

Case Report

# Kimura's Disease with Secondary Fungal Infection and Its Management by Antifungal Therapy: an Unusual Case Report

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## ABSTRACT

Kimura's disease is a chronic inflammatory disease of unknown etiology. It presents as painless lymphadenopathy or subcutaneous masses in the head and neck region. In words of Kimura it is an "unusual granulation combined with hyperplastic changes in lymphoid tissue".

It is believed that it represents a chronic deeper form of Angiolymphoid Hyperplasia with eosinophilia (AHLE). However, they can be distinguished based on histopathologic characteristics. AHLE represents a primary vascular malformation with secondary inflammation whereas Kimura's disease represents a primary inflammation with secondary vascular proliferation. The report presents a case of 29-year-old Indian male who reported to the institute with swelling in the mid facial region with marked facial disfigurement. The swelling was firm, non-tender, non-fluctuant and without any neural involvement. The patient was treated with antibiotics. The symptoms receded after a month-long treatment. After a latency of one week, the disease reverted, now, showing clinical features of fungal infection. This was treated with antifungal therapy after consulting with dermatologist. The disease subsided following treatment. This is a report of unusual presentation of Kimura's disease with fungal infection.

**Keywords:** Kimura's disease, chronic inflammatory disease, fungal infection, antifungal therapy

## INTRODUCTION

Kimura's disease is an uncommon benign chronic inflammatory disease of unknown etiology that mainly affects Asian men in their second and third decades of life. [1] It was first described in the Chinese literature by Kim and Szeto in 1937 as 'Eosinophilic hyperplastic lymphogranuloma', [2,3] and later titled as "Kimura's disease" in 1948 following a detailed anatomico-pathological description by Kimura.

The etiology of Kimura disease is not well understood till date, some have considered it to be a parasitic infection or reflective of a chronic, allergic or inflammatory reaction to some unspecific antigen. The disease is frequently associated with marked eosinophilia and an elevated serum level of IgE. Kimura's disease or eosinophilic lymphogranuloma is a rare condition characterized by tumor like lesions in the head and neck region, producing salivary gland nodules and lymph node enlargement. [4] Up to 60% of the

patients affected by this disease develop nephritic syndrome attributed to various types of membranous and membrano-proliferative glomerulonephritis. [5]

Correct and well-timed diagnosis of such diseases is crucial for treatment planning and also to avoid the conversion into an exaggerated chronic condition. There are many such conditions having similar clinical manifestations which should be differentiated for treatment. Angiolymphoid hyperplasia with eosinophilia (ALHE) should be considered as primary differential diagnosis, while diagnosing Kimura's disease, pertaining to many similar characteristics. The clinical course of Kimura's disease is often progressive, and the main problem with treatment is disease recurrence. [6]

### CASE REPORT

A 29-year-old Indian male patient reported with complaint of extraoral painless swelling over the middle third of the face. The swelling had gradually increased since the patient first noticed it 2 months before presentation. The patient complained of worsening facial disfigurement which was affecting his social and professional life. On examination was a diffuse ill-circumscribed extra oral swelling centered over the nasal dorsum, which included both the nostrils and altered the nasolabial folds bilaterally, thereby resulting in a flattened appearance of the nose. Superiorly the swelling extended towards the infraorbital area bilaterally. Inferiorly, it completely ballooned and encompassed the upper lip with flattening of the philtrum and altering the nasolabial angle. Laterally it was extending bilaterally towards the zygomatic buttress area. The swelling scaled 19mm x 23mm over the nose and 20mm x 35mm over upper lip. Skin over the lesion was intact without any visible pulsation, discharge or surface ulceration, and had a reddish inflamed appearance. It was firm, non-tender and non-fluctuant on palpation. No signs of neural involvement of the swelling were found on examination. On

intraoral examination swelling was associated with hard and soft palate resulting in changes in the normal palatal architecture. Blanching was seen on the hard palate with a shallow depression present on the mid palatine raphe. Fig:1, 2,3.



Figure 1: Shows pretreatment swelling on nose and lip



Figure 2: Shows swelling on upper lip and nostrils



Figure 3: Shows intraoral swelling involving palate

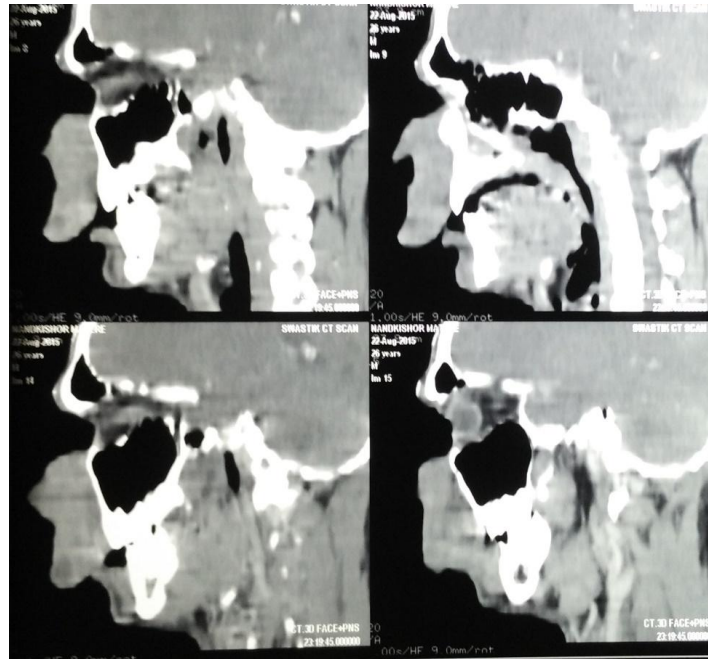


Figure 4: CT Scan image showing swollen upper lip and nose

Incisional biopsy for histopathological examination was deemed necessary and was taken from the left nostril. Based on the clinical presentation of the disease, initial steroid therapy was started for the patient. The histological picture presented with granulation tissue sheets showing predominant eosinophils, neutrophils and multinucleated giant cells. Lymphoid follicles and multiple foci of necrosis were also reported. The overall clinical-histopathological presentation pointed towards Kimura's disease.

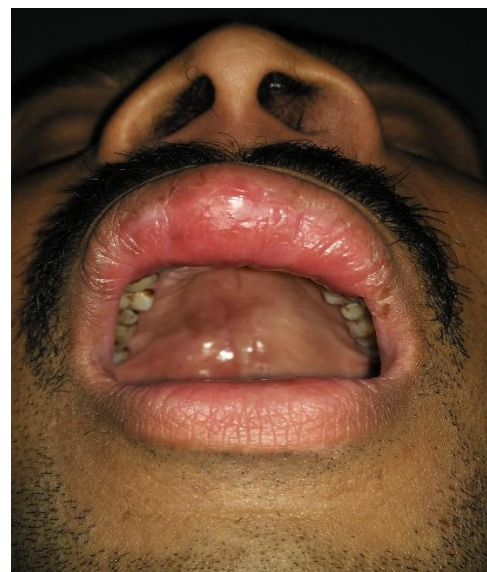


Figure 6: Shows regression of intraoral swelling after steroidal treatment



Figure 5: Shows regression of extraoral swelling after steroidal treatment

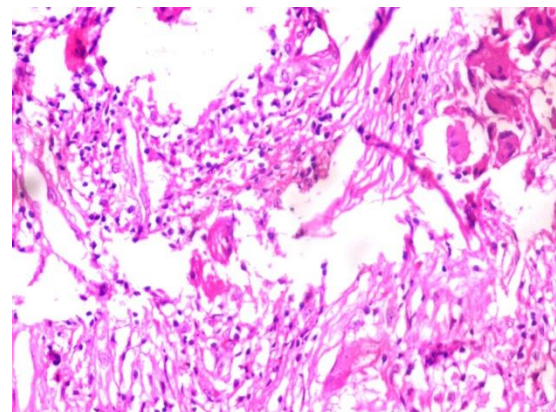


Figure 7: Histological Images showing giant cell.



Figure 8: Showing follow up after 2 years with complete regression of swelling

Considering the histological diagnosis as Kimura's disease, conservative medicinal treatment was started before surgical intervention. Antimicrobials, (Inj. Ofra-max forte 1.5 gm, Inj. Metrogyl 500mg intravenously), non-steroidal anti-inflammatory drugs (NSAIDs) (Inj. voveran 75mg given intramuscularly) and anti-histamines (Tab. Levocetirizine -5mg orally) were started in continuation with steroids (Tab.Methylprednisolone-125 mg once a day) for 5 days. Subsequently there was a remarkable decrease in the swelling as shown in fig: 5,6. However, the swelling reappeared on tapering of steroids and discontinuation of other drugs. The same regimen was again restarted and continued for 5 days, with extended steroid supplementation for 1 month. There was notable reduction in the expanse of the disease with the patient exhibiting near-normal facial architecture. At the termination of the month-long therapy and after achieving acceptably good aesthetics to the patient's satisfaction, the disease reverted with remission and reappearance of the swelling after a latency of a week. The clinical features were resembled sub mucosal zygomycosis. Hence, we decided to consult dermatologist to rule out possibilities for fungal infections. On the basis of clinical background we started antifungal treatment.

Continuing the treatment as stated we got a remarkable decrease in swelling and symptoms as shown fig:7. There were no episodes of recurrence in the follow up period of over 2 years.

## DISCUSSION

Kimura's disease mainly occurs in the head and neck region involving the salivary glands and regional lymph nodes.<sup>[7]</sup> Although the incidence of Kimura's disease is predominant in South East-Asians, but until now there is no proven cause of this condition. Many authors have variably considered it to be a parasitic infection, or allergic and inflammatory reaction to some antigens.<sup>[7,8]</sup> The disease has been found to be more common in second and third decades of life with an increased male predilection.<sup>[9]</sup> Based on the findings of elevated tissue and serum IgE and eosinophils, generally it is considered in association with Type-1 allergy.<sup>[10]</sup> In the reported case we also observed the elevated eosinophils, neutrophils and many lymphoid follicles with multinucleated giant cells.

Kimura's disease commonly presents as a subcutaneous mass in head and neck region which primarily involves the salivary glands but in the present case we observed the subcutaneous swelling involving the middle third of face without involvement of salivary glands, which is

rarely represented in the published literature. Many other granulomatous diseases can be considered as differential diagnosis for such clinical presentations like Angiolymphoid hyperplasia with eosinophilia, systemic lupus erythematosus, Eosinophilic granuloma, acute nonlymphocytic leukemia, Hodgkin's disease, non-neoplastic parotid lesions, fungal diseases like mucormycosis and zygomycosis. Among them Angiolymphoid hyperplasia with eosinophilia also represents same clinical features like Kimura's disease but we can distinguish the Kimura's disease by many factors as having female predominance and less common eosinophilia in Angiolymphoid hyperplasia with eosinophilia. The nature and etiology of both the entities are still uncertain, however it is now considered that Kimura's disease represents an immunologic medical disorder whereas Angiolymphoid hyperplasia with eosinophilia is consistent with benign vascular neoplasms. [6]

In such conditions proper diagnosis is essential for further treatment. As the cause of the disease is uncertain, the management of such conditions is a challenge to the clinicians. Kimura's disease is benign with no malignant potential. The lesions can however be large and disfiguring. Certain cases have also been associated with the nephritic syndrome. [5] In our case there were no findings pointing towards any renal disease.

The main obstacle in the treatment of this disease is recurrence. Even after surgical excision of the lesion, recurrence makes it a multistage treatment. At the same time, surgical excision poses a risk of damaging surrounding vital structures. There are many conservative treatments given in the literature. The immunosuppressant drug cyclosporine has also been used in treatment of Kimura's disease. Also radiation accompanied by surgical excision is effective therapy but associated with this therapy many serious side effect have been reported. [11]

In present case we started the conservative treatment including the Antimicrobials, (Inj. Oframax forte 1.5 gm, Inj. Metrogyl 500mg), non-steroidal anti-inflammatory drugs (NSAIDs) (Inj. voveran 75mg) and anti-histamines (Levocetirizine - 5 mg) were started in continuation with steroids (Methylprednisolone-125 mg ones a day ). On continuing steroidal therapy for 1 months there was appreciable decrease in swelling on both site i.e. face and intraorally as shown in fig.5,6. There was the recurrence of swelling 1 week after the stoppage of steroidal therapy which is attributed to the high recurrence rate of Kimura's disease i.e., above 60%. [6] As the condition resembled fungal infection we consulted the dermatologist. In the literature there are many observation given regarding the etiology and relation with fungal infection. The most popular theory is that of Candida acting as a source of persistent antigenaemia, although neither hyphae nor spores have been isolated. [9] In present case when we reviewed the histopathological slide for fungal lesion there was no growth of hyphae or spores seen in slide. In our case also we started the antifungal treatment as stated. Patient responded well and after complete regression of swelling we stopped antifungal therapy. On regular follow up there is no sign of recurrence even after 2 years.

This case is exceptional as (1) It is a sporadic case found in non-orientals; (2) Involvement of middle third of face (3) Its presentation without lymphadenopathy (4) With no evidence of fungal disease in histological slide it respond to antifungal without no recurrence after 2 years.

## CONCLUSION

Etiology of the Kimura's disease is uncertain, diagnosis and treatment of such diseases poses challenge to the clinicians. Although the histologically it diagnosed as Kimura's disease it's relation to any other diseases cannot be neglected hence to find out the other possibilities we have to wide up the investigations also secondary

infection to fungal disease cannot be neglected.

#### Conflict Of Interest

Authors declare that there is no conflict of interest.

#### Role of the Funding Source

None

#### Informed Consent

Informed consent was obtained by all the patient for publishing the data in the study.

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