NASAL MALIGNANT MELANOMA

By T. SINCLAIR STEWART* (Manchester)

Introduction

MALIGNANT melanoma of the nasal chamber is considered rare, but it has become apparent in the Christie Hospital that a far from negligible proportion of cases of malignant disease of the nose is due to this tumour.

Published cases are relatively few, but various authors have stressed that early and radical excision is the only treatment offering a chance of cure. The general impression appears to be that they do not respond to radiation, thus differing from carcinoma of the nose and sinuses, for which radiation has become the accepted treatment. In the hope of clarifying the picture of malignant melanoma of the nose as a clinical entity, the writer has made a study of fifteen cases of this tumour seen in the Oto-laryngological Unit at the Christie Hospital and Holt Radium Institute from 1936-1950.

Incidence

That this tumour has been considered uncommon is confirmed by C. C. Grace, writing in 1947, who found only sixty-six of them in the literature. I have been able to trace eleven others described in the last three years.

The following figures give some idea of the frequency with which various nasal and nasal sinus tumours, considered treatable, have attended the Christie Hospital and Holt Radium Institute. Untreated cases are not considered, because tumours too advanced for palliation may not be investigated sufficiently for our purpose.

In over three hundred malignant tumours of the above site, verified by histological examination, attending the hospital from 1936-1949 inclusive, the distribution is as follows :

Carcinoma	80 per cent.
Malignant melanoma	4 per cent.
Other tumours ..	17 per cent.

Clinically the melanomata have proved quite unlike those tumours whose greatest bulk is in the antrum, and which are classified at this hospital as antral tumours. If these are subtracted, the total figure is seventy-four, and the thirteen malignant melanomata make a striking

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group among the remaining malignant tumours of the nasal chamber and ethmoid. One cannot help but think that this neoplasm occurs more frequently than the number of recorded cases suggests.

The Problem of Diagnosis

Pigmentation

Except in the few cases where pigment is visible in the tumour, clinical examination can lead us only to suspect that we are dealing with a melanoma. In two of these cases black, purple or brown pigmentation of the tumour itself was described in the clinical note made when the patient first attended this hospital, although it was revealed at the biopsy exploration in two more.

Pigment was seen four times in the mucous membrane adjacent to the tumour, once clinically, and on the other occasions at operation, once being succinctly described as freckles. Such mucosal pigmentation has been recorded previously, notably by J. S. Monro (1945) and by G. Wilkinson of Sheffield, in his excellent and complete article of 1912. When we consider how rarely pigment is seen in the nose, and that benign melanomata are not observed in this field, the association of a tumour with pigmentation of the adjacent nasal lining must lead us to suspect that the tumour itself is indeed a malignant melanoma.

The Form of the Tumour

The appearance of the tumour is variable, and will depend to what extent polyposis, within or about the tumour, infection, and necrosis have supervened. From their histology one would expect the last two to be prominent in these tumours.

Possibly three types can be differentiated. First a nodule plaque, or sessile tumour near the muco-cutaneous junction of the vestibule, or just beyond it, with pigment visible in some cases, if looked for deliberately. Wilkinson (1912), Tweedie (1933), Smith (1939), Monro (1945).

Secondly a malignant polypus: a large dull grey polypus presenting at the nostril, bleeding on touch, and rapidly recurrent. In Case XIV such a polypus was removed on two occasions, and each time after removal it was impossible clinically to find the point of attachment. This proved to be a fine stalk to macroscopically normal mucosa, on the under surface of the anterior end of the inferior turbinate. It is only too easy to assume that a polypus takes origin from the usual situation in the middle meatus, and in this particular case I failed to appreciate its attachment even when removing it with a snare. Case XV also presented a " non-ethmoid " polypus. Wilkinson thought that this type might be an infective polypus invaded by melanotic cells; or the

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reverse may be the case, a melanoma with secondary polypoid swelling. Either may account for the grey, rather than black, pigmentation. The polypus and sessile growth have occurred together, in our cases and others previously described.

Thirdly, the late malignant mass has no distinguishing features, in the absence of pigment. Possibly it starts farther back in the nose, and those secondary changes mentioned already, polyposis, infection, and necrosis, have taken effect before symptoms occur.

The Site

A melanoma may be confined to the back of the nose, as in Case XII, and only recognized at posterior rhinoscopy, or extensive when first seen and called ethmoid; but from this short series, and from those cases previously described, it appears to originate most frequently in the anterior and lower part of the nasal chamber, not far behind the muco-cutaneous junction. It may be seen growing from the lower part of the septum, the nasal floor, inferior meatus, and inferior turbinate, anteriorly.

Such was the case in six of this group. There was only one lesion limited to the posterior part of the nose. Of the others, too extensive to define their starting points, one was confined to the anterior part of the nose, and two seen on anterior but not posterior rhinoscopy.

It has been suggested that the tumour grows from misplaced cells of cutaneous origin (Smith (1939), Grace (1947)), being comparable to a melanoma of the rectum, and that we might expect it to occur most often in this area.

Carcinoma is usually seen about the middle meatus, and, when it fills the nasal cavity, still appears to be attached there.

Rarity of Sinus Involvement

Involvement of sinuses is more prominent in carcinoma than melanoma. Of these cases, six appeared to the clinical examiner to be tumours of the nasal mucosa itself. Of the thirteen submitted to diagnostic X-ray before interference, seven showed no evidence of bone erosion or sinus involvement by tumour. In twelve cases there was no external abnormality other than bulging of the nostril, and this bulging of the nares alone is a noticeable feature. In none was there expansion or erosion of the antero-lateral wall or floor of the antrum, as seen in tumours whose main mass is in that cavity.

Symptoms

The patient's symptoms are of no real help in diagnosis, but one notices the frequency of epistaxis alone at the start of the trouble, and the infrequency of pain until after our interference. The rate of local

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growth and metastasis is obviously very variable, and the duration of his symptoms before the patient attends can give no help whatsoever in diagnosis.

Histology

Diagnosis must depend on microscopy, and the risk of biopsy has to be taken in all but the frankly untreatable.

The histology of melanomata is a debatable subject, and its polymorphism makes diagnosis difficult. It is not a problem to be discussed in this clinical record.

In the present series, the first mention of the name melanoma has been either by the pathologist or operator, although in four the clinician probably suspected it when making his initial annotation. The microscopist at this hospital was able to make the diagnosis from the first biopsy material in nine cases, and suspected it in another five. It was first discussed later in the disease in one case only.

Nevertheless, our case records show that a pathologist without very special tumour experience is apt to overlook the diagnosis. The first section examined may show an anaplastic tumour, and, coming from the nose, may be considered carcinomatous, when examination of another part might reveal a more typical melanoma picture. From the clinical findings the rhinologist may be able to give his pathological colleague a helpful warning in a particular case, so that this tumour may be recognized more often.

Prognosis

Of the fifteen cases in this series, ten have died. Eradication was attempted in thirteen. The five living presented themselves during the last two years, and two have frank recurrent tumour, now untreatable. We can but subscribe to the general opinion that the prognosis is grave.

A comparative survey of 159 cases of proved carcinoma of the nose, ethmoid, and antrum attending from 1936-1944, shows that 25 per cent. survived five years. Radiation therapy was used in all cases. Grouping the other malignant tumours together (sarcoma, reticulo-endothelial tumours, etc.) their number is too small to give a percentage, but the results are considerably better than those of the melanomata.

Treatment

In considering treatment, two problems present themselves. Is such a proportion of these tumours sensitive to radiation, that this should be our first line of attack? If not, do a sufficient number remain localized at their site of origin, or in excisable lymph nodes, to warrant an attempt at surgical excision? Previous writers have answered the second question in the affirmative, and the course of these cases tends to confirm their

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opinion (Wilkinson (1912), Howes (1943), Monro (1945), Grace (1947), Schoolman).

The ten cases of this series treated by radium or X-ray are too few to give any real guide as to the true sensitivity of the tumour, and previous opinions have been various. The consensus is, I believe, that the tumour is relatively insensitive. Grace found that in forty-two of the recorded cases, treatment was described in detail. Radiotherapy was used in eighteen without avail. My interpretation of the cases published subsequently is that they confirm this view, although initial tumour regression may be noted.

The evaluation of response to radiation is particularly difficult in nasal tumours, for there are side effects not easily discounted. The bulk of the tumour is reduced mechanically when a radium applicator is used. Infection prevents assessment for some months after the radiation, and at the same time destroys part of the tumour. Vascular damage in the tumour may play a large part in any regression seen, whereas the abundant blood supply of the region must help the tumour to survive complete destruction by these side effects, perhaps leaving an active residue difficult to see. In a malignant melanoma we may expect the true sensitivity to vary in different parts as do the cells. A final difficulty is that only an expert can give a useful opinion as to whether tumour is present in the nose, and such an opinion is usually not available when the patient is confined to his home; so that a last note of " no local recurrence " may be of little value.

The ultimate test is cure, and in none of this series has it been effected by radiation. Nevertheless, the clinical sensitivity of Case IX, and possibly I and XIII, is noted, and the effect on lymph nodes. Case XIII is unusually interesting, for careful sections of the irradiated tissue, excised shortly after exposure, on suspicion of recurrence, showed no tumour. Unfortunately serial sections were not requested, and we cannot say with certainty that this tissue was cancer free. It has been said that radiation is a useful alternative to surgery for malignant melanomata in other sites (Tod, 1944), but the writer believes that the first treatment of a nasal malignant melanoma should remain wide surgical excision.

Considering surgical excision, this series confirms that there are cases in which spread to local lymph nodes is late, and distant metastasis even later, and from careful reading of these records, one gathers that possibly half the cases presented at a stage when macroscopic tumour could have been excised.

It should be remembered that we are considering a group of treated cases.

The serious result of incomplete surgical treatment of skin melanomata is well known (Tod), and the malignant nasal melanomata may themselves be slow growing until interfered with, and surprisingly free of pain.

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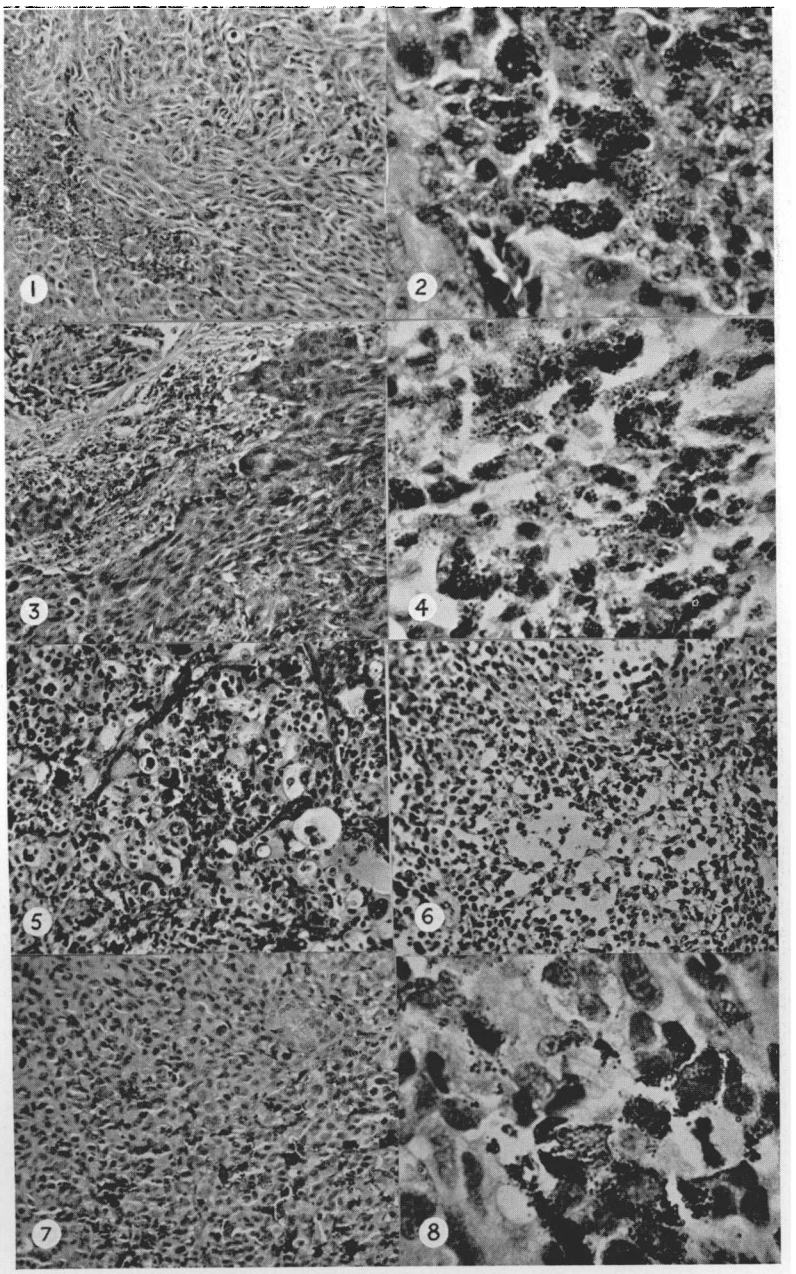


PLATE I.

FIG. 1. Case III, metastasis in lymph gland, 100.
FIG. 2. The same, 600.
FIG. 3. The Primary tumour, 100.
FIG. 4. The same, 600.
FIG. 5. Case II, the primary tumour, 100.
FIG. 6. Case VII, the primary tumour, 100.
FIG. 7. Case V, the primary tumour, 100.
FIG. 8. The same, 600.

(The pigment in these tumours is iron free.)

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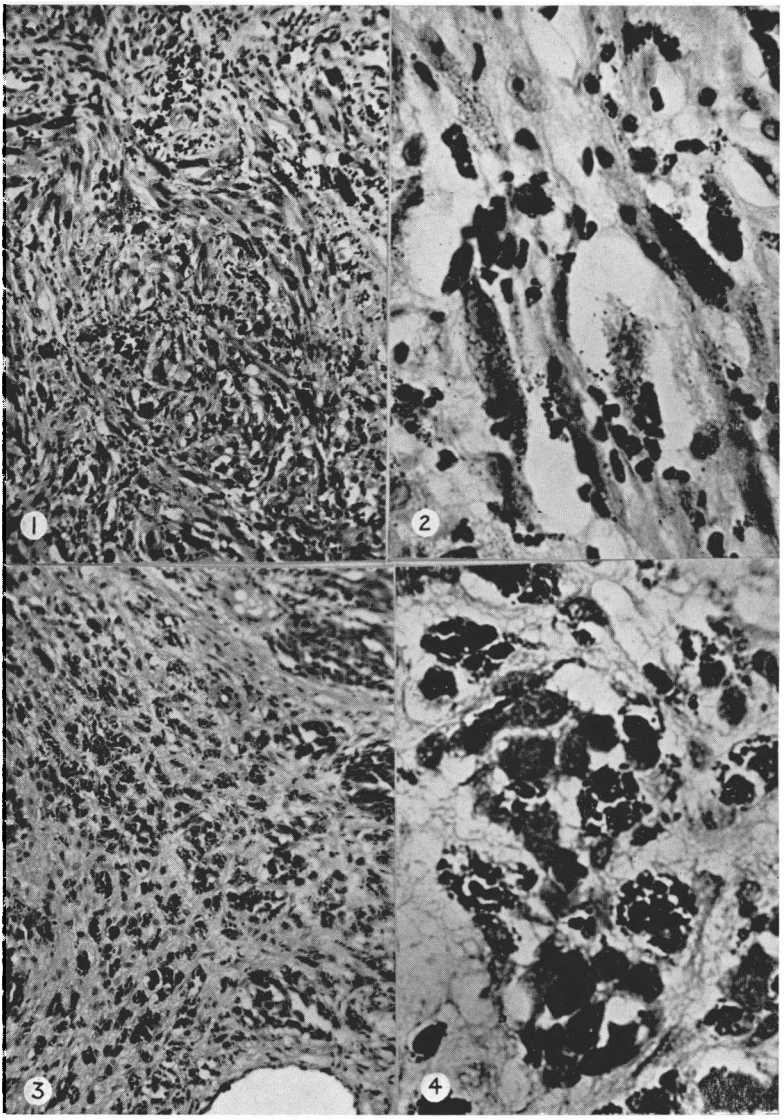


PLATE 2.

FIG. 1. Case VI, primary tumour, 100.
FIG. 2. The same, 600.
FIG. 3. Case VIII, primary tumour, 100.
FIG. 4. The same, 600.

(The pigment in these tumours is iron free.)

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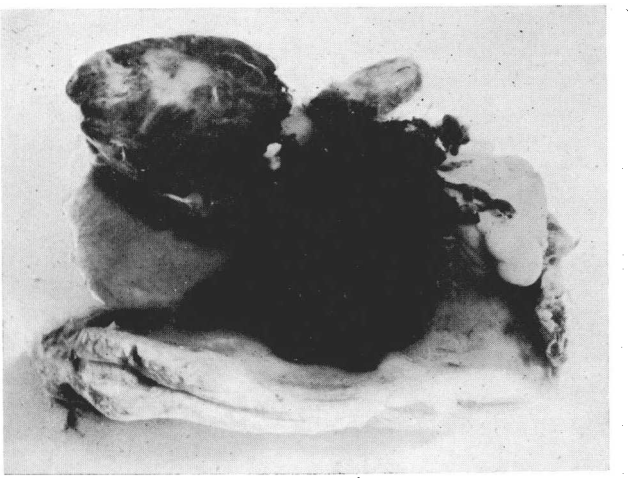


PLATE 3.

FIG. 1. Case XII, operation specimen, looking down to the nasal floor, with the cut edge of the septum in the lower part of the photograph. Black tumour is seen on the nasal floor and lateral wall. A section has been removed from the tumour in the top left-hand corner of the photograph.

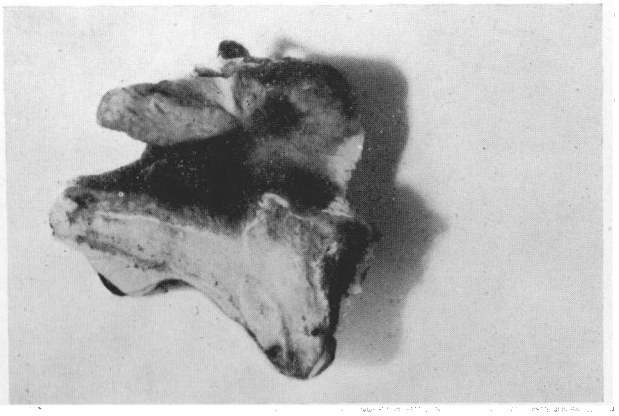


FIG. 2. Case XIV, operation specimen, showing the divided palate and lateral nasal wall. The stump of the malignant polyp may be seen beneath the inferior turbinate process, a very different tumour from that in Fig. 1.

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Wilkinson laid particular stress on this aspect (I). He says "In all cases but one whose history I have been able to obtain, the sequence of events from the surgical standpoint may be summarized as follows: partial removal, rapid local recurrence, extensive operation, rapid generalization and death. . . . One of the most noticeable features of melanotic sarcoma from the surgeon's point of view is the rapidity with which dissemination takes place if the first growth is disturbed in any way, as by incomplete operative removal. Having this in mind, the writer determined, so soon as diagnosis was made, to remove the tumour intact within its bony case by complete excision of the upper jaw together with a wide margin of the tissue of the face surrounding the infiltrated area around the ala nasi."

The problem is to decide how wide this margin should be. In cases apparently excisable, there seem to be two distinct sequences after operation. In one the operation appears to have been worthwhile, for there is no sign of rapid recurrence, and the surgeon is led to hope that the tumour has been eradicated. Whereas, in the other, malignant melanoma re-appears widely over the nasal mucosa within a few months (Case XIV). It can only be from experience of similar extensive local recurrence, that the general surgeon will remove the greater part of a limb for a small malignant melanoma of its extremity.

In these unfavourable cases there may have been spread in this very vascular area from parts of the original tumour not obvious at operation, or its cells may have been spilled and implanted. But we have to consider the possibility of other melanotic areas in the nose undergoing malignant change, and the existence of such pigmented areas has been mentioned already.

We cannot counter these possibilities by the really wide proximal amputation possible in a limb, and, with radiation therapy proving unsuccessful it seems that we must excise with a "reasonable" margin, hoping that the tumour is indeed as localized as it appears to the naked eye. In the anterior cases this may mean taking the columella, anterior part of the septum, lower part of the dorsum, and ala. Fortunately, in none of our cases was spread to the opposite nasal chamber apparent.

In other regions tumour implantation is well recognized, and in dealing with these very malignant nasal growths, it might be a wise precaution to return to the rigid "tumour asepsis", which seems to be practised less commonly now than it was some years ago.

In the latest cases of this series and in excision of recurrent carcinoma, a few special points in surgical technique have become apparent. In tumours of the anterior part of the nose, bone incisions short of those for the classical removal of the upper jaw appear to take one clear of tumour, particularly when the palate is divided through the opposite side of the nose, to include the lower part of the septum with the tumour

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block. It may be safe to leave the posterior part of the alveolus, of value in fixing an obturator, and an oblique incision is then made across the palate, from the first molar region to a point just in front of the posterior nasal spine, to join the antero-posterior incision at that point. When the whole maxilla has been removed, all bleeding points should be tied or waxed, for, although a hot swab will control even a brisk hæmorrhage from the internal maxillary artery, reactionary bleeding is a real danger.

Summary

The clinical aspects of fifteen cases of malignant melanoma of the nasal cavity are recorded and discussed.

The tumour may be more common than has been realized.

There are points of distinction from other nasal tumours, but the clinical picture is not well defined. Its recognition demands a particularly careful microscopic examination.

For the present, excision appears to be the correct treatment of this tumour, whereas radiation is the accepted method for carcinoma. The prognosis is poor.

The Cases

Dr. H. Russell has reviewed the pathology of the cases I submitted to her, and, having discarded any of which she was uncertain, is satisfied that those recorded here are malignant melanomata.

No attempt is made to give details of radiation therapy, and figures are quoted only to give some idea of the order of dosage.

All durations are related to the patient's first visit to this hospital. As a rule negative findings are not quoted.

CASE I

Male, aged 69.

Symptoms. Right epistaxis, three months.

Previous treatment. None.

Examination. A fleshy bleeding mass filled the right side of the nose, from anterior to posterior nares; slight right epiphora.

X-ray. Antrum opaque and obvious bone involvement.

Metastases. None.

Biopsy exploration. Pigmented growth in ethmoid region: antrum free.

Microscopy. A pigment producing tumour composed of small round cells—melanoma; other areas rather spindle celled type: antrum, non-malignant polypoid growth.

Initial treatment. Radium through lateral rhinotomy (10,000 r at ethmoid and 7,200 r at antrum, five days).

Local recurrence. Queries at five months, but crusting and discharge masked the treated area, and although there does seem to have been a response to radiation, it is difficult to estimate, for tumour had been removed to insert

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the radium. Nevertheless, the nose was sufficiently clear at nine months to warrant the treatment of a preauricular gland by radium implant : the gland disappeared.

Death. Ten months, probably from metastases.

CASE II

Female, aged 56 (microphotograph).

Symptoms. Epistaxis and swelling of the left side of her nose, eight months.

Previous treatment. Shortly before she was referred to this hospital, a fleshy hæmorrhagic polypus, filling the left nasal vestibule, was removed by subperichondrial resection. It was growing from the septum, just within the vestibule.

Examination. No sign of the growth when she attended here.

X-ray. Sinuses normal.

Metastases. None.

Microscopy. At first sight a squamous carcinoma, but detailed examination suggests strongly the possibility of a malignant melanoma.

Initial treatment. Intranasal radium (10,000 r, 140 hours).

Local recurrence. The nose remained clear for four years : no mention of nasal disease after she had become too ill to attend.

Later metastases. Left middle deep cervical node, seventeen months ; hard fixed right cervical mass, twenty-four months, which appeared resistant to a sensitivity test of X-radiation (1,000 r, 1 day). Later bilateral axillary nodes, and pleural and peritoneal effusions.

Death. $4\frac{1}{2}$ years.

CASE III

Female, aged 54 (microphotographs).

Symptoms. Slight epistaxis, five months, felt something abnormal in the nose, two months.

Previous treatment. Surgical exploration.

Examination. The referring surgeon recorded a tough mobile polypoid mass present in the left nasal vestibule, which bled readily, and was attached to the inferior turbinate process.

Metastases. None.

Biopsy exploration (elsewhere). The mucosa of the inferior turbinate about the point of attachment of the tumour was pigmented ; that within the antrum, about the ostium, was pigmented in patches, like freckles. There was no tumour in the antrum.

Microscopy. A malignant growth, so pleomorphic that it was thought to be epidermoid carcinoma or endothelioma. Antral biopsy—no tumour.

Initial treatment. Intranasal radium (7,000 r, 72 hours).

In five months the antrum was re-explored for pain, and necrotic tissue removed. Shortly afterwards, a Vth nerve root section was performed. At eleven months, tumour had invaded the orbit : the eye was exenterated. Thereafter she appeared to be free of tumour, local or distal, so that even a plastic repair of a facial skin defect was considered, but biopsy of a bleeding

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granular mass on the septum showed " epidermal carcinoma, not fully differentiated ". This was excised widely, and microscopy then revealed pigment, shown by staining to be melanin. At sixteen months pigmentation was noticed at the back of the operation cavity. Antral recurrence later diathermized, after which growth was rapid.

Later metastases. Sub-maxilliary node, seven years, block dissection of neck, pigment visible in one gland with the naked eye; they recurred. More distant metastases not apparent.

Death. Eight years, eleven months.

CASE IV

Male, aged 44.

Symptoms. A small pimple seen inside the right nostril, gradually increasing seven months; pain and right lachrymation for a few weeks only.

Previous treatment. None.

Examination. There was a firm raised round nodule just inside the right nostril about 0·5 cm. across, continuous with a ridge extending further into the nasal vestibule, and a curious brown pigmentation of the nasal mucosa behind it, which seemed to be quite distinct from the raised area.

Metastases. None apparent.

Microscopy. " A malignant growth showing carcinoma of epithelial origin with area similar to pigmented melanoma, and other areas of more anaplastic type."

Initial treatment. Radium (6,000 r, in 28½ hours)

Local recurrence. When crusting had cleared in four months, very marked pigmentation was observed inside the nostril, but no sign of active growth; at three years there was a striking increase of the pigment in the vestibule, and a slowly growing tumour behind the previously treated area. Radium treatment was again attempted (7,000 r, 131 hours), this time the tumour remaining unaffected.

Later metastases. A right submandibular lymph gland, eight months, block dissection, section of a pigmented gland showed melanoma. No subsequent recurrence in the neck. Later multiple secondaries in the liver.

Death. Four years.

CASE V

Female, aged 72 (microphotographs).

Symptoms. Three months left nasal discharge, and later obstruction.

Previous treatment. None.

Examination. A shrunken grey polypus in the nostril, and a slight fullness over this on the outside.

X-ray. " An extensive nasal polyp, with malignant characteristics, and no bone destruction."

Metastases. None.

Microscopy. " A melanotic sarcoma, composed of fairly large round cells. Iron stain negative."

Initial treatment. Palliative X-radiation (2,000 r in one day) in view of her

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general condition. There may have been some slight initial regression of the tumour, but thereafter it slowly increased in size.

Later metastases. None apparent.

Death. Ten months.

CASE VI

Male, aged 74 (microphotographs).

Symptoms. " The left nostril had been swollen for nine years " ; epistaxis and increase of swelling, nine months.

Previous treatment. None.

Examination. Left nostril full of tumour, which appeared limited to the anterior part of the nose. The outside of the nose was swollen from the nostril to the upper part of the nasal bone on the left.

X-ray. No bone destruction.

Metastasis. None.

Microscopy. A melanoma, malignant and infected.

Initial treatment. Radium (8,690 r, 123 hours).

Local recurrence. A localized plaque of tumour persisted in the upper and medial part of the nostril ; impossible to be certain of the effect of the radium, the main mass having been removed locally when the sorbo was inserted. Local tumour growth was slow.

Later metastases. A small left upper deep cervical gland, two months.

Death. Thirteen months, actual cause unknown.

CASE VII

Female, aged 60 (microphotograph).

Symptoms. Slowly increasing nasal obstruction, twelve months ; swelling of the nose, six weeks.

Previous treatment. None.

Examination. Left nostril expanded and polypoid growth visible therein, and in the post-nasal space.

X-ray. Mass filling the nasal chamber, and it " seemed to be of ethmoid origin ". No bone destruction apparent.

Microscopy. A breaking-down neoplasm, probably epidermal in origin, and possibly melanoma.

Initial treatment. X-radiation (3,250 r, in eighteen days).

Local recurrence. That part of the tumour previously visible at the posterior nares disappeared, but the anterior portion remained unchanged. In twelve months it was frankly but slowly extending, and bulging the palate.

Later metastases. Bilateral cervical lymph nodes, fourteen months.

Death. Sixteen months.

CASE VIII

Male, aged 57 (microphotographs).

Symptoms. Left epistaxis and obstruction, five weeks.

Previous treatment. None.

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Examination. Friable and ulcerated polyp visible in the left nostril, which was expanded.

X-ray. A suspicion of bone destruction in the left lateral nasal wall.

Metastasis. No evidence.

Microscopy. A malignant melanoma, with a partly papillary structure.

Initial treatment. Radium (8,000 r, in 142 hours).

Recurrence. In seven months his doctor reported live and general abdominal metastases, although no apparent local recurrence.

Death. Ten months.

CASE IX

Male, aged 54.

Symptoms. Headaches, three months, later epistaxis and mucous discharge from the right nostril.

Previous treatment. A right nasal polyp had been removed for biopsy a fortnight before he attended.

Examination. Right proptosis and chemosis, and palpable swelling in the orbit over the eye, probably tumour; a nodule about 1 cm. in diameter could be felt on the upper surface of the soft palate on the right side.

X-ray. An ethmoid tumour running riot.

Metastases. Large palpable nodes in the right upper and lower deep cervical groups.

Microscopy. Of polyps previously removed—an epithelial tumour, undifferentiated and malignant; the cells were unusually large, and the pattern suggested a melanoma, although there was no distinct pigment.

Initial treatment. X-radiation (3,000 r, regional therapy, seventeen days), on the clinical supposition that this might be a reticulo-endothelial tumour. It was noted at the time that the response indicated sensitivity, tumour regressing and glands becoming impalpable.

Local recurrence. Recurrent swelling at the inner aspect of the right orbit, nostril filled by tumour, five months.

Later metastases. No knowledge.

Death. Eight months.

CASE X

Male, aged 62.

Symptoms. Right nasal obstruction, four months; later epistaxis.

Previous treatment. Nasal polyp removed for biopsy, one week before attending.

Examination. An ulcerated tumour, soft, friable and hæmorrhagic, completely blocking the right nasal passage; no extension in the post-nasal space; some deformity present in the region of the right nasal bone and right ascending process of the maxilla.

X-ray. A highly malignant tumour, probably arising in the right ethmoid area, and invading the right antrum, destroying its roof and medial wall and possibly invading the septum.

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Metastases. Extensive involvement of both lungs; possibly the right parietal bone; right upper and middle deep cervical nodes.

Microscopy. Malignant melanoma, a pigmented spindle cell tumour.

Initial treatment. Palliative clearing of the nasal airway.

Later metastases. Skin and viscera.

Death. Twelve months.

CASE XI

Female, aged 38.

Symptoms. Right nasal obstruction, two years: a polypus had been removed from the right nostril twelve months after the onset of symptoms, and this gave her six months freedom, when pain, epistaxis and swelling of the nostril commenced.

Examination. Two formations in the right nasal passage, a raised smooth gelatinous area of the front part of the septum, and a rough and ulcerated tumour attached to the anterior end of the inferior turbinate, spreading considerably further back on the turbinate than could be defined, and upwards into the middle meatus. It was continuous with that on the septum by low pigmented tumour round the anterior part of the nasal vestibule. Sinuses were clear at exploration.

X-ray. No proof of malignancy, and normal sinuses.

Microscopy. Of both the septal and the main tumour mass, " a rather small cell epidermal tumour, malignant, with pigment present, iron free and morphologically resembling melanin ".

Initial treatment. Excision, believed at the time to be incomplete.

Local recurrence. Eleven months, extensive, and no further excision attempted.

Second treatment. Palliative, X-radiation of the local tumour and neck nodes, twelve months, response not known, too ill to attend.

Metastases. Right cervical node, twelve months. Ovarian tumour (at appendicectomy elsewhere), seventeen months, reported might be melanoma; later mandible and left femur.

Alive. Two years.

CASE XII

Male, 68 (Photograph of operation specimen).

Symptoms. Persistent post-nasal bleeding, six months; nasal obstruction in the last few weeks.

Previous treatment. A post-nasal biopsy had shown a malignant tumour, possibly melanoma.

Examination. Only abnormality visible a little pus on the right nasal floor at anterior rhinoscopy: but posterior rhinoscopy was always difficult and incomplete in this patient.

Examination under anæsthesia. A raised, easily felt, but not firm tumour, on the upper surface of the soft palate, to the right of the mid-line; confined to the soft palate, except anteriorly, where it reached, and possibly entered, the posterior nares on the nasal floor. Biopsy material was strikingly black.

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X-ray. Tumour visible in the above position; not attacking bone; sinuses normal.

Metastases. None.

Microscopy. A malignant melanoma, with considerable pigment, infiltrating between the mucous glands; iron stain negative.

Initial treatment. Radium sorbo in the post-nasal space (7,040 r, 107 hours). On mirror examination a month later, no tumour seen, and epistaxis had ceased. He stated that the right side of his nose never became clear. Epistaxis again, black tumour visible on the nasal floor, through the right anterior nares, ten months.

Second treatment. Excision of the superior maxilla taking the lower part of the septum. The main mass of black tumour was confined to the right nasal chamber (photograph), and it was possible to remove it in a block, except at the palate and eustachian orifice; these post-nasal extensions were excised with cutting diathermy. There was no extension into the left nasal chamber or the sinuses; antral mucosa polypoid, but not pigmented or cancerous.

Microscopy. Melanoma; in parts infiltration of perivascular tissue with possible chromatophores.

Local recurrence. After three months a black speck was punched from the cut edge of the septum; it proved to be an area of dilated vessels around which there were chromatophores.

Alive. Two years; one year since excision; well. Notably free of pain throughout.

CASE XIII

Female, aged 56.

Symptoms. Epistaxis, gradually increasing, five months. No pain.

Examination. An area of roughened epithelium, raised about 2-3 mm. above adjacent mucosa, which involved the anterior part of the left nasal floor, from muco-cutaneous junction, backward for about 2 cm. It passed laterally just beneath the overhanging edge of the inferior turbinate, and medially upwards for about 4 mm. on the septum. No notable coloration.

X-ray. No bone invasion or sinus disease.

Metastases. None.

Microscopy. "A malignant and undifferentiated epithelial tumour. A melanoma, I think."

Initial treatment. Radium needles (5,770 r, 144 hours).

The tumour receded from the muco-cutaneous border; elsewhere reaction prevented accurate assessment.

Local recurrence. Two months later a limited dark area on the septum, and granulation tissue from the left inferior turbinate to septum, roused suspicion and was excised. Microscopy failed to reveal tumour in any suspected part.

Alive. Twelve months. Well.

CASE XIV

Male, aged 65 (photograph of operation specimen).

Symptoms. He noticed something in his left nostril, five months; large

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dull grey polyp removed by snare, apparently completely, four months. Removed again for biopsy a few weeks before attending this hospital.

Examination. Stalk of polyp visible, attached to apparently normal epithelium on the lateral surface of the inferior turbinate, about 0·5 cm. from its anterior extremity (photograph).

X-ray. Infection in both antra, no bone destruction.

Metastases. None.

Microscopy. Malignant melanoma.

Initial treatment. Partial removal of the jaw.

Local recurrence. The nose remained clear for five months. He then absented himself for five months, to attend " because the polyp had come back". The left nasal chamber is now filled with a polypoid mass. This is frankly cancerous on the septum beneath the dorsum nasi and at the roof of the post-nasal space. He has remained free of pain, and therefore, apparently, is not alarmed by this thrice recurrent tumour.

Second treatment. X-radiation.

Alive. Ten months.

CASE XV

Female, aged 60.

Symptoms. Epistaxis, seven months, a few weeks later " a mobile red blister at the right nostril " ; polyp removed, proved to be malignant, two months. Throughout her illness, until the time of writing, pain has been absent.

Examination. Exact information lacking as to site of original tumour ; there was a clean operative excavation in the right ethmoid, and, distinct from this, what appeared to be the thick stump of a polyp, springing from the lower surface of the right inferior turbinate bone, about 1·5 cm. from its anterior end. It was 0·5 cm. in diameter, mobile, bleeding on touch, and unusually grey. The adjacent mucosa was dark grey also.

X-ray. No bone destruction other than that by operation in the right ethmoid ; sinuses clear of tumour.

Metastases. None.

Microscopy. Of the polyp taken elsewhere, and the stump, showed malignant melanoma ; the same tumour.

Treatment. Partial excision of the right maxilla and lower half of the septum, the patient has recently left hospital.

It is most interesting to note, on the excised specimen, the rough pigmented epithelium on the turbinate about the malignant stump, not obvious when viewed obliquely through the anterior nares. In this area there are melanin-containing cells in the epidermis, which do not appear malignant.

Alive.

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