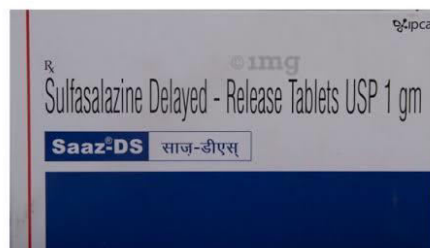
- Drug class: Cephalosporin antibiotic
- Indication: to treat bacterial infection
- Brand name: Hicef 200 Tab.

d) Heparin:

- Drug class: Anticoagulant
- Indication: For prophylaxis of venous thromboembolism
- Brand name: Hep inj.

e) Sulfasalazine:

- Drug class: Disease modifying anti-rheumatic drug (DMARD)
- Indication: To treat rheumatoid arthritis
- Side effect: Rashes, itchiness, fever
- Brand name: Saaz ds Tab. (mfg by: ipca lab. Ltd.)  
Sazo 500 Tab. (mfg by: Wallace pharmaceuticals Pvt. Ltd.)



f) Methotrexate:

- Drug class: Disease modifying anti-rheumatic drug (DMARD)
- Indication: As a first line therapy for rheumatoid arthritis.
- Side effect: Decreased appetite
- Brand name: Folistrax 7.5 Tab.(mfg by: ipca lab. Ltd.)

Sazo 5 Tab. (Wallace pharmaceutical Pvt. Ltd)



g) Indomethacine:

- Drug class: Non steroidal anti inflammatory drug (NSAID)
- Indication: To reduce fever, pain and swelling from inflammation.
- Side effect: It may cause gastric ulcer
- Brand name: Donica 100 cap. (Mfg by: ipca lab. Ltd.)



h) Folic acid:

- Drug class: Vitamin supplement
- Indication: As Methotrexate can cause folic acid deficiency
- Brand name: Folvite 5 Tab.

i) Prednisolone:

- Drug class: Corticosteroids
- Indication: As an anti inflammatory agent to treat rheumatoid arthritis.
- Side effect: weight gain, insomnia
- Brand name: Wysolone 5 Tab. (mfg by: Pfizer ltd.)



j) Colistazole:

- Drug class: Anti-platelet drug
- Indication: To prevent platelet aggregation
- Side effects: headache, dizziness, diarrhea, nausea
- Brand name: Pletoz 100 Tab.

k) Warfarin:

- Drug class: Anticoagulant
- Indication: To prevent blood clotting
- Brand name: Warf 5 Tab.

l) Cholecalciferol:

- Drug class: Vitamin and calcium supplement
- Indication: Treat and prevent bone loss
- Brand name: Uprise-D3 60K cap.

m) Ofloxacin:

- Drug class: Antibiotic
- Indication: To treat bacterial infection
- Brand name: Oflox 200 Tab.

n) Aspirin:

- Drug class: Non steroidal anti inflammatory drugs(NSAIDs)
- Indication: To reduce fever and pain
- Brand name: Ecosprin 75 Tab.

❖ Injection of ranitidine, cloxacillin, ceftriaxone, heparin was given to the admitted patient for rapid onset of action and as patient was unconscious oral dosage form was difficult to administer and also to reduce first pass metabolism.

## 9. Reason for the therapy:

- ✓ Disease modifying anti rheumatic drugs are considered as a first line therapy for RA
- ✓ Short term treatment with glucocorticoids when starting a new DMARD is considered
- ✓ Combination of DMARD is beneficial than single drug

- ✓ Frequency of methotrexate is improper as it should be given only once a week.

## **10. Monitoring:**

- ✓ Monitoring for drug related side effects.
- ✓ As DMARDs are prescribed, it is advisable to monitor LFT and CBC every 2-4 weeks for first 3 months.
- ✓ These monitoring requirements have been missing during discharge.

## **11. Advice given to patient:**

- ✓ Take adequate rest. It will relieve the stress on inflamed joints and prevent further destruction.
- ✓ Don't take too much rest as immobility will lead to muscle and joint damage.
- ✓ Do not heat, cold or electrotherapy to reduce pain and swelling in the joint.
- ✓ Do exercise as directed by the physiotherapist to strengthen the joints and to mobilize joint damage.
- ✓ Use supportive device like walker, to protect joint from excessive stress.
- ✓ Try to keep your body weight at a healthy level to avoid stress on joint.
- ✓ Eat food rich in omega-3 fatty acid such as olive oil, fish, etc. that help in reducing swelling.
- ✓ Take the medicine as directed without fail.

## **12. CURRENT SCENARIO OF HERBAL DRUGS IN RHEUMATOID ARTHRITIS**

Herbal medicine provides a foundation for various traditional medicine systems worldwide. Today, these herbs contribute approximately 25% of currently used crude drugs and another 25% is derived from chemically altered natural products [27]. Herbal therapies occupy a large section of alternative therapy. India, along with its wealth, is rich in wide variety of medicinal plants, a large number of popular remedies many of which are in common use even



today. More than 2000 plants of medicinal value are mentioned in Indian ancient Ayurvedic, Unani and Tibbi systems of medicine [28]. We have also carried out a number of studies on possible intervention of herbal preparations with diabetic and arthritic conditions in experimental animals [29, 30].

- Some of the herbal medicine used to treat arthritis are given below:
  1. Ginger (*Zinziber officinalis*, Zinziberacea) has been used for centuries in Indian ayurvedic medicine and traditional medicine system as an anti-inflammatory agent. It is cultivated all over tropic and subtropical Asia and 50% of the world's harvest is produced in India. Five constituents of ginger have been identified as inhibitors of prostaglandins. Another constituent of ginger, gingerol inhibited lipopolysaccharide (LPS) induced inducible nitric oxide synthase (iNOS) expression and production of NO in vitro [31].



2. Pineapple has also been used as a medicinal plant after its recognition in late 18th century. Bromelain, an extract of pineapple stem, has been reported to possess anti-inflammatory property. It is a general name for a family of sulfhydryl proteolytic enzymes obtained from *Ananas comosus*, the pineapple plant. Active components of bromelain are peroxidase, acid phosphatase, several protease inhibitors. When bromelain was tried with RA patients, 72% of total patients reported reduced swelling and pain [33].
3. Turmeric (*Curcuma longa*), is commonly used in Chinese and Indian (Ayurvedic) medicine system, possess curcumin which is an active anti-

inflammatory component. It is a perennial plant, grows 3 to 5 feet high in the tropical regions of Southern Asia. The rhizome, the root, of curcuma is used in medicinal and food preparations. Curcumin is the main active component of this herb, and exhibits antioxidant properties. Significant improvement in morning stiffness, walking time and joint swelling have been observed as anti-arthritic effects after regular curcuma consumption by RA patients [34].



4. Saffron (*Crocus sativus*, Iridaceae) is commonly used as folk medicine for various purposes such as antispasmodic and expectorant. It is a perennial flowering plant with very less growing height up to 40 cm. Commonly cultivated in the Kashmir and ranges to Northern America, Greece and Spain. Saffron stigma possesses anti-inflammatory action due to presence of crocetin and carotenoids. Aqueous and ethanolic extracts of saffron petals exhibit radical scavenging as well as anti-inflammatory effects in xylene and formalin induced inflammation [37].
5. Euphorbiaceae roots are also used in Indian Ayurvedic medicine for the treatment of rheumatism, arthritis and gastritis [39]. No toxicity has been observed after oral administration of alcoholic extract at different dose to wistar rats, also superoxide dismutase, glutathione peroxidase activities were found to be elevated thus indicating the free radical scavenging property [40].
6. Karvi (Acanthaceae), another Indian medicinal herb, commonly found in the Maharashtra state has been used by the local tribal for the treatment of inflammatory disorders.[38]



## 1.Hypertension

Hypertension [1-16, 46-64], or high blood pressure, is a very common and serious condition that can lead to or complicate many health problems. The risk of cardiovascular morbidity and mortality is directly

correlated with blood pressure. Risks of stroke, MI, angina, heart failure, kidney failure or early death from a cardiovascular cause are directly correlated with BP. Hypertension is often called "the silent killer" because it generally has no symptoms until serious complications develop. There are three general types of hypertension. Essential or primary hypertension occurs when the condition has no known cause. This form of hypertension cannot be cured, but it can be controlled. More than 90% of individuals with hypertension have essential hypertension. Genetic factor may play an important role in the development of essential hypertension. When hypertension is caused by another condition or disease process, it is called secondary hypertension. Fewer than 10% of patients have secondary hypertension; where either a co-morbid disease or drug is responsible for elevating BP. In most of these cases renal dysfunction resulting from severe chronic kidney disease or renovascular disease is the most common secondary cause. Hypertension has a variety of causes. Blood pressure generally tends to rise with age. Hypertension can also be caused by other medical conditions, such as thyroid disease or chronic kidney disease. Hypertension may also be a side effect of certain medications, such as over-the-counter cold medications and oral contraceptives and other hormone drugs.

Obesity, heredity and life style also play a role in the development of hypertension. When symptoms do occur, they can differ between individuals depending on such factors as the level of blood pressure, age, underlying cause, medical history, the presence of complications and general health. For more information on symptoms and complications, refer to symptoms of hypertension. Diagnosis of hypertension includes performing a complete evaluation that includes a medical history and physical examination and a series of blood pressure readings. Systolic blood pressure is a stronger predictor of cardiovascular diseases than diastolic blood pressure in adults'  $\geq 50$  year of age and is the most important clinical blood pressure parameter for most patients. Patient with diastolic blood pressure value less than 90 mmHg and systolic blood pressure value  $\geq 140$  mmHg have isolated systolic hypertension. Many people think of a reading of 120/80mmHg as "normal". In fact there are many variations of normal that are dependent on a variety of factors. As a very general guide, adults should keep their blood pressure below 140/90mmHg. In addition, current guidelines consider consistent readings over 120/80mmHg as a condition called pre-hypertension, which should be monitored and addressed to ensure that blood pressure does not rise

higher over time. It is very possible that a diagnosis of hypertension can be missed or delayed because there are generally no symptoms in the early stages. Patient compliance with a good treatment plan generally results in a normalization of blood pressure and also minimizes complications.

Heart is relatively small, roughly the same size as your closed fist. Heart rest on the diaphragm, near the midline of the thoracic cavity. It lies in the mediastinum, a mass of tissue that extends from the sternum to the vertebral column between the lungs. Human heart is covered by double walled covering called pericardium. The membrane that surrounds and protects the heart is the pericardium. It confines the heart to its position in the mediastinum, while allowing sufficient freedom of movement for vigorous and rapid contraction. The pericardiums consist of two parts; the fibrous pericardium and the serous pericardium. The superficial fibrous pericardium is composed of tough, inelastic dense irregular connective tissue. The fibrous pericardiums prevent overstretching of heart, provide protection.

## **2.CASE:**

There was total 60 patient observed during the work. Most of them were having diabetes and hypertension. A few patients were of common cold and fever. A tuberculosis was also found. 6 patients was admitted from which 3 patient were of food poisoning, 2 of diarrhoea and 1 patient was of jaundice.

Few patients were suffering from both hypertension and diabetes.

## **3.History of patient illness:**

- Generally there was no history but before the diagnosis of disease patients were having blurred vision with excessive urination.
- Hunger and thirst was increased apparently.
- Some of them have diagnosed the disease during full body check-up. This type of patient was generally educated.
- Some patients have diagnosed the disease during the surgery.
- Most of them past medication history were nil.
- Some of them were having similar illness in family.
- Pain in joint was associated to older age patient that indicates deficiency of vitamin B<sub>12</sub>.

- Back pain was also seen in the patient of old age.
- No injury on the body.

#### 4. Physical examination:

- On general examination the follow up patients was healthy and fit.
- Pulse rate: Observed high in patient with hypertension
- Blood pressure: High in hypertension patient
- Respiration: 12/min (fluctuated in patient with disease state of lungs)
- CNS: No functional neurological disorder
- CVS: Abnormal S1 and S2 sound in patient associated with heart disease.
- ECG (electrocardiogram) was conducted by the physician for diagnosis of the disease.

#### 5. Laboratory investigation:

##### Urine:

##### 1. Physical examination:

Sr no.	Test	Result
1	Colour	Pale yellow
2	Blood	Absent

##### 2. Chemical examination:

Sr no.	Test	Result
1	Protein	Absent
2	Glucose	Occasionally
3	Ketone	Absent
4	Bile salts	Absent
5	Bile pigment	Absent
6	Reaction	Acidic

##### 3. Microscopic examination:

Sr no.	Test	Result
1	Pus cell	0-2 /hpf.
2	Red cell	2-4 /hpf.

3	Epithelial cell	Occasionally /hpf.
4	Bacteria	Absent

### Blood:

Sr no.	Test	Normal range
1	Haemoglobin	12-16 g/dl
2	Total RBC count	4.2-5.4 mill/cmm
3	Total WBC count	4000-10000 /cmm
4	Platelet count	150000-450000 /cmm
5	Random blood glucose	70-140 mg/dl
6	Serum creatinine	Male: 0.7-1.4 mg/dl Female: 0.5-1.2 mg/dl

### Lipid profile:

Sr no.	Test	Normal range
1	Cholesterol total	<200 mg/dl
2	Triglycerides	<150 mg/dl
3	HDL Cholesterol	>60 mg/dl
4	Non-HDL Cholesterol	<130 mg/dl
5	LDL Cholesterol	<100 mg/dl
6	CHOL/HDL ratio	3.5-5 mg/dl
7	VLDL Cholesterol	6-38 mg/dl

### Report:

- Glucose is occasionally present in urine.
- All other tests for urine are normal.
- Epithelial cell are occasionally present in urine.
- Random blood glucose is higher than normal range
- In some cases WBC is observed higher than normal.
- High amount of lipid profile observed.

### 6.Provisional diagnosis:

- High blood pressure
- Inflammation in ankle and other parts of body
- Headache
- Blurred vision
- Disorganised speech

## 7. Assessment:

### 1. Diagnosis:

- Hypertension
- Diabetes type I and II
- Leg pain due to vitamin deficiency

### 2. Goal of treatment:

- Maintain good quality of life
- Prevent or delay the appearance of late disease complication
- To prevent cardiovascular damage.

### 3. Need of therapy:

- Patient should be treated to systolic and diastolic BP goals of 140 mmhg and <90 mmhg

### 4. Assessment of therapy: drug prescribed to the patient's

#### a) Pioglitazone:

- Drug class: Thiazolidinediones
- Indication: control blood sugar in patients with type II diabetes.
- Side effect: increased level of cholesterol, sore throat with shortness of breath.
- Brand name: Pioz MF G1

#### b) Metformin hcl:

- Drug class: Biguanides
- Indication: control blood sugar in patients with type II diabetes.
- Side effect: headache, dizziness
- Brand name: Pioz MF G1

#### c) Glimepiride:



- Drug class: Sulfonylurea's
  - Indication: It lowers blood sugar by causing the release of your body's natural insulin.
  - Brand name: Pioz MF G1
- d) Telmisartan:
- Drug class: Angiotensin receptor blockers
  - Indication: To treat high blood pressure
  - Brand name: Cortel trio
  - Side effect: Dry cough was in some patient
- e) Amlodipine:
- Drug class: Calcium channel blocker
  - Indication: Lowers the blood pressure
  - Brand name: Cortel trio
- f) Rosuvastatin:
- Drug class: HMG-CoA reductase inhibitor
  - Indication: Decrease amount of cholesterol
  - Brand name: Roseday a 10
- g) Aspirin:
- Drug class: Non-steroidal anti-inflammatory drugs
  - Indication: Cardiovascular risk reduction
  - Brand name: Roseday a 10
- h) Rabeprazole: Prescribed to reduce the acid secretion that may lead to gastritis
- Drug class: proton pump inhibitor
  - Indication: Reduce ulcer formation
  - Brand name: Rabekind 20
- i) Methylcobalamin:
- Drug class: Vitamin B12
  - Indication: To restore deficiency of vit.B12
  - Brand name: Nervigen
- j) Fexofenadine:
- Drug class: Antihistamine
  - Indication: Decrease allergic symptoms
  - Brand name: Torkast-FX
- k) Montelukast:
- Drug class: Leukotriene receptor antagonist
  - Indication: Decrease symptoms of asthma and rhinitis
  - Brand name: Torkast-FX

l) Teneligliptin:

- Drug class: Anti-diabetic medicines called gliptin
- Indication: to treat diabetes
- Brand name: Teniva 20

m) Chlorthalidone:

- Drug class: Diuretics
- Indication: to treat high blood pressure and in heart disease. (Reduce extra salt in body caused by condition such as heart disease)
- Brand name: CTD 12.5

n) Bisoprolol :

- Drug class: Beta blocker
- Indication: To treat high blood pressure
- Brand name: Concor AM 5

o) Cefixime:

- Drug class: Cephalosporin antibiotic.
- Indication: to treat wide variety of antibiotics
- Brand name: Hifen 200 dt

p) Paracetamol:

- Drug class: Analgesic and antipyretic
- Indication: To treat pain and to reduce fever
- Brand name: Dolo 650

## **8. Reason for the therapy:**

- ✓ Glimepiride is primary used to treat diabetes.
- ✓ Thiozolidinediones and Biguanides are mostly used to treat type II diabetes mellitus.
- ✓ Amlodipine and Telmisartan are widely used as first line therapy for treatment of hypertension.
- ✓ Cefixime and paracetamol is prescribed in some cases to treat viral fever that is observed due to change in weather condition or place change.

- ✓ Side effect like dry cough was observed in some cases due to use of Telmisartan. So Fexofenadine with Montelukast was prescribed to reduce cough.
- ✓ Bisoprolol was prescribed over Telmisartan as side effect was seen.
- ✓ Paracetamol is prescribed if necessary to treat headache or fever.

## **9. Monitoring:**

- ✓ Monitoring of drug related side effect.
- ✓ Blood sugar level is monitored during initial diagnosis.
- ✓ Blood pressure was observed during the starting of treatment.
- ✓ Side effect caused due to any kind of prescribed drug is monitored.

## **10. Advice given to patient:**

- ✓ Take the medicine as directed by physician without fail.
- ✓ Do exercise as directed.
- ✓ Take adequate rest that may relieve from hypertension.
- ✓ Not to intake salt containing food.
- ✓ Eat less or no sweets. Sweets may increase blood glucose level.
- ✓ Try to keep your body weight at a healthy level.
- ✓ Take food rich in vitamins and calcium.
- ✓ Regular checkups to physician and laboratory test is done.

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