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BILATERAL POSTAURICULAR AND SUBMANDIBULAR KIMURA DISEASE RECURRENCE AFTER 15 YEARS.

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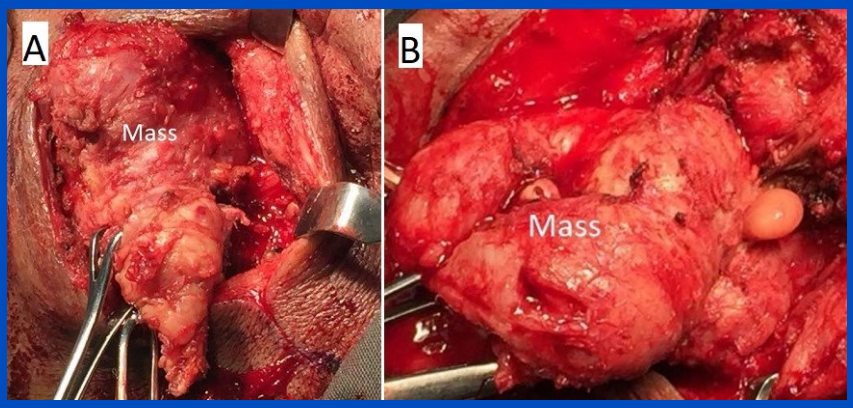

ABSTRACT

Kimura disease is a rare disease which typically presents with painless swellings in the head and neck region associated with peripheral eosinophilia and raised serum IgE. Asian young men is the most affected subpopulation. Recurrence is prevalent despite not being associated with malignancy potential. We report an atypical case of an Indonesian man presented with a recurrent large submandibular and bilateral postauricular swellings after 15 years for which histology confirmed recurrence of kimura disease. Multiple treatment modalities and the respective success rates are elaborated in this article.

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ABSTRACT
Kimura disease is a rare disease which typically presents with painless swellings in the head and neck region associated with peripheral eosinophilia and raised serum IgE. Asian young men is the most affected subpopulation. Recurrence is prevalent despite not being associated with malignancy potential. We report an atypical case of an Indonesian man presented with a recurrent large submandibular and bilateral postauricular swellings after 15 years for which histology confirmed recurrence of kimura disease. Multiple treatment modalities and the respective success rates are elaborated in this article.

Keywords: Angiolymphoid hyperplasia with eosinophilia, Kimura disease, Pseudopyogenic granuloma, Recurrence, Radiotherapy, Surgery

INTRODUCTION
Kimura disease (KD) is a rare and benign chronic inflammatory disorder for which the exact etiology remains unknown. Underlying pathogenesis is attributed to immune mediated hypersensitivity. Asian countries especially Japan and China followed by South East Asia regions have higher incidence, with incidence outside of Asia is sporadic.[1] Men are the predominantly affected gender and those in the 20 - 30 years old bracket recorded highest incidence.[1,2] It typically presents as a subcutaneous swelling or lymphadenopathy in the head and neck region followed by salivary glands and other lymph nodes in the body. Relapse rate ranges from 60 % to 100 %. Nephrotic syndrome has been reported as systemic manifestation of KD.[1] We present a unique case of KD in a 59 years old Indonesian man who has had the disease for the past 15 years with recurrences despite undergoing multiple treatment modalities previously.

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CASE REPORT
A 59-year-old Indonesian man presented to our department with painless bilateral postauricular and large submandibular swellings, which has gradually increased in size over 15 years but did not exert any mass effect on adjacent structures. He had similar but significantly smaller postauricular swellings 16 years ago which was surgically excised but the histological report of the resected specimen were not available or retrievable. The right postauricular swelling measured 11 cm x 8 cm while the left postauricular swelling is 9 cm x 10 cm (Figures 1A & B). The submandibular swelling was multilobulated, measured 8 cm x 6 cm (Figure 1C). They were firm, painless, mobile and not warm to touch. There was neither infiltration of the overlying skin nor punctum

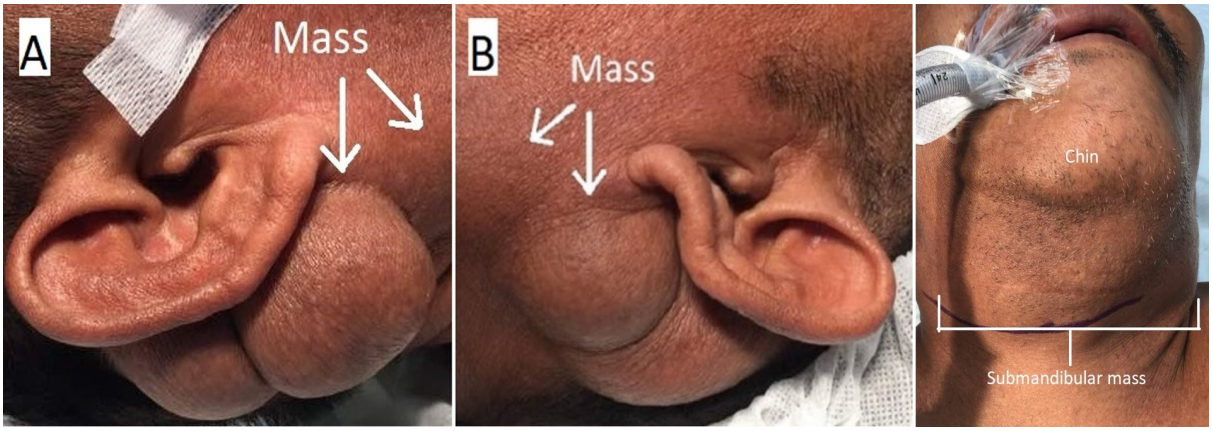

Figure 1: (A) Right postauricular mass, (B). Left postauricular mass, (C) Submandibular mass.

seen. There was no associated hepatosplenomegaly or no other swellings elsewhere. Otoscopic examination was normal and systemic review was uneventful. His past medical history included only hypertension and he has no known allergy.

Computed Tomography (CT) scan revealed lobulated masses arising from postauricular region and an irregular enhancing mass was seen in the right antero-inferior aspect of the jaw (Fig. 2A & B). No calcifications, fat or cystic components seen within these masses. There was no clear fat plane with adjacent sternocleidomastoid muscles. Multiple submental, submandibular, cervical, supraclavicular lymph nodes no larger than 0.8 cm were present. Submandibular and thyroid glands were normal. Radiology findings indicated possible malignancy. Blood investigation only showed eosinophilia with a raised count of 4.68 109/L or 37 % (normal: less than 0.5 109/L). Intraoperatively both parotid glands were normal and postauricular masses were fibrocystic in consistency and complete excision of both right (12 x 5 x 2 cm) and left (15 x 7 x 4 cm) masses was achieved (Fig. 3A & B). Submandibular mass however was deeply situated and there was no clear plane of dissection with the subcutaneous tissue and hence was not removed en bloc due to risk of possible marginal mandibular nerve injury. Hence, only an incisional biopsy of the submandibular mass was done in order to obtain a definitive diagnosis first. Histology showed fibrocollagenous tissue exhibiting numerous enlarged lymphoid follicles with prominent geminal centers. There was dense eosinophils infiltrates with eosinophils microabscesses formation and eosinophilic exudates within the follicles and surrounding fibrocollagenous tissue. Numerous Warthin-Finkeldey type polykaryocytes were also seen within the germinal center suggestive of KD (Fig. 4A – D).

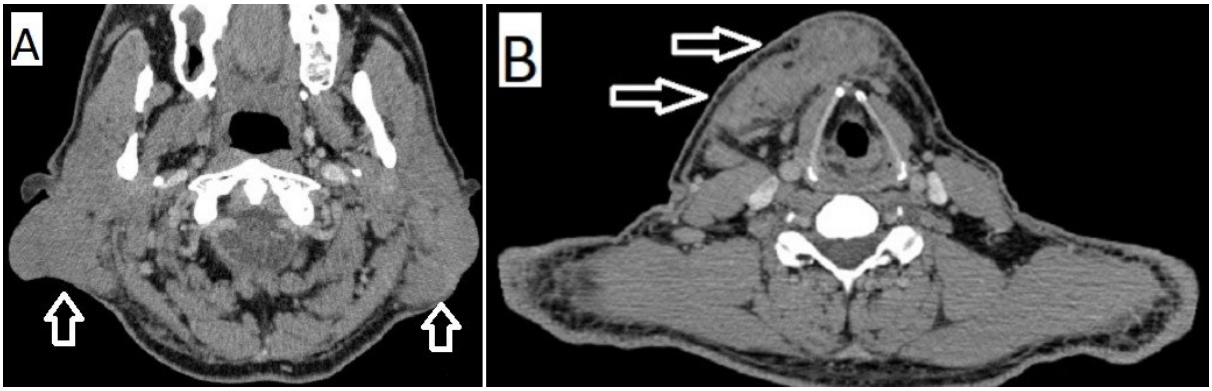

Figure 2: CT brain axial view - (A) postauricular masses indicated by arrows. (B) submandibular mass.

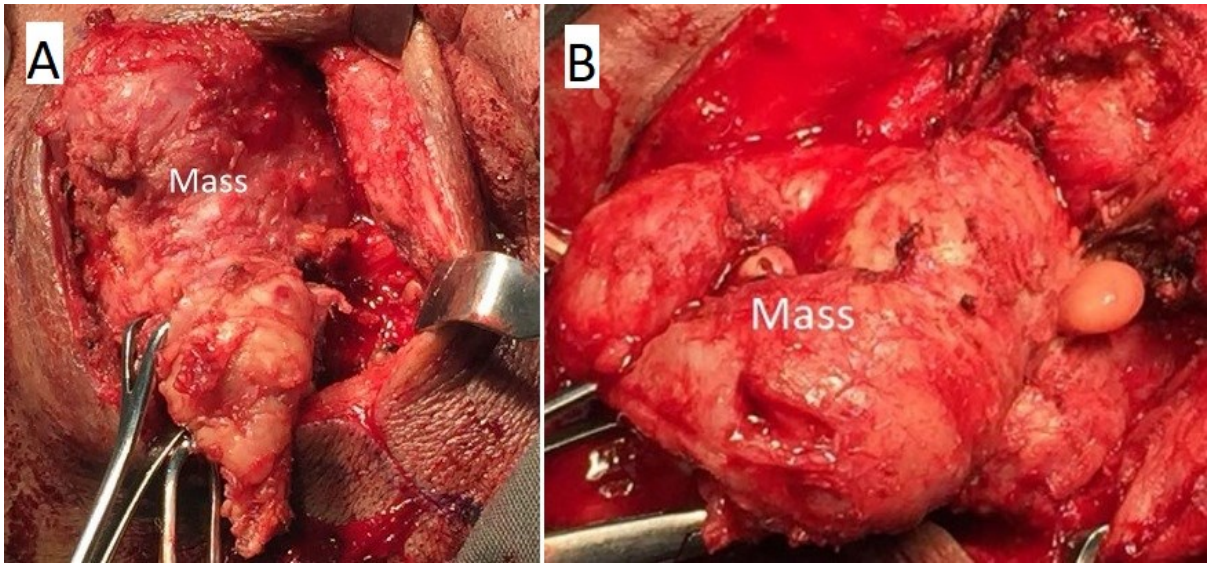

Figure 3: Intraoperative view: (A) right postauricular mass. (B) left postauricular mass.

tissue. Numerous Warthin-Finkeldey type polykaryocytes were also seen within the germinal center suggestive of KD (Fig. 4A – D). No malignancy was seen.

He was started on post-operative tapering doses of oral prednisolone starting from 20 mg daily dose. No recurrence was seen within 6 months after surgical excision.

DISCUSSION

Clinical diagnosis of KD typically encompasses slow-growing painless subcutaneous nodules, eosinophilia and raised serum IgE level.[3] These nodules mostly occurred in the head and neck region (70%) followed by axillary and inguinal lymph nodes (15%).[4] The reason for the highest incidence in the head and neck region remains unknown. Serum IgE was not investigated for this patient as KD was not among the differential diagnoses such as lipoma or sebaceous cyst as he did not fall in the normal age category for KD. Confirmatory diagnosis of KD was made on histological examination of the resected specimens.

Various hypothesis for the etiology of KD have been put forward previouslyincluding allergy, autoimmune, bacterial, parasitic infestation and Epstein Barr Virus.[1-5] Peripheral eosinophilia and eosinophilic infiltrates are postulated to be attributed by activities of type 1 & type 2 T- helper cells which are increased by the etiologies mentioned. This increased activitiy causes excessive eosinophilotrophic cytokine production leading to eosinophilia and eosinophilic infiltration.[4]

Several diseases have similar clinical features as KD. Angiolymphoid hyperplasia with eosinophilia (AHLE), Hodgkin's lymphoma, Langerhans's cell histiocytosis, salivary gland tumor, lymph node metastasis and lymphadenitis are valid differential diagnosis in terms of clinical presentation.[3,4] Presence of classic Reed Sternberg cells, Langerhans cells, malignant cells or neutrophils would suggest alternative diagnoses to KD. KD presents as large deep subcutaneous masses with dense eosiniphils infiltrate associated with lymphoid follicle formation histologically while AHLE lesions are superficial, smaller and devoid of the former features with more prominent vascular proliferation. Presence of Warthin-Finkeldey

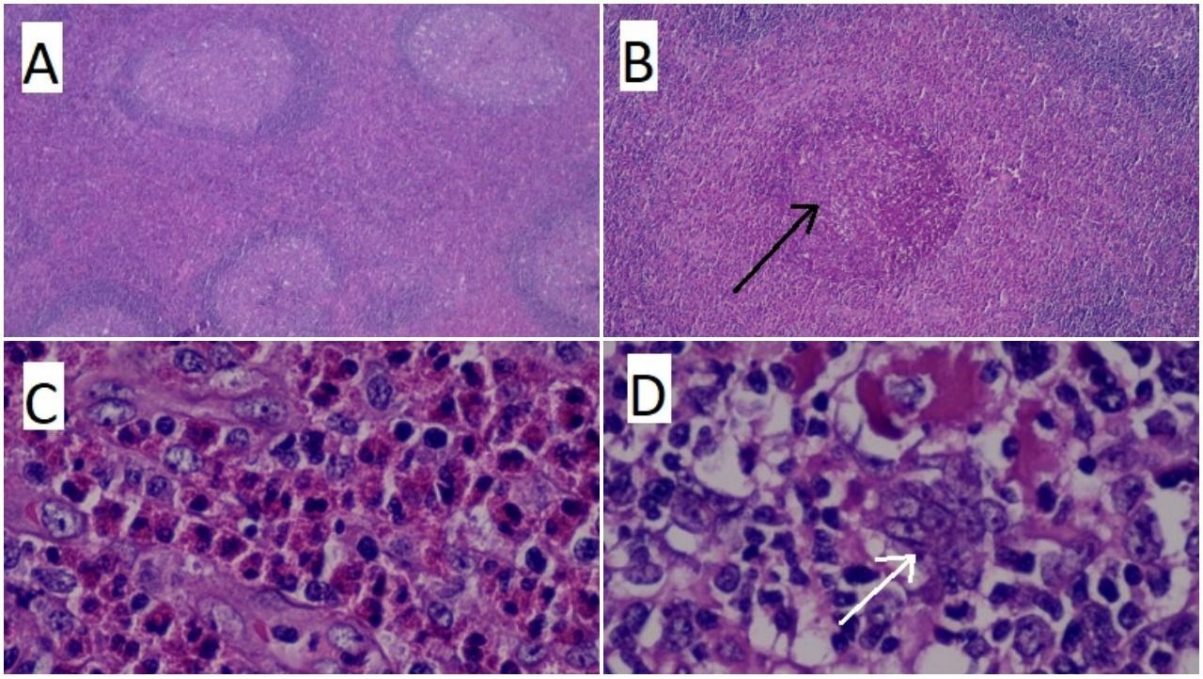

Figure 4: (A) 2X view: marked follicular hyperplasia comprising varying sizes of lymphoid follicles with prominent germinal center. (B) 4X view: eosinophils infiltrate within the medulla, paracortex and germinal center with eosinophilic microabscess formation. (C) 10X view: dense eosinophilic infiltrate with plump endothelial venules. (D) 40X view: Formation of follicular dendritic cell polykaryon (Warthin-Finkeldey type polykaryocytes).

proliferation. Presence of Warthin-Finkeldey type polykaryocytes in tissue cytology or histology is not pathognomonic but functions as soft indicator of KD.[6]

Main treatment of KD is surgical excision but local recurrence rate is 25%.[7] Various types of treatment modalities are available with variable success rates. Surgical resection combined with low dose postoperative radiotherapy yielded best outcome as radiotherapy alone increased local recurrence rate by 1.718 times compared to the former.[8] Surgical excision alone yielded local recurrence rate of 4.722 greater than combined with radiotherapy.[8] Surgical excision or radiotherapy as a monotherapy has no significant difference in local recurrences.[8] Total doses of radiotherapy typically administered for KD is 20 - 30 Gy. Radiotherapy is used for primary case, recurrence and steroid resistant KD. Tapering dose of prednisolone 30 mg/day for 5 months and tapered over 6 weeks: is the main therapy in some centers depending on the age of patient and debilitating radiotherapy complications.[4] Relapse is common during tapering and after cessation of steroids.[5] In a case of KD recurrence after superficial parotidectomy which surgery was not feasible due to dense fibrosis at operative site, an alternative treatment regime was developed: oral methylprednisolone 16 mg thrice a day with tapering dose of prednisolone over 3 months combined with daily cetrizine 10 mg.[7] Complete recovery was seen within 2 weeks and continuation of cetrizine for recurrence prevention.[7] Poor surgical margins and aesthetic factor resulted in usage of mycophenolate mofetil 1000mg daily dosage which then demonstrated clinical improvement within 1 month and maintained disease free at 23 months of follow up.[3] Immunosuppresive agents such as cyclosporine, and cyclophosphamide were used to treat resistant disease.[4] Outcome of intralesional steroid is inconclusive.

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CONCLUSION

Kimura disease should be suspected in cases of head and neck swellings especially in those associated with recurrence. The disease is benign with no malignant potential. Appropriate treatment modality should be selected based on the patient factors, treatment status and availability of facilities in view of each reported treatment have had successful outcomes.

DISCLOSURE STATEMENT

The authors reported no conflict of interest or financial liability. Consent has been obtained from the patient in regards to the pictures and details included in this report.

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