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CASE STUDY ON GOUT

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ABSTRACT

Joint pain is a recent common complain among the youngsters and areoffenlyattributed due to the overuse or injury. In the face due to persistent, severesymptoms, it also includes the bony or structural causes versus rheumatologic conditions. The current case study in based on a typical example of a male candidate who was diagnosed with the gout, a disease which is rarely found in the in adults but virtually ignored in the field of pediatrics.

KEYWORDS: Juvenile idiopathic arthritis, Gout, Obesity, Ankle pain, Adolescent, Joint pain, Autoimmune, Osteochondritisdissecans, Treatment failure.

INTRODUCTION

In the pediatric population, there are numerous causes of joint pain, stiffness, and swelling. Many can be attributed to minor activity or overuse-related injury, especially in the overweight and obese populations[1], but in the face of persistent, severe, or recurrent symptoms, other diagnoses must be considered. These typically fall into two categories in children and adolescents: bony or structural causes[2], or rheumatologic conditions.[3] Careful history and physical examination, along with use of imaging and laboratory studies, can often distinguish between the two[4,5]; however, when a complete work-up is performed and no clear answer emerges, the differential must be expanded.[6] In the rare case in which a firm primary diagnosis has been made, it is more difficult still to consider additional, secondary, causes of joint pain. Patients usually present with rapid onset of severe pain, swelling, redness, and Weakness, inflammatory response. Acute attack untreated attacks usually last

two to 21 days depending on cases. There are four clinical stages of gout Diseases (NIAMS). The first stage is known as asymptomatic hyperurecemia. During this stage, the patients can have an elevation of uric acid indeposits around a joint and if any trauma triggers the release of crystal into the joint space, patients will suffer acute attacks of gout. This secor intercritical gout, involves the interval between acute flare gout attacks with persist crystals in the joints. When crystals deposits continue This stage is called chronic tophceous gout. Some permanent damage to affected joints and sometimes to kidneys can be seen.

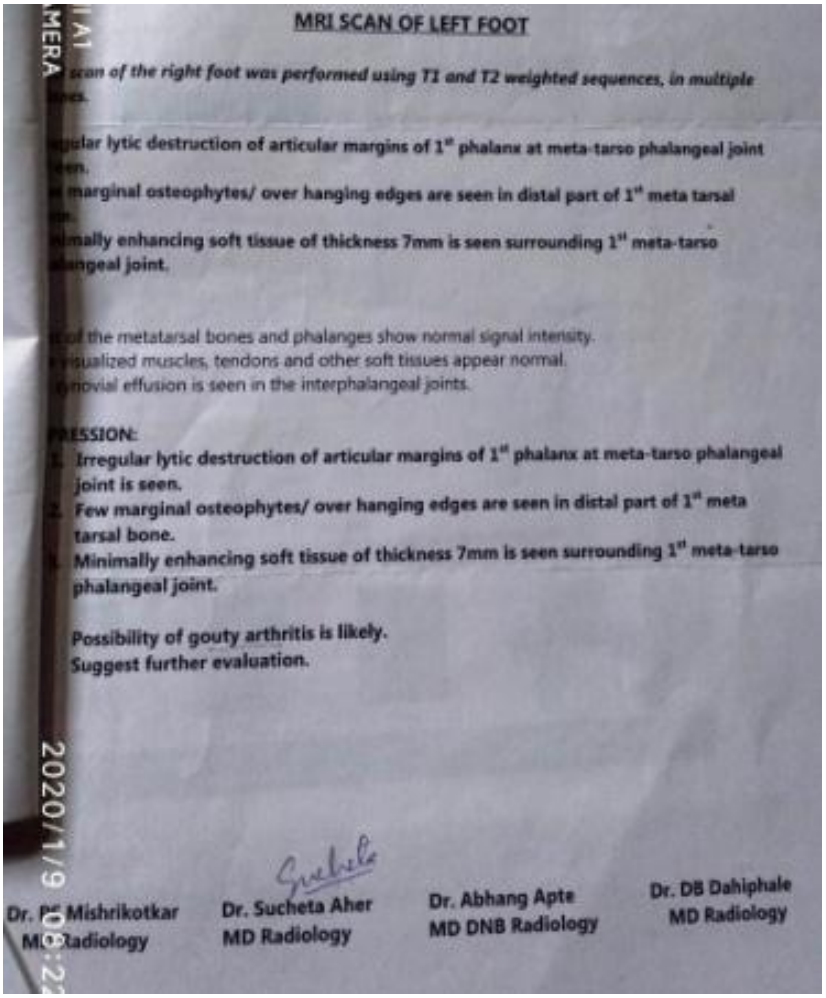
Pathophysiology: Gout is an inflammatory disease characterized by the deposition of uric acid crystals in and around joints, subcutaneous tissues, and kidneys. Although likely to have serum concentrations above 7 mg per dL. Gout typically occurs during middle age and is uncommon before the age 30 years old.[7]

Differential Diagnosis: Gout in the elderly is often polyarticular and involves upper extremity joints (especially proximalinterphalangeal joints and distal interphalangeathe classic monoarticular arthritis seen in men. Gout can be mistaken for rheumatoid arthritis because tophi may resemblerheumatoid nodules adifficult to differentiate cellulitis or septic arthritis from gout, particularly when a fever, leukocytosis, redness, or desquamation is present. Thedifficulty in clinically differentiating it from gout. For definitive diagnosis, joint fluid must be aspirated for culture and a search for urate crystals.

Diagnostic Test: The uricase Uv test is the basic primary test is been performed. Also the gold standard diagnostic test for gout is an arthrocentesis. The American College of Rheumatology has established it. It is not mostly recommended in India.

Case presentation: A 26-year-old obese young man was presented tothe orthopedicclinical care hospital. Thecomplain of the patient was the swelling in the right side of his ankle. His pain and swelling was more in the winter season. Afterprolonged contionusproblem to wake up and stand from the bed he visited the orthopedic clinical hopital and presented his situation to the doctor. On theexamination of background he was found to be with his past medical history as unremarkable. Along with the family history as positive when further discussed with the patient. The vital signs when observed were the swelling over the right ankle. A new observation for this case was one part used to swell only one time in the the winter season. After the analysis he was recommended to pass a MRI scan.[Fig1]. The reports remarked a clear indication that he was suffering from the Gout disease. Later he

skipped the further analysis due to the mental stress. After a several weeks he started to suffer as earlier. He consulted the orthopaedic surgeon and showed the earlier MRI scan reports. Thesurgeon suggest his to pass the uric acid test. The reports were positive [fig2] and made a clear indication that his uric acid concentration was higher than normal [14.6]. Later he was prescribed severalmedicines. Later on after a couple of months me checked his uric acid concentration and the the reports showed that the concentration of uric acid was less.[Fig 3].


MRI SCAN OF LEFT FOOT

scan of the right foot was performed using T1 and T2 weighted sequences, in multiple

gular lytic destruction of articular margins of 1st phalanx at meta-tarso phalangeal joint

marginal osteophytes/ over hanging edges are seen in distal part of 1st meta tarsal

mally enhancing soft tissue of thickness 7mm is seen surrounding 1st meta-tarso angeal joint.

of the metatarsal bones and phalanges show normal signal intensity.
visualized muscles, tendons and other soft tissues appear normal.
novial effusion is seen in the interphalangeal joints.

PRESSION:
1. Irregular lytic destruction of articular margins of 1st phalanx at meta-tarso phalangeal joint is seen.
2. Few marginal osteophytes/ over hanging edges are seen in distal part of 1st meta tarsal bone.
3. Minimally enhancing soft tissue of thickness 7mm is seen surrounding 1st meta-tarso phalangeal joint.

Possibility of gouty arthritis is likely.
Suggest further evaluation.

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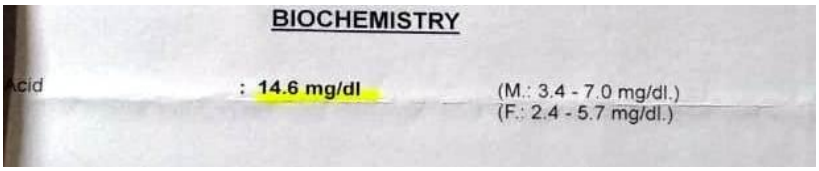
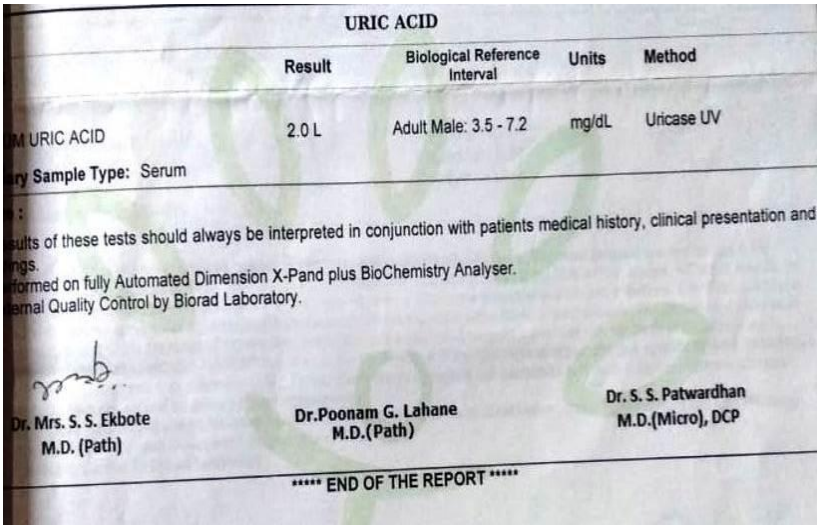
Fig 1: MRI Scan report.


BIOCHEMISTRY

Acid : 14.6 mg/dl (M.: 3.4 - 7.0 mg/dl.) (F.: 2.4 - 5.7 mg/dl.)

Fig 2: Primary uricase Uv reports.



URIC ACID

	Result	Biological Reference Interval	Units	Method
M URIC ACID	2.0 L	Adult Male: 3.5 - 7.2	mg/dL	Uricase UV

ry Sample Type: Serum

sults of these tests should always be interpreted in conjunction with patients medical history, clinical presentation and ngs.
formed on fully Automated Dimension X-Pand plus BioChemistry Analyser.
ernal Quality Control by Biorad Laboratory.

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***** END OF THE REPORT *****

Fig 3: Final uricase Uv reports.

DISCUSSION

Joint pain is a common complain symptoms, the differential typically expands to include bony orstructural causes versus rheumatologic conditions. In this case, however, diagnosis was complicated because the child had two distinct etiologies causing joint pain. Moreover, the patient's second diagnosis was gout, a veryuncommon condition in a pediatric patient, even in the setting of morbid obesity. The use of the steroidal treatment and as well the combination of NSAIDS with the antacids is used. Aletrntive method of homoeopathy can be implemented.

Treatment: The surgeon prescribed him the NSAIDS and alsosteroidal drugs. The medicines prescribed were paracetamol, Acetofinac, Diclorofinac, etc. The steroidal treatment contained the main tablet methyl Prednisolone. The antacids used in the combination were omeprazole, rapiprazole, etc.

CONCLUSION

In conclusion, gout was diagnosed in this teenage patient with the help of allopathic drugs**.** The diagnosis of gout should therefore be an important element of the differential for a refractory painful joint in an overweight patient regardless of age, and regardless of pre-existing diagnoses. Failing to consider this diagnosis may result in delay of optimal treatment and cause long-term effects of bone erosion and joint destruction. Sending joint fluid for crystalline analysis, checking uric acid levels, and performing imaging studies, specifically non-invasive, cost effective modalities such as ultra- sound, are all reasonable parts of a complete work-up in any child with arthritis.

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Conflict of Interest: Authors declared that there are no conflicts of interest.

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