EOSINOPHILIC GRANULOMA OF THE NASAL CAVITIES AND THE SUBGLOTTIC SPACE ASSOCIATED WITH GENERAL SYMPTOMS, A CASE REPORT

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The fundamental cause of eosinophilic granuloma remains a matter of discussion as to whether it is neoplastic or inflammatory. The rarity of an eosinophilic granuloma primary in the nasal cavities followed by a secondary appearance in the subglottis seems to make the present case worth reporting. A girl aged 16 was admitted to our service on June 20, 1964, because of nasal obstruction with dyspnea.

Six months before admission having complained for six months of nasal obstruction with hyperrhinorrhea, this patient was diagnosed as of "chronic" maxillary sinusitis of the polypous type. Bilateral Caldwell-Luc operations were done. One month later the nasal bases and the inferior conchae revealed granulomateus change; the larynx appeared to be normal at this time. Two months before admission fitfull coughing was followed by a hoarse voice and slight dyspnea. Crust formation was seen in the subglottic region and the nasal cavities were stenosed by granulation tissue. She visited our clinic on June 10, 1964, for examination. At this time the nasal cavities were stenosed by granulation tissue extending over the floor of the nose, the septum and inferior conchae. Areas of whitish slough were poorly discerned in the

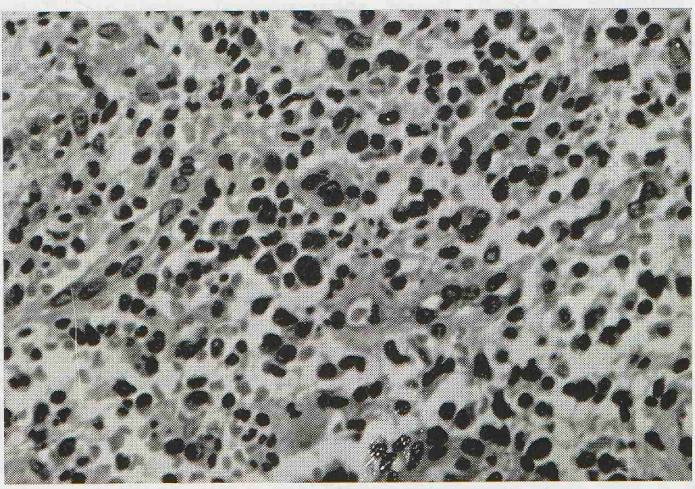

Figure 1.

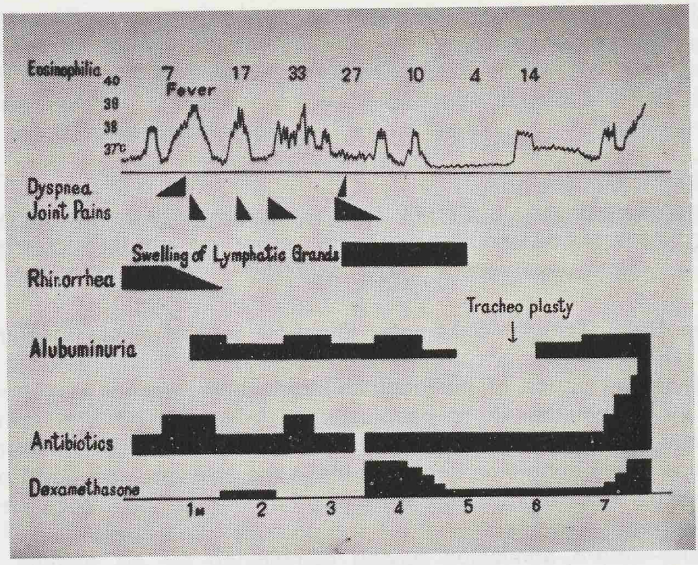

Figure 2.

granulation tissue beyond the obscure margins of the nasal floor and the inferior chonchae. There were in the middle meatus on both sides purulent secretion. The vocal cords were congested and the subglottic region swollen but no granulation were present. After biopsy of the nasal lesions she went back to the previous hospital.

As shown figure I the biopsy specimen revealed evidence of granulation which contained many eosinophiles and reticulocytes having the appearance of an eosinophilic granuloma. Three days later dyspnea developed and tracheotomy was done at the hospital of first admission. The patient was admitted in our wards on June 20, 1964. The course following admission is illustrated in figure II. On admission the patient appeared to be in good general health without fever. The nasal findings were unchanged as compared with our first examination, except that radiological examination showed a slight diffuse shadow in the maxillary sinuses and in the ethmoid cells.

There was a solid mass of granulation tissue in the subglottic region which could not be discerned at our previous examination. On laboratory examination positive findings were obtained in the C-reactive Protein and RA tests and the erythrocyte sedimentation rate was 72 mm in the first hour.

On the fifth hospital day dyspnea disappeared and the tracheal cannula was removed. On the 17th day after admission she became febrile and dyspnea reappeared with increased evidence of inflammation.

Culture of nasal discharge were done on many occasions, yielding staphylococci which were sensitive to Leucomycin. Under treatment with this antibiotic dyspnea became relieved and hyperrhinorrhea was reduced.

At the fourth week, biopsy of the subglottic lesion was done. The histologic appearance of a section of the specimen was identical to that of the biopsy previously removed from the nose.

Subsequent serum examinations showed an increase in alpha and beta globulin despite a normal A-G ratio. The C-reactive Protein and RA tests remained positive and the ASLO became positive after the fourth week, when eosinophilia appeared.
After the fourth week a moderate remittent fever appeared, together with pain in the knee, ankle and shoulder joints despite chemotherapy. Albuminuria was persistently present and a leukocytosis over 16000 with 33% eosinophiles was found with a progressive iron-deficient anemia.
On serum examination constant positive results were found in the CRP, RA and ASLO tests and the normal A-G ratio with the increased globulin persisted. After the 14th week the lymph nodes became swollen in the submental, axillary and inguinal regions.
Chemotherapy consisting of Chloramphenicol, Pc or Mc besides LM were given without an observable effect on the general condition of the patient. However, the nasal discharge decreased and the nasal and subglottic granulations appeared to cicatrize. With Dexamethasone and Mytomycine the fever subsided and the swelling of the lymph nodes disappeared together with the pain in the joints. At the 18th week, the nasal cavities and the subglottis were in completely stenosed due to cicatrization.
Ferric medication, renal diet and transfusion were given. The anemia and the albuminuria improved and the blood eosinophilia disappeared. At the 25th week because of complete obstruction of the subglottis a laryngoplasty was done with a free skin-flap. Two weeks later the skin flap fell off in necrosis and a moderate fever occurred with marked albuminuria. Pneumonia was found at the 30th week. Antibiotics, dexamethasone and fresh blood transfusion were tried without success and the patient expired on Feb. 9th, 1965, at the 33rd week of her illness.
The C-reactive protein and RA tests remained positive but the ASLO test became negative at the 16th week. The AG ratio dropped after the 21st week and the alpha and beta globulins rapidly increased. Examinations for parasites or ova were repeatedly negative during the whole course of the illness. Radiologically no bony lesions were found. Autopsy revealed following findings:
There was brown atrophy of the myocardium with marked fragmentation; bronchopneumonia with circumscribed areas of edema; degenerative atrophy of the liver parenchyma; secondary contracted kidney with heavy glomerular changes, capsulitis, degenerative atrophy of the tubules with hyaline cylinders. There was no evidenve of polyarteritis nodosa.

DISCUSSION

In considering the clinical course of this patient's illness would seem important to differentiate her condition from polyarteritis nodosa of the midline granuloma or Wegener's type. At autopsy there was no evidence of a so-called necrotizing granulomatous lesion in the upper respiratory tract; the nasal cavities and the larynx. Nor was such a lesion found in the lung or the bronchial mucous membrane. Only evidence of aspiration pneumonia was found. The alterations of angitis were not revealed in the venous or arterial vessels even in those within the organs. However there was a moderately

contracted kidney which appeared to derive from chronic glomerulonephritis. While this case showed the clinical pattern of polyarteritis nodosa of the midline granuloma or Wegener's type the autopsy findings were not consistent. with this diagnosis. Pneumonia, in association with eosinophilic granuloma of the nasal cavities and larynx apparently produced the fatal termination. Eosinophilic granuloma is usually divided into four types according to whether the localization is in the skin, the bone, the soft tissue or the digestive, urinary and pulmonary organs. These are said to be different disease . . . . . and not due to transformation or multiple systemic localizations.
The prognosis is ordinarily benign. Etiologically, several different opinions as to etiology have been expressed including inflammation viral or parasitic invasion but there is no conclusive theory which is the consensus at present. It is interesting etiology to consider the possibility of our case.

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