

Kimura's Disease: A Case Report

Somchai Insiripong, M.D.*

Panitan Wisalsawat, M.D.**

Abstract

Kimura's disease is chronic inflammatory disorder of lymph node. Its classical manifestation is asymptomatic enlargement of lymph nodes predominantly of head and neck with eosinophilia. The diagnosis depends on the pathological findings, i.e. angiolymphoid hyperplasia with eosinophil infiltration of the lymph node, in combination with blood eosinophilia and increased serum immunoglobulin E. It can be principally treated by surgical correction. So far, it is still rare disease and here is one additional case. A 52-year old man presented with progressive painless mass confined within the left parotid gland area for a few months, no constitutional symptom. The mass was 10x10x2 cm, firm, without tenderness. Other physical examinations were within normal limit. The CBC, liver and kidney function tests were generally normal, except for eosinophilia and very high serum immunoglobulin E. The biopsy showed the angiolymphoid hyperplasia with eosinophil infiltration, which was consistent with Kimura's disease. With oral prednisolone, the mass completely disappeared as well as eosinophilia within 2 months. He had been well for 4 years until Kimura's disease with blood eosinophilia reappeared again. He still responded well to second course of oral prednisolone.

บทคัดย่อ: Kimura's Disease: รายงานผู้ป่วย 1 ราย

สมชาย อินทรศิริพงษ์, พ.บ.*

ปณิธาน วิศาลสวัสดิ์, พ.บ.**

*กลุ่มงานอายุรกรรม, โรงพยาบาลมหาราชนครราชสีมา จ.นครราชสีมา 30000

**กลุ่มงานพยาธิวิทยาคลินิก, โรงพยาบาลมหาราชนครราชสีมา จ.นครราชสีมา 30000

เวชสาร โรงพยาบาลมหาราชนครราชสีมา 2555; 36: 121 - 5

Kimura's disease เป็นโรคที่เกิดจากการอักเสบเรื้อรังของต่อมน้ำเหลือง อาการที่สำคัญคือ ต่อมน้ำเหลืองโตซ้ำ ๆ โดยเฉพาะที่คอ โดยไม่มีอาการเจ็บ การวินิจฉัยขึ้นอยู่กับ การตรวจพบลักษณะจำเพาะทางจุลพยาธิวิทยาของต่อมน้ำเหลืองแบบ angiolymphoid hyperplasia with eosinophilia ร่วมกับการพบ eosinophil และ immunoglobulin E สูงขึ้นในเลือด การรักษา

*Department of Medicine, Maharat Nakhon Ratchasima Hospital, Nakhon Ratchasima 30000

**Department of Pathology, Maharat Nakhon Ratchasima Hospital, Nakhon Ratchasima 30000

ที่สำคัญคือ การผ่าตัด โรคนี้เป็นโรคที่พบได้น้อย รายงานนี้เป็นผู้ป่วยชายไทย อายุ 52 ปีมาตรวจด้วยอาการมีก้อนที่ต่อมน้ำลายข้างซ้ายโตช้า ๆ ใน 2-3 เดือน ไม่มีอาการอื่น ๆ ตรวจร่างกายพบว่าเป็นก้อนขนาดประมาณ 10 เซนติเมตร หน้า 2 เซนติเมตร กดไม่เจ็บ ที่บริเวณ left parotid area ผลตรวจชิ้นเนื้อพบ angiolymphoid hyperplasia with eosinophilia ร่วมกับพบ eosinophilia และ immunoglobulin E สูงในเลือด ซึ่งเข้าได้กับโรค Kimura's disease ได้ให้การรักษาด้วย prednisolone ก่อนเนื้อหายสลายภายใน 2 เดือนเช่นเดียวกับ eosinophilia ในเลือด ผู้ป่วยปลอดภัยเป็นเวลา 4 ปี แล้วกลับมาใหม่ด้วยอาการเดิม และผู้ป่วยยังคงตอบสนองดีต่อ prednisolone

Introduction

Kimura's disease (KD) is a chronic inflammatory disorder of unknown etiology of the lymph node, it always manifests as painless unilateral cervical lymph nodes or subcutaneous masses in the head or neck region⁽¹⁾. It was firstly reported from China in 1937, in the term of eosinophilic hyperplastic lymphogranuloma by Kimm and Szeto⁽²⁾ and later it was named according to Kimura⁽³⁾ in 1948 who described its pathology as "unusual granulation combined with hyperplastic changes of lymphoid tissues". Its etiology has not exactly been known, possibly hypersensitivity reaction is proposed because there have been prominent eosinophil infiltrate in the affected lymph node, blood eosinophilia and increased serum immunoglobulin E (IgE). It always slowly runs chronic course with rarely spontaneous recovery. However, the patients with this disease have no constitutional symptoms such as weight loss or fever and the disease has never turned malignant. The diagnosis of Kimura's disease depends on the typical pathological findings of angiolymphoid hyperplasia with eosinophilic infiltration of the lymph node. And its treatment is mainly surgical correction, while some authors reported its treatment with corticosteroid or radiotherapy⁽⁴⁾. In Thailand, the case with classically pathological findings of Kimura's disease was firstly reported in 1989⁽⁵⁾ and then it has been occasionally reported later^(6,7). Here we report the additional case of Kimura's disease who presented with the mass at the parotid area, pathologically proved to be Kimura's disease.

Case Report

Five years ago, the 52-year-old Thai male, had presented with gradual onset of painless, progressive enlargement of the mass confined within the left parotid gland area for a few months. He had no fever, no pruritus and no weight loss. On physical examination, the mass occupied the left parotid gland area, size 10x10 cm. in width and 2 cm. in thickness, smooth surface, firm, no tenderness and no fluctuation and it was fixed to the underlying tissue. The covering skin and the buccal mucosa revealed normal appearance, without the induration or the signs of inflammation. He had no left facial palsy, no other lymphadenopathy and no hepatosplenomegaly. The oral hygiene, the left temporo-mandibular joint and the dental condition were unremarkable.

His laboratory tests included hemoglobin 14.1 g%, hematocrit 44.2 vol%, WBC 13,800/mm³, N 68.7%, L 10.6%, M 6.6%, E 10.4% (absolute eosinophil count 1,435/mm³), B 0.4%, platelet 317,000/mm³, BUN 37.1 mg%, creatinine 1.1 mg%, FBS 87.8 mg%, cholesterol 167 mg%, direct bilirubin 0.2 mg%, total bilirubin 0.7 mg%, AST 21 IU/L, ALT 18 IU/L, alkaline phosphatase 45 IU/L, uric acid 2.5 mg%, albumin 4.0 g%, globulin 3.2 g%, cortisol 2.20 (normal 2.0-26), calcium 8.7 mg%, phosphorus 1.0 mg%.

The imaging studies consisted of the computerized tomography of the brain, the plain film of the chest and the ultrasonography of the whole abdomen, all of them were unremarkable, no lymphadenopathy was demonstrated.

The total serum immunoglobulin E (IgE) was 1,873 IU/ml. (normal 0-120 IU/ml)

Anti-HIV antibody and VDRL were negative and urinalysis was repeatedly normal as well as stool.

The presumptive diagnosis was left parotid tumor of unknown nature. Under general anesthesia, the mass could not be totally excised because of the attempt of the preservation of the left facial nerve.

The post-operative pathological diagnosis of left parotid tumor was angiolymphoid hyperplasia with eosinophilia while that of the left adjacent cervical lymph node was necrotizing lymphadenitis with eosinophilia.

He was conclusively diagnosed as Kimura's disease and the treatment with oral prednisolone 60 mg a day was started. He responded well, the mass gradually subsided and completely disappeared within 2 months whereas the blood eosinophilia became normal. The steroid was gradually tapered and finally stopped after the disappearance of the mass.

He had been well and lost follow-up for 4 years without any symptom or mass enlargement.

One year ago, the mass at the left parotid gland area reappeared, and it had similar characteristics, i.e. gradual onset within 2 months, slowly progressive, painless growing, no tenderness and no fluctuation. He was still free from any constitutional symptom. No other abnormality was detected on thorough physical examination. The laboratory tests and imaging processes were repeated again, and only one abnormality demonstrated was blood eosinophil of 47% from the total WBC of $11,300/\text{mm}^3$ (absolute eosinophil count was $5,311/\text{mm}^3$). The mass was again nearly totally excised under general anesthesia. And the final pathological diagnosis was the recurrence of Kimura's disease. He was again treated with oral prednisolone 60 mg a day. The response was still dramatic and the mass as well as blood eosinophilia disappeared again within 2 months.

The corticosteroid could be tapered and stopped within a few months after the disappearance of the mass. The final blood eosinophil was 4.2% while the total WBC was $12,600/\text{mm}^3$ (absolute eosinophil was $529.2/\text{mm}^3$).

Discussion

Our case had the classical clinical characteristic of Kimura's disease which consisted of the slowly growing, painless and unilateral mass or lymphadenopathy in the head and neck region, high blood eosinophil count and high serum level of Ig E, without any constitutional symptom⁽⁸⁾. And he was proved to be Kimura's disease by the histological finding that was the angiolymphoid hyperplasia with eosinophilic infiltration.

Some authorities supposed that Kimura's disease and angiolymphoid hyperplasia with eosinophilia were different entities⁽⁹⁻¹¹⁾. Although the pathology from both entities looked so similar, but clinically the angiolymphoid hyperplasia with eosinophilia always involved the superficial structure such as skin, its lesion was always smaller and it attacked all races. On contrary, Kimura's disease involved the deeper tissues such as the lymph nodes, the salivary glands and the subcutaneous tissues and it more frequently attacked the Asian races with male predominance⁽¹²⁾.

However, there was also the report of the case with the simultaneous presentation of Kimura's disease and the angiolymphoid hyperplasia with eosinophilia⁽¹³⁾. And the authors proposed that both Kimura's disease and the angiolymphoid hyperplasia with eosinophilia were within the spectrum of the same entity.

In fact, high blood eosinophil count was found around 90% of cases with Kimura's disease⁽¹⁴⁾ and its blood level correlated well with the activity of the disease. In our case, the blood eosinophil count was $1,435.2/\text{mm}^3$ for the first presentation and $5,311/\text{mm}^3$ for the second time which were greater than the definition of eosinophilia,

i.e. $>600/\text{mm}^{3(15)}$. And also the count became normal after the disappearance of the tumor. However the exact cause of the eosinophilia in Kimura's disease has not yet been known, it is supposed to be the part of immunologic response to any stimulus such as allergy or autoimmune process.

The serum total immunoglobulin E (IgE) in our case was very high, i.e. 1,873 IU/ml (normal 0-120). The increase of IgE in combination with blood eosinophilia conformed the diagnosis of Kimura's disease⁽¹⁶⁾.

Some patients with Kimura's disease had heavy proteinuria of the range of nephrotic syndrome, i.e. more than 3.5 gram a day^(17,18). The cause of this finding was not known. But in our case, urinalysis was normal.

Because the etiology of Kimura's disease has not obviously been known, its management is variably different. The important treatment is surgical correction. In Thailand, there was the report of the very good result of radiotherapy in this disease⁽⁷⁾. For our case, he responded well with oral corticosteroid for 2 times, four years apart. And the blood eosinophil count correlated well with the presence or the absence of the tumor. These implied the immunologic basis of this disease.

Because our patient had no constitutional symptom, no anemia of chronic disease, the clinical manifestation was minimally progressive, the mass was easily controlled by short course of oral prednisolone for 4 years, our case implied that Kimura's disease was not malignant disease itself and it would not turn to be malignancy within 5 years of follow-up.

References

1. Lee SJ, James AJ, James WD, Mercado P. Kimura disease. Available from: <http://emedicine.medscape.com/article/1098777-overview>.
2. Kimm HT, Szeto C. Eosinophilic hyperplastic lymphogranuloma, comparison with Mikulicz's disease. Proc Chin Med Soc 1937; 1: 329. (In Chinese) [abstract]
3. Kimura T, Yoshimura S, Ishikawa E. On the unusual granulation combined with hyperplastic changes of lymphatic tissues. Trans Soc Pathol Jpn 1948; 37: 179-80. (In Japanese) [abstract]
4. Chang AR, Kim K, Kim HJ, Kim IH, Park CI, Jun YK. Outcomes of Kimura's disease after radiotherapy or nonradiotherapeutic treatment modalities. Int J Radiat Oncol Biol Phys 2006; 65: 1233-9.
5. Cutchavaree A, Viratchai C, Tonsakulrungruang K, Supiyaphun P. Eosinophilic lymphofollicular hyperplasia with eosinophilia: report of cases. J Med Assoc Thai 1989; 72: 649-54.
6. Dhanuthai K, Jansisyanont P, Tangjaturonrasami P, Amornpitakpant K. Kimura's disease. Asian Assoc Oral Maxillofacial Surg 2006; 18: 151-6.
7. Chitapanarux I, Ya-in C, Kittichest R, Kamnerdsupaphon P, Lorvidhaya V, Sukthomya V, et al. Radiotherapy in Kimura's disease: a report of eight cases. J Med Assoc Thai 2007; 90: 1001-5.
8. Archad AR. Kimura's disease of parotid gland presenting as solitary parotid swelling. Head Neck 2003; 25: 754-7.
9. Kung IT, Gibson JB, Bannatyne PM. Kimura's disease: a clinico-pathological study of 21 cases and its distinction from angiolymphoid hyperplasia with eosinophilia. Pathol 1984; 16: 39-44.
10. Chan JK, Hui PK, Ng CS, Yuen NW, Kung IT, Gwi E. Epithelioid haemangioma (angiolymphoid hyperplasia with eosinophilia) and Kimura's disease in Chinese. Histopathol 1989; 15: 557-74.
11. Googe PB, Harris NL, Mihm MC Jr. Kimura's disease and angiolymphoid hyperplasia with eosinophilia: two distinct histopathological entities. J Cutan Pathol 1987; 14: 263-71.
12. Chen H, Thompson LD, Aguilera NS, Abbondanzo SL. Kimura disease: a clinicopathologic study of 21 cases. Am J Surg Pathol 2004; 28: 505-13.
13. Esmaili DD, Chang EL, O'Hearn TM, Smith RE, Rao NA. Simultaneous presentation of Kimura disease and angiolymphoid hyperplasia with eosinophilia. Ophthal Plast Reconstr Surg 2008; 24: 310-1.
14. Abuel-Haija M, Hurford MT. Kimura disease. Arch Pathol Lab Med 2007; 131: 650-1.

15. Tefferi A. Blood eosinophilia: a new paradigm in disease classification, diagnosis, and treatment. *Mayo Clin Proc* 2005; 80: 75-83.
16. Kuo T, Shih L, Chan H. Kimura disease. Involvement of regional lymph nodes and distinction from angiolymphoid hyperplasia with eosinophilia. *Am J Surg Pathol* 1988; 12: 843-54.
17. Yoshida A, Takeda A, Koyama K, Ohtsuka Y, Morozumi K, Oikawa T. Kimura's disease associated with minimal change nephrotic syndrome: A case report. *Clin Exper Nephrol* 1997; 1: 292-6.
18. Rajpoot DK, Pahl M, Clark J. Nephrotic syndrome associated with Kimura disease. *Pediatric Nephrol* 2000; 14: 486-8.