MALIGNANT GRANULOMA

By G. H. HOWELLS (London)

THE first record of this condition in the literature is a case described in 1896 by McBride under the title of a "Case of Rapid Destruction of the Nose and Face".

Sir Robert Woods in 1921 published two cases under the name of "Malignant Granuloma of the Nose". Since that date a few cases have been reported and in 1933 J. P. Stewart collected 10 cases including three with which he had personal contact and made an exhaustive analysis of all the material available under the title of "Progressive Lethal Granulomatous Ulceration of the Nose".

Cases were reported at intervals after that date and in 1953, N. E. Levan collected 70 cases to which he added three of his own.

Some of the earlier cases may be considered to be of doubtful value owing to possible confusion with other forms of granuloma of the nose, palate, fauces, conditions such as syphilis, tubercle, malignant neoplasms, actinomycosis, spirotrichosis, Leishmaniasis gangosa, etc. In the early stages the distinction may be serological or bacteriological.

Stewart describes the course of the disease in three stages, prodromal, active disease and terminal.

The prodromal stage is extremely insidious and is characterized by a minor degree of nasal obstruction usually unilateral and later associated with a watery nasal discharge which eventually becomes blood stained. In this stage the patient may seek advice, but, as there is nothing characteristic to be seen in the nose they will probably have been given routine palliative treatment with a complete lack of improvement.

In the second or active stage, the obstruction increases, the discharge becomes foul and there will now be ulceration and granulation in the nasal cavity; the former possibly extending to the outer surface of the nose, lids and cheek. The marked feature of the ulceration is its rapid course often associated with a complete absence of pain. The ulceration is followed by necrosis of the nasal skeleton, the wall of the accessory sinuses and hard palate, sometimes proceeding to such a degree as to destroy the face between the eyes and mandible. The fauces may also be involved.

In the third or terminal stage the patient's condition degenerates and a fatal termination ensues.

The published cases have been predominately males between the ages of 30 and 70 years, the majority being in the middle decades. There has

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been nothing suggestive in any of the previous personal histories, except that in three cases (Stewart two and Levan one) there was a history of previous trauma.

Some cases had undergone minor surgery in the prodromal stage of the disease, but, this probably had no influence on the subsequent course.

In all the published cases every possible form of treatment had been tried without avail. They all terminated fatally, except for a case published by Hagens, Parry and Markson (1953) in a man aged 60 who responded to treatment with A.C.T.H., and was well and apparently healed after seven months.

My personal experience of the disease is limited to three cases, one has already been published in collaboration with Dr. Friedmann (Howells, and Friedmann, 1950). The patient was a young man of 23 with nasal obstruction and discharge for three months. He was fully investigated and was treated with antibiotics. Death occurred five months after the onset of symptoms. Post mortem showed generalized polyarteritis nodosa in addition to the local granulomatous lesion.

CASE II.

G.W.C., male, age 49, attended with the following history: Admitted to the Royal National Throat, Nose and Ear Hospital on September 21st, 1953. He gave a history of four months intermittent swelling right cheek, two months swelling of the lids of the right eye, and for one week protrusion of the right eye with diplopia. There had never been any nasal symptoms and pain was absent.

On examination he was a healthy looking man. The right upper and lower lids were swollen. There was a straight proptosis of the right eye, chemosis was present. All ocular movements were present, but limited. The fundus oculi was normal. The nose was clear, but, the mucosa of the middle turbinate region was œdematous. There was slight tenderness of the right cheek.

On September 28th, 1953, he developed severe right temporal headache. R. Caldwell-Luc operation showed that the antrum contained pus and the walls were intact. Biopsy: Section showed chronic inflammation.

October 1st, 1953, condition unchanged. Exploration of right frontal and ethmoids was carried out. Pus and granular growth were present in the frontal sinus and ethmoidal cells. Biopsy was performed.

Pathological report: Many vessels show necrotizing arteritis with considerable hæmorrhage. Suggestion of polyarteritis nodosa.

Sero-diagnosis negative. W.B.C. 10,550. Blood urea 35 mg. per cent. Muscle biopsy normal. Repeated urine investigations showed occasional red and white blood corpuscles and granular casts. The parietal pain persisted. He was given a course of antibiotics without any improvement in his condition.

November, 1953, cortisone therapy was commenced, 100 mg. per day. The pain gradually decreased, but, proptosis increased. Nasal biopsy showed non-specific granulation suggestive of chronic infection. Report on fundus oculi, by Mr. Williamson-Noble: Numerous white masses present. A type of change seen in association with vascular lesions.

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January, 1954, cortisone was increased to 200 mg. per day, but his local condition gradually deteriorated.

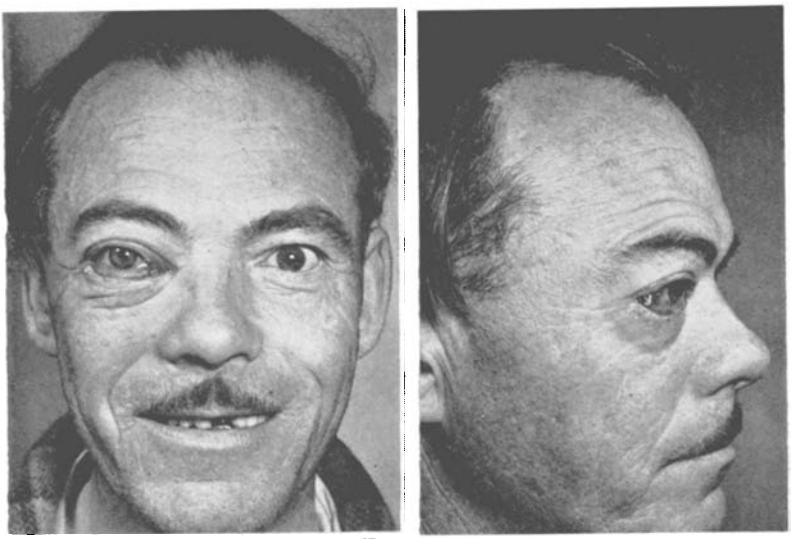


FIG. 1.
Case II. On admission.

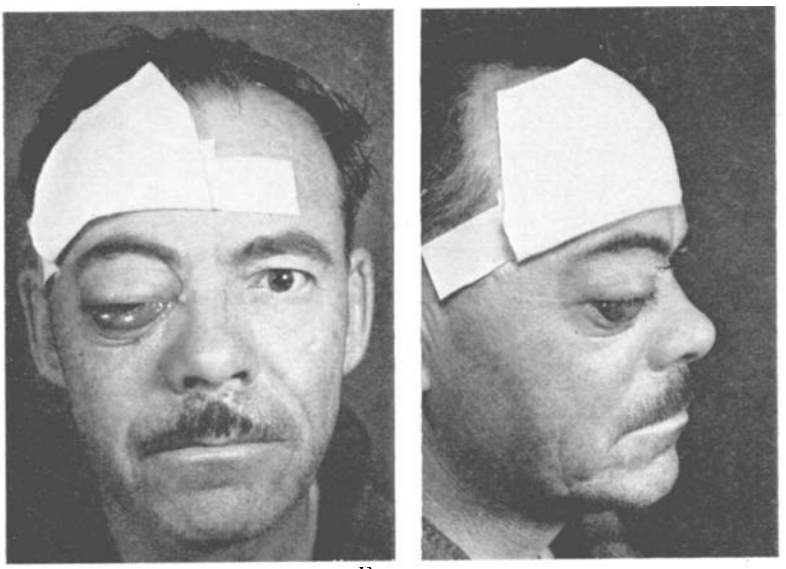


FIG. 2.
Case II. After a course of cortisone.

April, 1954, exenteration of the right orbit was performed. Large masses of similar growth completely filling back of orbit were found. The orbito-ethmoidal wall was destroyed.

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May 17th, 1954, radio therapy was commenced (Dr. Lederman). He received 1,500 R. in 45 days. He healed well and local condition has remained satisfactory for six months (Figs. 1, 2 and 3).

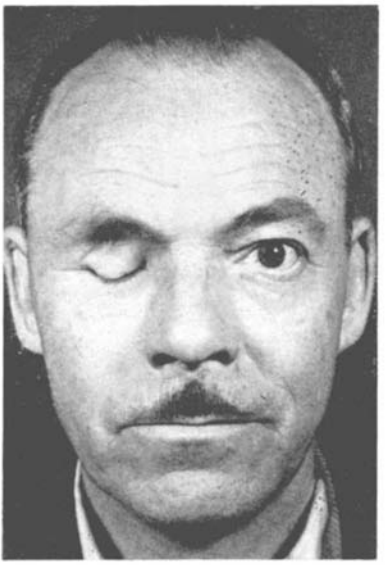


FIG. 3.
Case II. After exenteration of orbit and course of irradiation.

CASE III.

M.T., female, age 37. In November, 1952, she complained of mild right sided nasal obstruction and discharge. She attended hospital in provinces. X-ray report: opacity of right antrum. Intranasal antrostomy was performed with uneventful convalescence.

June, 1953, she was delivered of her first child by cæsarean section. June 12th, 1953, she complained of pain in right eye and slight proptosis. On examination her nose was normal, but a hard elongated swelling was found along the right infra-orbital margin. X-ray showed complete opacity of right antrum.

June 17th, 1953, there was marked proptosis and œdema of conjunctiva. June 20th, 1953, right Caldwell-Luc was performed and the antrum was found to be filled with a hard fleshy irregular mass, the bony walls were eroded and the growth extending into the orbit.

On July 14th, 1953, there was a marked increase in proptosis with the pain increasing. She was referred to Moorfields where she came under my care. At this time there was marked proptosis with œdema of the conjunctiva, the right pupil was smaller than left, but active to light. Optic disc was normal.

On July 25th, 1953, she was transferred to the Royal National Throat, Nose and Ear Hospital.

Examination showed the nose with wide airways, pale mucosa on the right side and crusting in the middle meatal region. There was yellow discharge in the inferior meatus, marked proptosis with chemosis and movements very restricted. The pupil was active.

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On July 30th, 1953, exploration of the right ethmoids showed soft growth growing through the floor of the ethmoids and orbit.

Pathological report: Diagnosis lies between giant cell granuloma and reparative granuloma.

Muscle biopsy: no evidence of polyarteritis nodosa. She was given a course of antibiotics without result.

October, 1953, ocular movements more restricted. Vision: perception of light only. The pupil was not reacting to light, but the consensual reflex was still present. The corneal reflex was present. Some diminution in sensation was found in the area of distribution of the infra-orbital nerve.

Mouth: palate normal, right upper alveolus very injected. Some tenderness in canine fossa.



FIG. 4.
Case III. On admission.

October 15th, course of cortisone was commenced:

100 mg. daily for 4 days.
75 mg. daily for 3 days.
50 mg. daily for 4 days.

Laboratory investigations normal except for some increase in serum potassium.

April 1st, 1954, her general condition was unchanged, but the local condition was deteriorating. Exenteration of right orbit was performed and the mass extended to the apex of the orbit.

Pathological report: The tumour-like hard tissue consists of inflammatory granulation tissue. There are numerous plasmocytes, eosinophils present also around small vessel which may be necrotic. No giant cells seen. Histology still consistent with malignant granuloma of nose and orbit.

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Healing was satisfactory. A course of radiotherapy was given by Dr. Lederman (1,337 R.) in 50 days. She has kept well for six months (Figs. 4 and 5).

These three cases conform to the same general pattern as those previously reported.

We have to consider a disease about which there is very little real knowledge. Hitherto cases have always terminated fatally and it is early to assess the recent apparent cures.

It is possible that we are dealing with a general condition in which the local ulceration and granulation is an expression of a hypersensitivity, perhaps precipitated by some factor which may be overlooked in the history. In this condition trauma may possibly be of importance.



FIG. 5.
Case III. After a course of cortisone.

The association with polyarteritis nodosa has been repeated too often to be overlooked and there is a wide field for pathological investigation in the endeavour to discover the ætiology of this very grave disease.

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