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### A STUDY OF CASES OF EPITHELIAL ODONTOME TREATED IN THE UNIVERSITY SURGICAL CLINIC.

by

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This paper is a study of the cases of epithelial odontome which have been treated in the Hong Kong University Surgical Clinic. We have at present a collection of about 25 microscopic sections of cases operated on since 1922, but unfortunately some of these case records have been destroyed by white ants, and others, we have not been able to recover.

However, it was found that on microscopic examination, some of these sections showed the typical appearances of epithelial odontomes, while others presented different pictures.

The cells of most of these tumours were found to be consistent with those of an enamel organ, although they were arranged in an irregular manner.

In order to trace the origin of these cells, the section of the enamel organ of a developing tooth should be examined. This consists of three principle parts, the outer, the middle, and the inner layers.

The cells of the outer layer consist of a stratum of well marked cubical epithelium and are named the external enamel epithelium. The middle layer consists of epithelial cells which have become separated from one another by an intercellular matrix, the cells having become stellate in shape and being connected by delicate processes, thus giving the whole structure an appearance not unlike that of myxomatous tissue. To it the name of stellate reticulum or enamel pulp is given.

Between the stellate reticulum and the inner layer of cells, there is a stratum intermedium, which consists of two or three layers of polyhedral cells.

The inner layer of the enamel organ comprises a single row of tall columnar cells, the enamel cells, (also called adamantoblasts or ameloblasts) through whose active agency the enamel is produced. The diagnosis of epithelial odontome is usually made from the following clinical picture:—

It is a soft endosteal swelling involving the mandible and less often the maxilla, occurring equally in both sexes and usually between the ages of 18 and 50 years. The swelling first appears from 1 to 30 years before the patient seeks admission.

It is a very slow growing tumour, taking months or even years to reach a considerable size, and causing a gradual expansion of the jaw with a tendency to (poly) cystic formation. This condition, if left alone, will develop into what is known as fibro-cystic disease of the jaw. This expansion of the bone together with the cystic formation tend to thin out the bone, and occasionally an "egg shell crackling" can be elicited on palpation. During the operation, when these cystic spaces are opened, they are found to contain a thin yellowish discharge. There is often a history of loosening of the teeth.

Many of these patients complain of toothache at the onset, but pain and tenderness are usually absent from the tumour, though some discomfort may be felt.

Suppuration sometimes supervenes, and in some cases, sinuses with a discharge of pus are found either on the external surface or in the buccal cavity.

The growth is usually innocent; only in one of our cases were metastases found, although recurrences after local removal are frequent.

Radiographically, these tumours usually show an expansion of bone with one or more light areas which are sometimes partially separated by irregular lines.

Microscopically, these tumours are composed of epithelial cells of the so called basal type, and in the typical cases, these cells are cylindrical in shape. They are found arranged in an outer palisade layer around central areas of loosely arranged spheroidal cells. Some of these areas show an intercellular collection of matrix separating the cells and giving them a stellate appearance. The intercellular matrix appears in part to run together to form cystic spaces. The stroma supporting these epithelial cells is composed of fibrous tissue and is often very vascular.

The following are the clinical records of some of the cases, and the microscopic appearances of the sections are given at the end.

*Microscopic section:*—342. U.S.C. 219/22.

*Name:*—Lau Cho Ying. *Sex:*—Female. *Age:*—20.

*Chief complaint:*—Swelling of the right side of the palate.

*Duration:*—4 years.

*History on admission:*—Four years ago, patient noticed a small swelling on the roof of her mouth which increased in size, but it was not painful.

She used to have attacks of toothache on the affected side.

*Condition on admission:*—There was a swelling of about 1" × 1" on the right side of the palate. It was soft, fluctuating, not painful, and not tender. It reached as far as the gum of the right upper jaw. At the side of the swelling, raised bone could be felt. The lower molar teeth were bad.

*Treatment:*—Excision of the tumour.

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*Microscopic section:*—No. 348. U.S.C. No. 254/22.

*Name:*—Tang Chung Sze. *Sex:*—Female. *Age:*—62.

*Chief complaint:*—Swelling of the left lower jaw.

*Duration:*—8 years.

*History on admission:*—About 8 years ago, patient noticed a small swelling on the gums of the left side of the lower jaw, which was neither painful nor tender. Patient never had any history of toothache, although two teeth were extracted because they were bad. The swelling grew and spread on every side.

*Condition on admission:*—The swelling on the lower jaw was neither painful nor tender. Fluctuation could be elicited. The premolar teeth were bad and all the molars were missing.

*Treatment:*—Excision and drainage.

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*Microscopic section:*—No. 834. U.S.C. No. 176/26.

*Name:*—Cheung Chun. *Sex:*—Female. *Age:*—39.

*Chief complaint:*—Swelling of the lower jaw.

*Duration:*—7 years.

*History on admission:*—Seven years ago, patient noticed a small swelling under the skin at the lower end of the chin. The swelling was about ½" in diameter when first noticed. It was painless and hard to the touch. The skin was freely movable over it. It increased in size gradually, but did not give her any discomfort.

*Condition on admission:*—The swelling was at the middle part of the lower jaw, slightly globular in shape and measuring about 3" × 2".

It was attached to the mandible, and the skin which was normal in appearance was freely movable over it. The right margin was about 2" from the right angle of the mandible and the left margin was about 3" from the left angle of the mandible. There was no difficulty in opening and closing the mouth. In the mouth, the swelling extended from the roots of the incisors of the lower jaw, and backwards to about 1". It was covered with normal mucous membrane. The margin of the swelling inside the mouth extended to the lower second premolar on the right side and to the 1st premolar on the left side. The lower 4 incisors and the two canine teeth were loose and irregularly placed. The condition of the teeth appeared normal. The whole swelling was hard and not tender to pressure. The submaxillary glands were palpable but the cervical glands were not enlarged.

*Treatment*:—The tumour was partially removed.

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*Microscopic section*:—Nos. 903, 904. U.S.C. Nos. 380/26, 112/27, 64/36.

*Name*:—Lui Pui. *Sex*:—Male. *Age*:—49.

*Chief complaint*:—Swelling of the left side of the face.

*Duration*:—30 years.

*History on admission*:—At the age of 18, he had a swelling on the left side of the lower jaw opposite the lower left first molar. He pricked it and allowed the discharge to run out, but it recurred many times.

Ten years ago, he underwent an operation at the Nethersole Hospital, where the teeth of the lower left jaw were extracted and an (?) operation on the jaw was performed. He left hospital against advice. The swelling again increased in size gradually. He had two sinuses on the lower aspect of the swelling which at first was discharging pus, but later blood stained fluid. No pain nor tenderness was complained of and there was no history of any toothache.

*Condition on admission*:—There was a hard globular swelling on the left side of the face and lower jaw. It was hard, not painful, not tender, and not attached to the skin. It was fixed to the bone. It measured 7½" antero-posteriorly and 8" superio-inferiorly. It was lobulated and there were areas of soft parts where fluctuation could be elicited especially at the centres of these lumps. There was no trismus. There were two sinuses at the lower aspect of the swelling. The teeth of the lower left jaw were all missing. The cervical glands on the left side were enlarged.

*Treatment*:—Patient was first admitted on 5.10.26, when the tumour was partially excised. He came for a second admission on 2.8.27,

when he had a partial resection of the lower jaw and the tumour was (apparently) completely removed. He was again admitted on 18.2.36, with recurrences, and he was discharged without any operation.

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*Microscopic section*:—Nos. 913 (A), 914 (B), 915 (C), 916 (D). U.S.C. No. 428/26.

*Name*:—Ip Lee. *Sex*:—Male. *Age*:—23.

*Chief complaint*:—Swelling of the right cheek.

*Duration*:—5 months.

*History on admission*:—About 5 months ago, patient had an attack of toothache from a molar in the right upper jaw. He had three of his teeth extracted, and the pain was relieved. He noticed a gradual swelling of the right upper jaw, pushing the right cheek outwards. This swelling increased in size slowly.

*Condition on admission*:—There was a globular swelling of the right side of the face measuring about 3½" horizontally and 3" vertically.

Vertically, this swelling extended from within ½" of the infra-orbital margin to 1" below the horizontal ramus of the right side of the mandible.

Horizontally, it extended from a point just beyond the lateral edge of the alae nasi to the angle of the mouth posteriorly for about 3".

The swelling was hard, not tender, not painful, not oedematous, not hot and not attached to the skin. It was not movable from the maxilla and not attached to the mandible. The movements of the jaws were free. The teeth were dirty. The premolars and molars of the right upper jaw were missing and their place was occupied by a massive growth covered by mucous membrane.

*X-ray report*:—Right antrum involved and obliterated—left antrum clear but small—lower portion of orbit (rt) apparently involved. Right ethmoid appears to be clear. Right nasal cavity probably involved is not clear. Sphenoids and frontal sinuses clear. Mandible not involved.

*Treatment*:The right maxilla was excised.

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*Microscopic section*:—No. 969. U.S.C. No. 78/27.

*Name*:—Lai Wing Koh. *Sex*:—Male. *Age*:—50.

*Chief complaint*:—Swelling of the hard palate and gum of the left upper jaw.

*Duration*:—15 months.

*History on admission:*—About 15 months ago, patient noticed a small swelling of the gum above the left medial incisor tooth of the upper jaw. It increased in size and extended along the anterior part of the hard palate and was hard to the touch. Thirteen months after the onset, the swelling burst and a foul discharge of fluid tinged with blood was noticed. The opening enlarged in size.

*Condition on admission:*—There was a swelling protruding from the left cheek measuring about  $2\frac{1}{2}'' \times 1\frac{1}{2}''$  and was hard to the touch. Inside the mouth, the tumour bulged downwards and a loose tooth could be felt.

*Treatment:*—Ligature of the external carotid artery and resection of the maxilla.

*Microscopic section:*—1004, 1005. U.S.C. No. 194/27.

*Name:*—Cheng Fatt. *Sex:*—Male. *Age:*—52.

*Chief complaint:*—Swelling of the hard palate.

*Duration:*—4 years.

*History on admission:*—About 4 years ago, patient had an attack of toothache, and at that time, he noticed a swelling behind the left premolar, which increased in size gradually.

Ten days later, the swelling spread to the hard palate, and he was admitted to the Government Civil Hospital for treatment. The tumour was partially removed.

About 3 years later, he had an attack of fever and toothache, and the swelling again began to increase in size.

*Condition on admission:*—There was a lobulated swelling of the hard palate. It was more to the left side of the hard palate. The tumour was soft, not painful and not movable.

*Treatment:*—The tumour was removed by diathermy.

*Microscopic section:*—No. 1114. U.S.C. No. 66/28.

*Name:*—Lo Kam Sim. *Sex:*—Female. *Age:*—17.

*Chief complaint:*—Swelling over the right incisive fossa.

*Duration:*—18 months.

*History on admission:*—About 18 months ago, patient noticed a small swelling on the gum of the right side of the upper jaw, which was not accompanied by pain. The swelling increased in size gradually.

*Condition on admission:*—There was a tumour situated on the right side of the gum of the upper jaw growing from the right incisive

fossa. It was fixed to the upper jaw, hard and not tender to the touch. The right nostril was deflected by the growth.

*Treatment*:—Excision of the tumour.

*Microscopic section*:—U.S.C. No. 167/28.

*Name*:—Lau Phoon. *Sex*:—Female. *Age*:—18.

*Chief complaint*:—Swelling of the left side of the upper jaw.

*Duration*:—5 years.

*History on admission*:—About 5 years ago, patient had a small lump on the left side of the upper jaw near the root of the left canine tooth. The swelling increased in size gradually without causing any pain.

*Condition on admission*:—The swelling was situated on the left side of the face. It extended along the side of the nose up to the lower eyelid. It was oval in shape and was hard in consistence, and fixed to the bone. The skin was not attached to the tumour.

*Treatment*:—The growth was removed.

*Microscopic section*:—U.S.C. No. 288/28.

*Name*:—Lau Lam. *Sex*:—Male. *Age*:—21.

*Chief complaint*:—Slightly painful swelling in the upper jaw.

*Duration*:—6 months.

*History on admission*:—Six months ago, patient felt a lump in the upper jaw. The tumour increased in size and he was operated on in the Tung Wah Hospital, where the tumour was removed together with four of his front teeth.

About 3 weeks ago, the tumour recurred. It increased in size rapidly. Slight pain and general malaise were noticed.

*Condition on admission*:—The growth extended forwards to behind the upper lip and backwards to the hard palate and more to the left than to the right side.

There was a cleft seen on the undersurface of the growth, from which blood was seen to ooze occasionally.

The tumour caused the upper lip to protrude forwards and patient had to keep his mouth open on account of the obstruction.

The submaxillary glands were palpable.

*Treatment*:—Patient refused operation.

*Microscopic section*:—No. 1235. U.S.C. No. 253/28.

*Name:*—Li Chan Kuen. *Sex:*—Male. *Age:*—41.

*Chief complaint:*—Swelling of the left side of the lower jaw.

*Duration:*—4 years.

*History on admission:*—About 4 years ago, patient noticed a small swelling beside a carious tooth which was later extracted. This swelling subsided but recurred a few days later, causing discomfort and pain especially during mastication. The swelling increased in size gradually and displaced the neighbouring teeth from their normal position. On account of the teeth causing her discomfort, she had five of them removed.

*Condition on admission:*—There was a swelling on the left side of the lower jaw measuring about  $1\frac{1}{4}'' \times 2'' \times 2\frac{1}{4}''$ , extending from the last left lower molar to the lower incisors. The margin was irregular. It was lobulated, hard and elastic. It was tender to pressure. The mucous membrane covering it was not inflamed, but septic areas were seen on it. No signs of suppuration and no discharge from the tooth sockets were noticed.

*Treatment:*—Partial resection of the mandible.

*Microscopic section:*—Nos. 1317, 1318. U.S.C. Nos. 128/28, 399/28.

*Name:*—Au Chan. *Sex:*—Female. *Age:*—35.

*Chief complaint:*—Swelling of the right mandible.

*Duration:*—20 years.

*History on admission:*—Twenty years ago, patient noticed a small swelling on the right side of the mandible. This increased in size gradually without causing any pain or discomfort until the left side of the face and the mucous membrane of the mouth on both sides became involved.

*Condition on admission:*—There was a tumour situated on the right side of the face measuring about  $4\frac{1}{2}'' \times 3\frac{1}{4}''$ .

*X-ray report:*—

Front view:—Tumour in front of the right jaw.

Side view:—Small swellings scattered along the right of mandible.

*Treatment:*—The growth was removed.

*Microscopic section:*—No. 1632A., 1632B. U.S.C. No. 385/30.

*Name:*—Gan Sui. *Sex:*—Male. *Age:*—43.



*Chief complaint:*—Swelling of the left side of the jaw.

*Duration:*—2 years.

*History on admission:*—About 2 years ago patient had an attack of toothache which was due to a bad molar tooth on the left side of his lower jaw. A dentist extracted the good tooth instead of the bad one by mistake, and following this, the gum on the affected side began to swell and bulge forwards.

*Condition on admission:*—There was a swelling on the left side of the lower jaw measuring about 4" × 2" × ¾". The swelling was hard, slightly tender to pressure, immovable and fixed to the bone. The gum on the affected side was swollen, and the first left lower molar was loose and pushed inwards.

There was pyorrhoea present and the teeth appeared bad.

The glands on both sides of the neck were enlarged.

*X-ray report No. 1022/30/-* "Tumour of jaw, apparently expanding bone of lower jaw. Left side extensive destruction of bone."

*Wassermann:*—Negative.

*Treatment:*—Resection of left lower jaw.

*Microscopic section:*—U.S.C. No. 252/31.

*Name:*—Sung Wai Sun. *Sex:*—Male. *Age:*—40.

*Chief complaint:*—Swelling of the right lower jaw.

*Duration:*—6 months.

*History on admission:*—About 6 months ago, patient felt a small, painless and hard swelling on the gums of the lower right jaw medial to the molar teeth. It increased in size.

About 3 months later, the swelling burst and there was a discharge of pus and it was during that time pain was felt.

About 3½ months later, there was another swelling noticed on the gums of the right lower jaw but it was in front of the first and lateral and opposite to the premolar and canine teeth.

The swelling grew in every direction and finally the right cheek became involved.

Patient had a history of frequent attacks of toothache.

*Condition on admission:*—There was a tumour involving the mandible and extending up to the cheek.

Inside the mouth, there were two swellings, one on the medical side and the other on the lateral side of the teeth of the right lower jaw.

The tumour on the medial side was situated opposite to the molar teeth. It measured about  $1\frac{1}{2}$ " long, and its outline was irregular, and it was lobulated. The front part of the tumour was hard and the posterior part was soft. Tenderness was complained of when pressure was applied to the posterior part.

The other swelling was hard and lobulated and not tender.

The cheek on the right side was also involved.

Trismus was present and speech was not distinct.

*Treatment*:—The external carotid artery was ligatured and the right side of the mandible was resected.

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*Microscopic section*:—Nos. 1792 A, B, C. U.S.C. No. 324/31.

*Name*:—Lau Tse Kong. *Sex*:—Male. *Age*:—43.

*Chief complaint*:—Swelling of the left side of the mandible.

*Duration*:—10 years.

*History on admission*:—Ten years ago, patient had an attack of toothache, affecting the last left lower molar tooth. Following this, he had a series of attacks which finally led to the formation of an abscess. The tooth was extracted by a dentist, but unfortunately the extraction was incomplete, one of the roots being left behind. The whole of the left cheek became swollen and finally the abscess discharged its contents through the mucous membrane of the mouth. The swelling subsided, but the patient noticed that the left angle of the mandible became swollen which increased in size gradually.

*Condition on admission*:—There was a swelling of the left side of the mandible which was very hard to the touch. It measured about  $3'' \times 2''$ , and extended from the angle to the left speno-mandibular joint.

*X-ray report*:—"The ascending ramus is involved in its entirety by a rarefying process. Neoplasm."

*Treatment*:—Partial removal of the left ramus of the mandible.

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*Microscopic section*:—None. U.S.C. No. 318/32.

*Name*:—Pang Kün. *Sex*:—Male. *Age*:—42.

*Chief complaint*:—Swelling of the right side of the lower jaw.

*Duration*:—8 years.

*History on admission*:—Eight years ago, patient had an attack of toothache and one of the lower right premolars was extracted. Four years later, the other right lower premolar was extracted. After this,

there appeared a swelling in the right side of the lower jaw. The swelling increased in size gradually and neither pain nor tenderness was ever present. Four years ago, he underwent an operation in Canton, and since then he has had a sinus inside the mouth.

*Condition on admission:*—There was a swelling on the right side of the lower jaw measuring about 3" × 2" which was hard to the touch. The skin was not attached to the tumour. It extended from the right lower canine tooth to the right angle of the lower jaw.

*X-ray report No. 1497:*—Large loculated cyst, condition probably fibro-cystic disease.

*Treatment:*—Patient refused operation and was discharged against advice.

*Microscopic section:*—No. 2250, 2271. U.S.C. No. 23/34.

*Name:*—Cheung Yun. *Sex:*—Male. *Age:*—32.

*Chief complaint:*—Swelling of the lower jaw.

*Duration:*—15 months.

*History on admission:*—About 1½ years ago, patient had an attack of toothache affecting the region of the right lower premolars and canine teeth. Three months after the first attack of toothache, he noticed that the right side of the lower jaw had swollen, which was neither painful nor tender. Nine months ago, patient noticed that the left side of the lower jaw began to swell which was also neither painful nor tender. Five months ago, patient noticed that the lower right premolar became loose and he extracted it himself.

*Condition on admission:*—There were two swellings, one on the right side and the other on the left side of the lower jaw. The right swelling measured about 7 cms × 6 cms., and the left was slightly smaller. They were neither painful nor tender.

*Treatment:*—The growth was scraped away.

*Microscopic section:*—None. U.S.C. Nos. 267/34, 72/36.

*Name:*—Mok Yee Ching. *Sex:*—Female. *Age:*—22.

*Chief complaint:*—Swelling of the left side of the face and the left lower jaw.

*Duration:*—19 years.

*History on admission:*—At the age of 3, patient noticed a gradual enlargement of her left lower jaw, which was not accompanied by pain. About 13 years ago, she was admitted into this hospital, but at that time she refused treatment. A few months ago, she had an

attack of toothache, and on that occasion her left cheek was swollen. She was then admitted into the French Hospital where she had the offending tooth extracted, and the swelling of the cheek subsided, but the condition of the jaw remained the same.

Three weeks ago, the patient had another attack of toothache, the offending tooth being the last left lower molar. After this attack, the left cheek was again swollen. She was again admitted into the French Hospital for treatment, but no improvement resulted this time.

Ten days ago, pus began to discharge from the left side of the mouth, especially when the patient lay down.

The swelling of the cheek had been noticed to increase in size gradually.

*Condition on admission:*—The left side of the face and the left lower jaw were swollen. The left side of the lower jaw was expanded and the gum could be seen projecting out beyond the teeth. At the angle of the mandible on the left side, the swollen part was soft, red and tender. Pus was seen discharging from a sinus lateral to the last left molar tooth.

*X-ray report:*—Enormous bony mass occupies most of the left side of the lower jaw, peculiar, structureless appearance with areas of rarefaction.

*Treatment:*—Patient was discharged against advice.

*Microscopic section:*—No. 2635. U.S.C. No. 284/35.

*Name:*—Leung Chui. *Sex:*—Male. *Age:*—33.

*Chief complaint:*—Swelling of the right side of the face.

*Duration:*—2 years.

*History on admission:*—Two years ago, patient had an attack of toothache, and a few days later, he noticed a small swelling on the lower border of the right mandible. The swelling was red and tender.

One month later, he was operated in the French Hospital, and the swelling then subsided. A lot of pus and blood was noticed in the discharge. The wound healed, but 3 months later, the swelling recurred. The swelling was hard, and not painful. It increased in size gradually involving the whole of the right side of his face.

*Condition on admission:*—There was a swelling of the right side of the face which fluctuates and is tender to pressure. The lower right molars and premolars were missing.

*X-ray report:*—"Bony tumour with many small rounded areas of rarefaction.—inverted tooth.

? Multilocular cysts.

? Myeloma.

*Treatment:*—Incision and drainage and subsequently followed by Carrel-dakinisation.

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*Microscopic section:*—No. 2639. U.S.C. No. 342/35.

*Name:*—Pang So Ho. *Sex:*—Female. *Age:*—19.

*Chief complaint:*—Swelling of the left side of the face.

*Duration:*—11 months.

*History on admission:*—Patient had an attack of toothache 11 months ago, and at that time, she received a blow on the left side of her face. Since then, there appeared a swelling which increased in size gradually.

One month after the onset, a sinus appeared in the mucous membrane of the left side of the mouth, and a purulent discharge was noticed. The condition had persisted.

One month after the occurrence of the first sinus, another sinus appeared on the undersurface of the lower jaw on the same side, and it healed two months later.

About 7 days ago, another sinus appeared on the left side of the face about 6 cms. below the lobule of the left ear.

*Condition on admission:*—There was a swelling of about 14 cms. × 11 cms. × 2½ cms. It was hard to the touch.

The external opening of the sinus was  $\frac{3}{4}$  cm. in diameter and 5½ cms., below the lobule of the left ear.

The opening of the sinus inside the mouth was situated in the reflection of the mucous membrane opposite the left lower premolar teeth.

*Treatment:*—Exploration and partial resection of the left side of mandible.

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*Microscopic section:*—No. 2728. U.S.C. No. 168/36.

*Name:*—Lau Woon. *Sex:*—Female. *Age:*—50.

*Chief Complaint:*—Swelling of the left side of lower jaw.

*Duration:*—2 years.

*History on admission:*—About two years ago, patient suffered from an attack of toothache, and at the same time a swelling occurred.

The offending tooth was the lower left first molar which was extracted at that time. The pain was relieved but the swelling persisted. The premolars and all the molars of the left lower jaw were eventually extracted. Some pus was found exuding from the tooth sockets.

*Condition on admission:*—There was a swelling on the lateral aspect of the left lower jaw, which was bony hard to the touch. It was attached to the bone. There were no signs of inflammation and the swelling was neither painful nor tender.

*X-ray report:*—"Suggest a cystic expansion—multiple cysts."

*Treatment:*—Partial removal of the tumour.

*Microscopic section:*—No. M.2818 A, B, C. U.S.C. No. 351/36.

*Name:*—Lui Hau. *Sex:*—Female. *Age:*—29.

*Chief complaint:*—Swelling with occasional pain of the left side of the lower jaw and face.

*Duration:*—3 years.

*History on admission:*—About 3½ years ago, patient noticed that a small swelling appeared on the gums on the left side of her lower jaw, which increased in size gradually and expanding the jaw, and consequently causing her face to bulge out.

A few months after the onset, it became hot to the touch and pain was felt in the region of the left mandibular joint and the last left lower molar, which had not erupted.

*Condition on admission:*—There was a swelling over the left side of the face extending below the lower border of the left side of the mandible. The swelling was also noticed inside the mouth and involving chiefly the lower jaw. It was hard to the touch except at the upper part which was soft and cystic and fluctuation could be elicited. Pain and tenderness were present and patient's temperature was F.100.

*Treatment:*—First Operation:—Excision of the cyst.

Second Operation:—Scraping the growth away.

*Microscopic section:*—None. U.S.C. No. 7/37.

*Name:*—Wong Chin. *Sex:*—Female. *Age:*—36.

*Chief complaint:*—Swelling of the right side of the mandible.

*Duration:*—4 years.

*History on admission:*—About 4 years ago, patient had an attack of

toothache, and at that time she noticed a small swelling on the outer aspect of the right side of the mandible, which increased in size gradually. There was neither pain nor tenderness from the onset, except that slight discomfort was felt during mastication. She had three of her right lower molar teeth extracted.

*Condition on admission:*—There was a tumour of the right side of the mandible extending from the angle of the mandible to the right mental foramen, and from the lower border of the mandible to some distance up the ramus. It was hard to the touch and the skin was freely movable over it and normal in appearance. Inside the mouth, there was a swelling which extended from the 2nd right premolar to the position of the last right molar. The gums were normal in appearance. All the right molars were missing. The right submaxillary glands were palpable.

*X-ray report:*—Neoplasm of the right lower jaw from the angle to the 1st premolar. Rarefaction—extending up the ramus almost reaching the base of the conoid process.

*Treatment:*—The patient refused treatment.

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*Microscopic section:*—No. 2907 (A), (B). U.S.C. No. 92/37.

*Name:*—Wong Sau. *Sex:*—Male. *Age:*—22.

*Chief complaint:*—Swelling of the left cheek and the left side of the lower jaw.

*Duration:*—1 year.

*History on admission:*—About a year ago, patient noticed that small round masses were formed at the junction of the mucous membrane of the mouth with the gums of the left side of the lower jaw opposite to the left lower molar tooth. The swelling became ulcerated and was seen to discharge pus with a foul odour. It increased in size rapidly involving the left cheek. Salivation was greatly increased and the ulcerated surface became painful. The first and second left lower molars were extracted and the ulcerated surface healed, but the swelling remained.

*Condition on admission:*—There was a tumour of the left side of the cheek and the lower jaw measuring about 3" × 3". It was hard, not painful and not tender. There were no signs of inflammation. The tumour was fixed to the lower jaw. The margins were ill defined. The movements of the jaws were free. Inside the mouth, the tumour was seen to extend from about the second lower premolar tooth to the ascending ramus of the left side of the mandible. The mandible on the left side was found to be expanded by the growth. The left sub-

maxillary glands were palpable. X-ray showed a tumour involving the left side of mandible.

*Treatment*:—The left external carotid artery was ligatured and the left side of the mandible was resected.

The following are the appearances of the microscopic sections of the above cases:—

M. S. 215. " " 348.	{	Sections consist of blood spaces lined by a pallisade layer of tall columnar cells, the nuclei of which are elongated. Facing next to these cells are spheroidal cells, some of which have been separated intercellularly by (?) fluid and being connected to each other by fine protoplasmic processes, they acquire a stellate appearance.
M. S. 342.	{	Section is that of an epithelial tumour, the regular structure of which is lost, but scattered groups of pallisade cells amidst degenerated spheroidal cells may be seen. The latter, here and there, present a sufficient resemblance to that of myxomatous tissue. The stroma consists of loose fibrous tissue, and at some parts large blood spaces are seen filled with red blood corpuscles.
M. S. 404. " " 949.	{	These sections are similar to that of M. S. 342, except in M. S. 404, there are no areas of congestion.
M. S. 834. " " 969. " " 1004. " " 1005. " " 1317. " " 1318.	{	These sections consist of groups of irregularly arranged masses of epithelial cells, giving a picture not unlike that of a basal cell carcinoma.
M. S. 913 (A). " " 914 (B). " " 915 (C). " " 916 (D).	{	In these sections, here are masses of epithelial cells and columns of tall columnar cells with elongated nuclei. In some parts, these tall columnar cells are arranged around the peripheries of epithelial masses, the centres of some have acquired a stellate appearance.
M. S. 1114. " " 1235.	{	Sections consist of tissue densely packed with stellate cells and traversed by small vessels, and here and there are islets of ossified tissue. No pallisade cells are seen in these sections.



- M. S. 1152  
 " " 1153. { Sections consist of irregularly arranged spheroidal and spindle shaped cells, admist which are scattered numerous multinucleated cells.  
 (These sections are not unlike that of a myeloma, but the records of this case were not available for reference).
- M. S. 1158.  
 " " 1735. { Sections consist of masses of epithelial cells supported by a stroma of loose fibrous tissue. These epithelial masses are closely packed together, the peripheries of which are lined by one or more layers of tall columnar cells, the centres of which are occupied by spheroidal cells loosely arranged, some of which have undergone intercellular degeneration giving them a stellate appearance.
- M. S. 1632.  
 " " 2635. { Sections consist of irregular masses of epithelial cells in a stroma of loose fibrous tissue. These masses of epithelial cells consist of an outer layer of very regular tall columnar cells, and the rest being filled in by spheroidal cells.  
 In many cases, the central parts show the appearance of droplets or spaces between the spheroidal cells which still remain connected by protoplasmic strands. This gives each a stellate appearance, the part of the tissue simulate myxomatous tissue. Eventually the spheroidal cells disappear and cyst-like spaces result.
- M. S. 1763A.  
 " " 1763B. { Section 1763A consists of granulation tissue only and 1763B consists of osseous and cancellous tissue.
- M. S. 2639. { Section consists of fibrous tissue with areas of inflammatory reaction and islets of ossified tissue.
- M. S. 2728. { Section consists of fibrous tissue with areas of marked congestion and chronic inflammatory reaction. Part of the surface is lined by one or more layers of columnar cells but not typical pallisade.
- M. S. 2818A.  
 " " 2818B.  
 " " 2818C. { Sections consist of columns of irregularly arranged pallisade cells, spheroidal and spindle shaped cells in a stroma of loose fibrous tissue in which are densely infiltrated with lymphocytes and polymorphonuclear leucocytes.  
 In some parts, these pallisade cells are arranged around the periphery of degenerated spheroidal cells which have a stellate appearance.  
 Areas of marked congestion are also present.

M. S. 2907A. } Sections consist of columns of oval and spindle shaped  
 „ „ 2907B. } cells. In some parts, these cells are arranged in masses,  
 the centres of which are loosely arranged.  
 The cells lining the peripheries of these masses  
 are of several layers and they appear to be elongated  
 and columnar in shape.  
 The nuclei of some of these cells are darkly stained.  
 (The section of a lymph gland from this case  
 showed lymphoid hyperplasia and presence of several  
 tubercles).

#### ACKNOWLEDGMENT.

I am indebted to Prof. K. H. Digby for his kind help in preparing this paper and for his permission to record these cases.

Thanks are also due to the Pathology Department of the Hong Kong University for preparing the microscopic sections, and to Drs. K. D. Ling, C. K. Quek and Mr. R. A. Evans (Technician to the Pathology Dept.) for helping me in the micro-photographs. I must also thank Prof. L. T. Ride for letting me use the photographic laboratory of the Physiology Dept.

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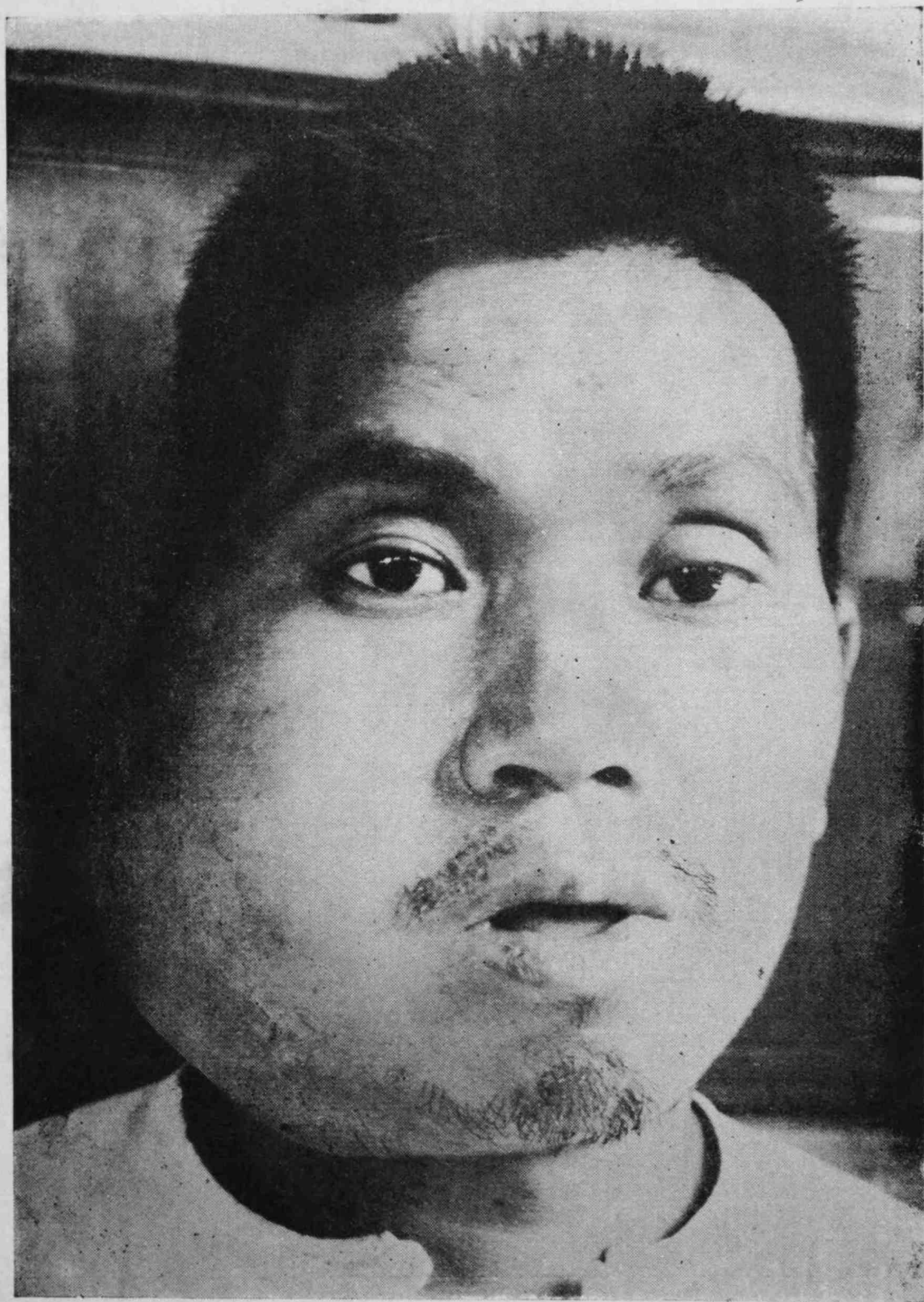


Fig. 1. Leung Chui. M.33. U.S.C. 284/35. Epithelial Odontome of the Right Side of Mandible.



Fig. 2. Pang So Ho. F.19. U.S.C. 342/35. Epithelial Odontome of Left Side of Mandible.

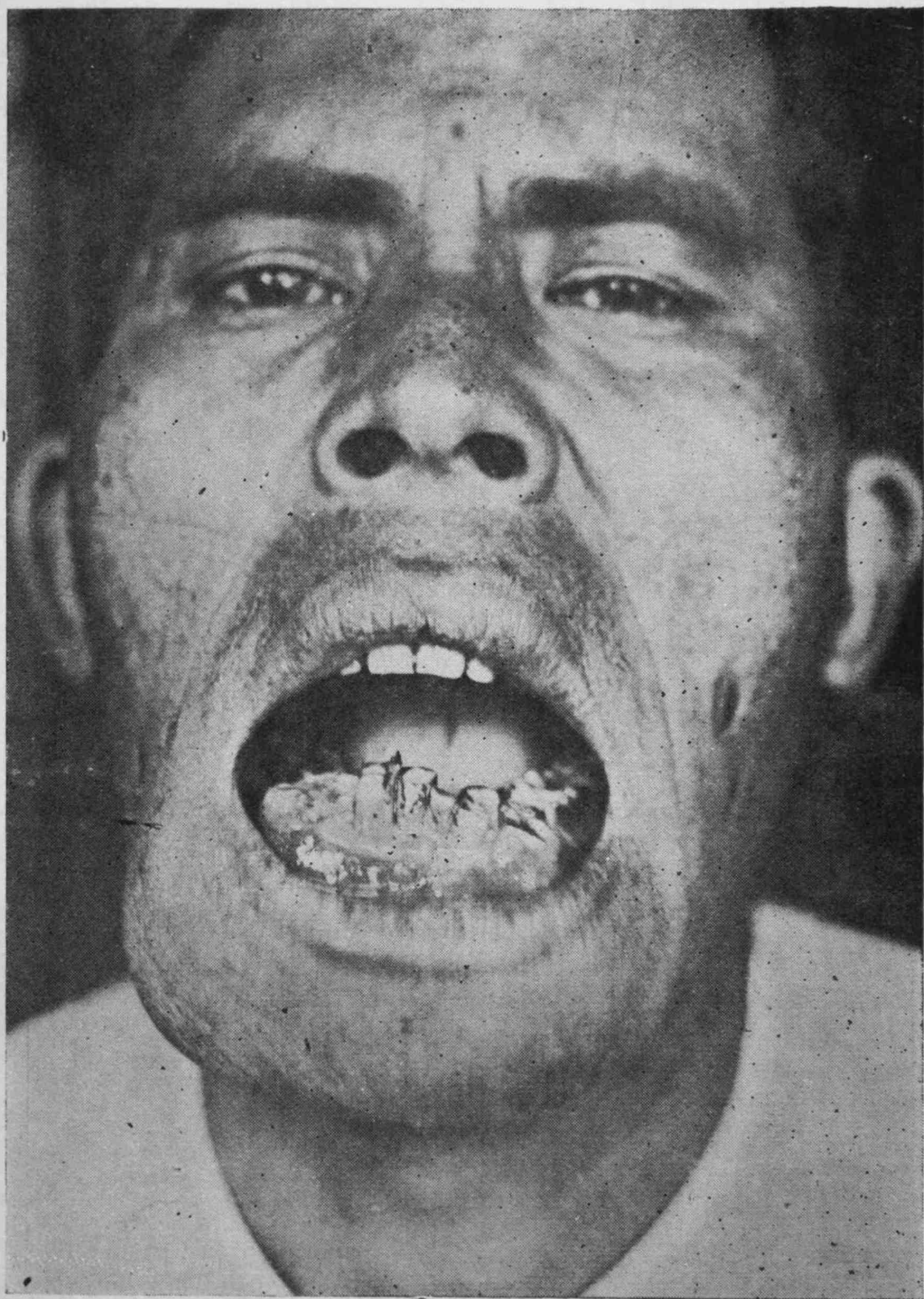


Fig. 3. Cheung Yun. M.32. U.S.C. 23/34. Epithelial Odontome of Mandible.

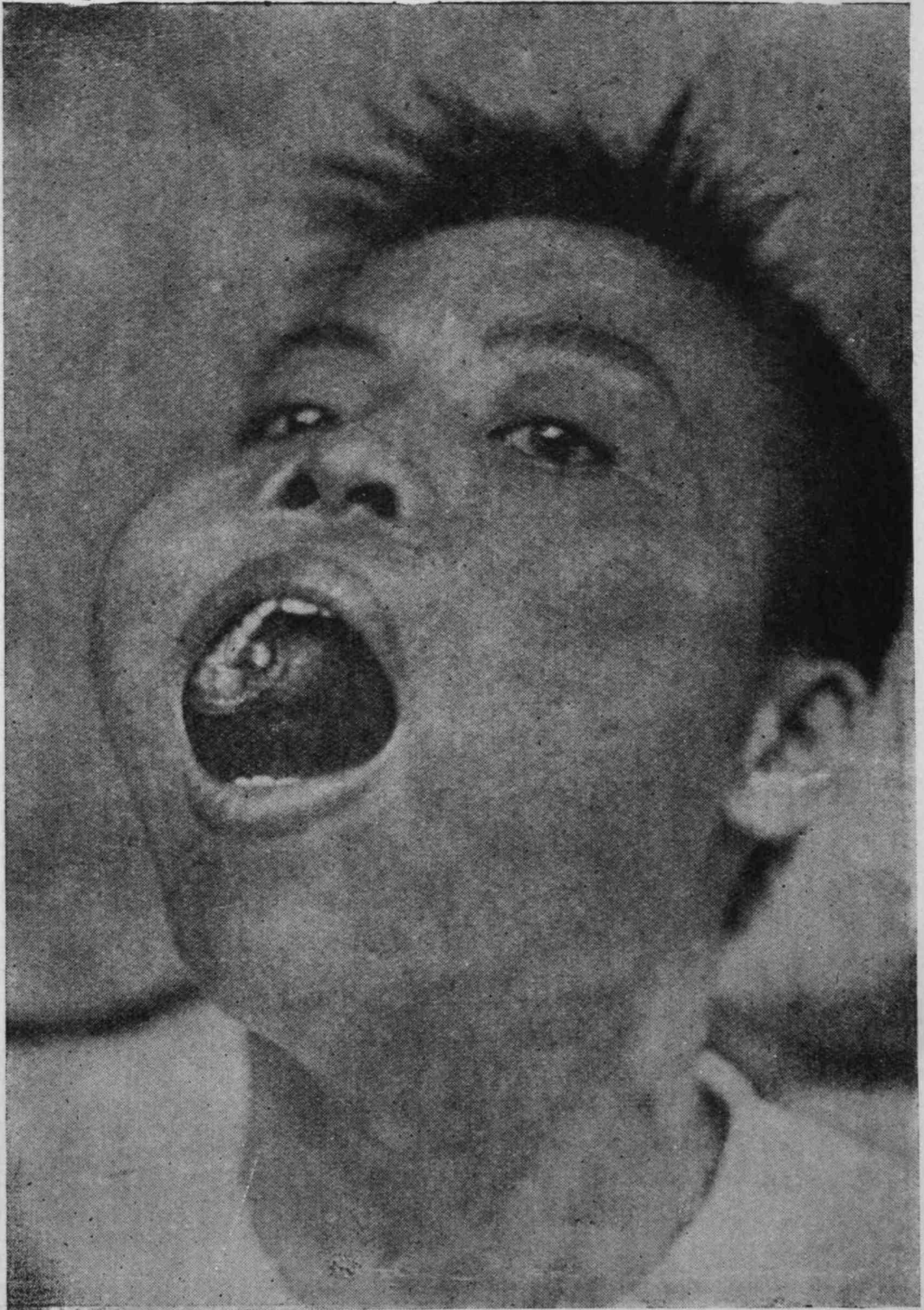


Fig. 4. Ip Lee. M.23. U.S.C. 428/26. Epithelial Odontome of Right Maxilla.



Fig. 5. Ip Lee. M.23. U.S.C. 428/26. Epithelial Odontome of Right Maxilla.



Fig. 6. Cheng Fatt. M.52. U.S.C. 194/27. Epithelial Odontome of Left Maxilla.





Fig. 7. X-ray of Case. No. 284/35.

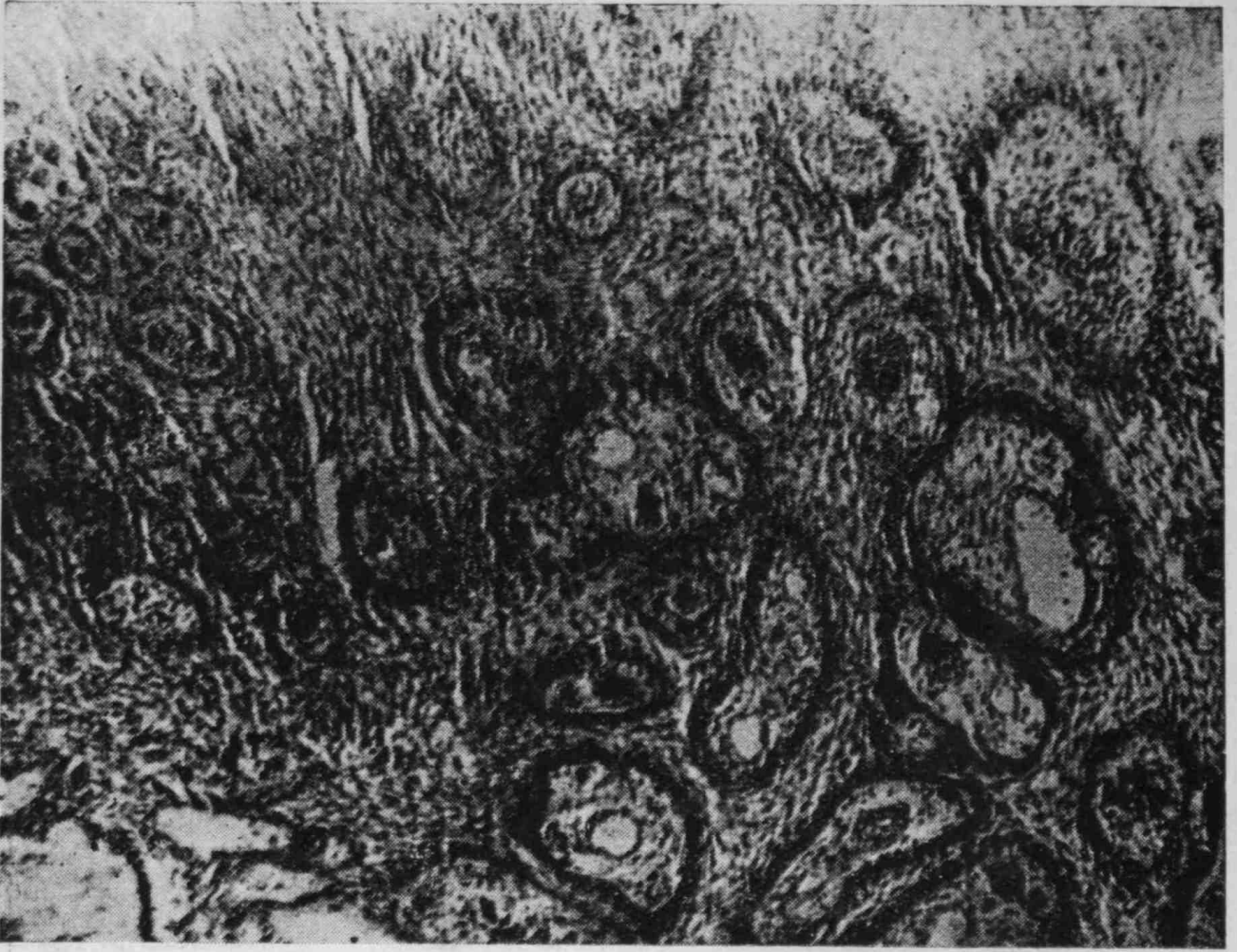


Fig. (I) M.S. 215. (Low power).

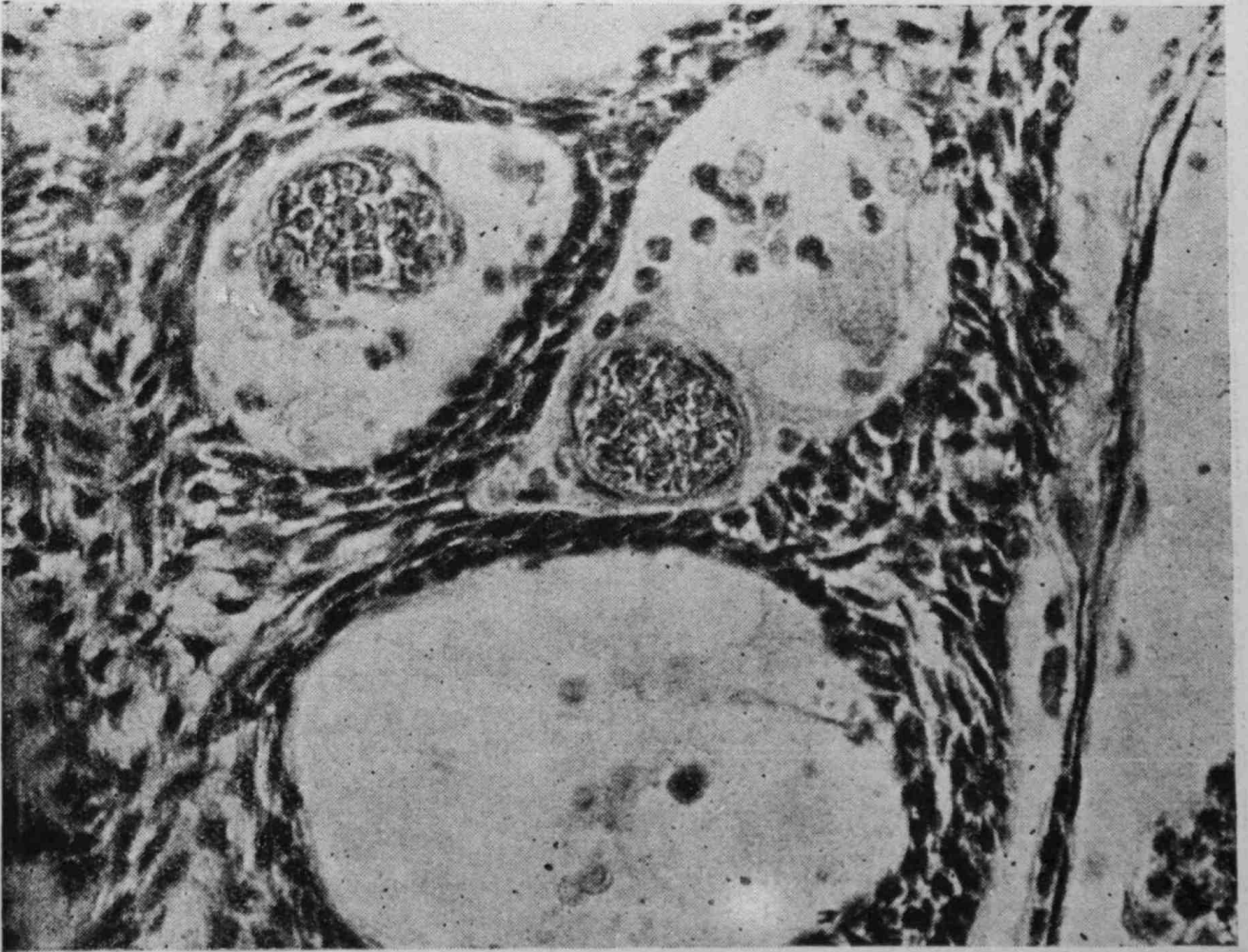


Fig. (II) M.S. 215. (High power).

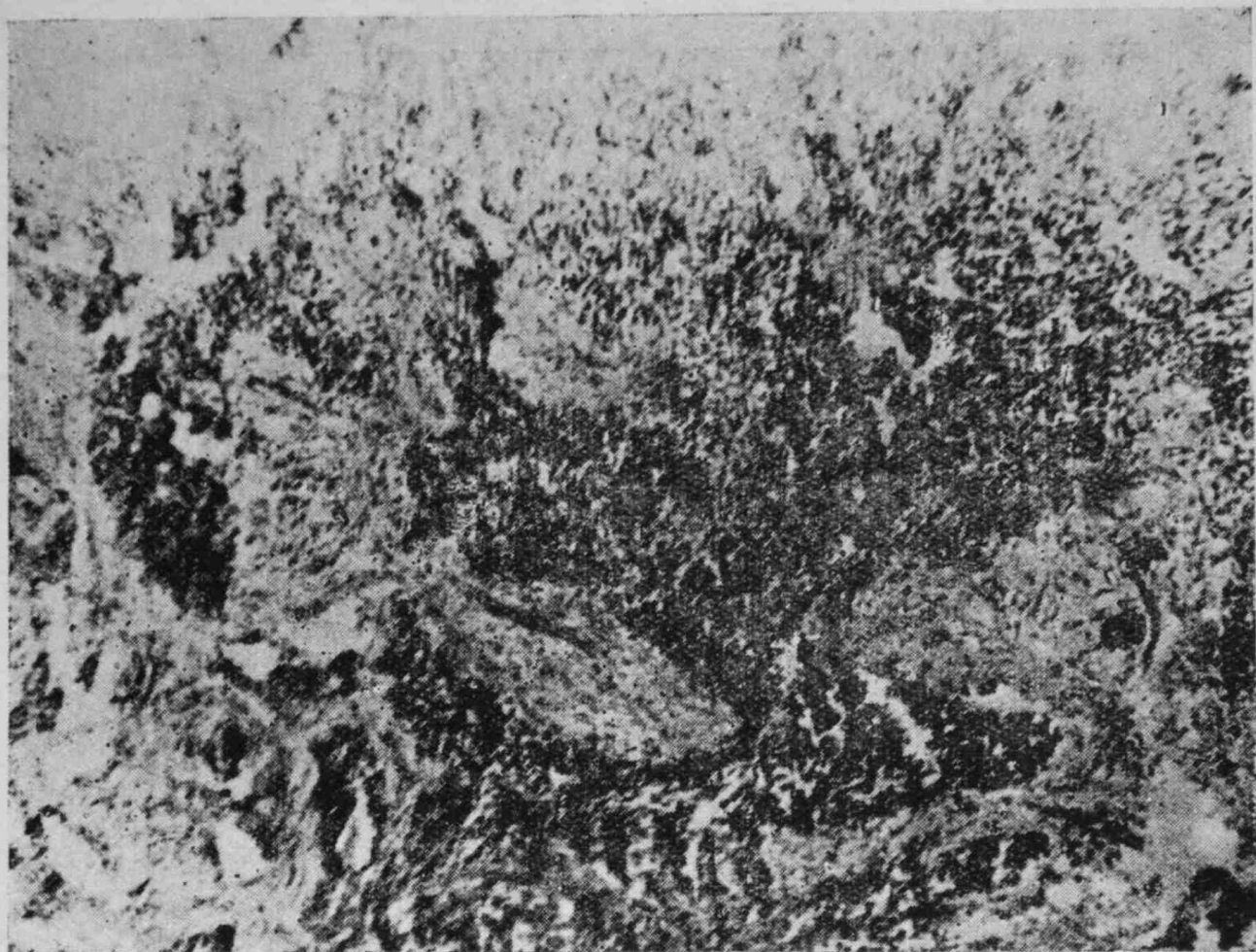


Fig. (III) M.S. 342. U.S.C. 219/22. (Low power).

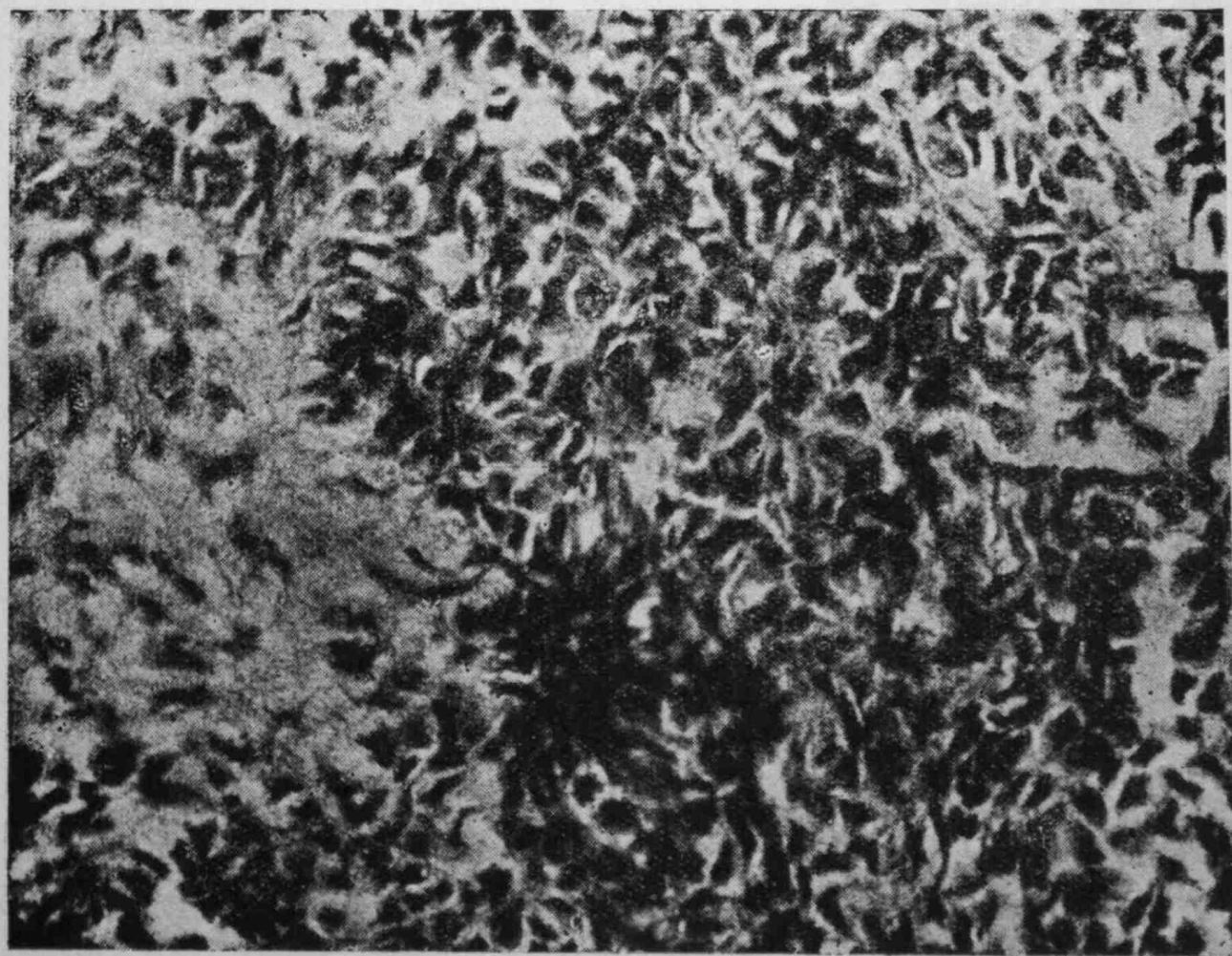


Fig. (IV) M.S. 242. U.S.C. 219/22. (High power).

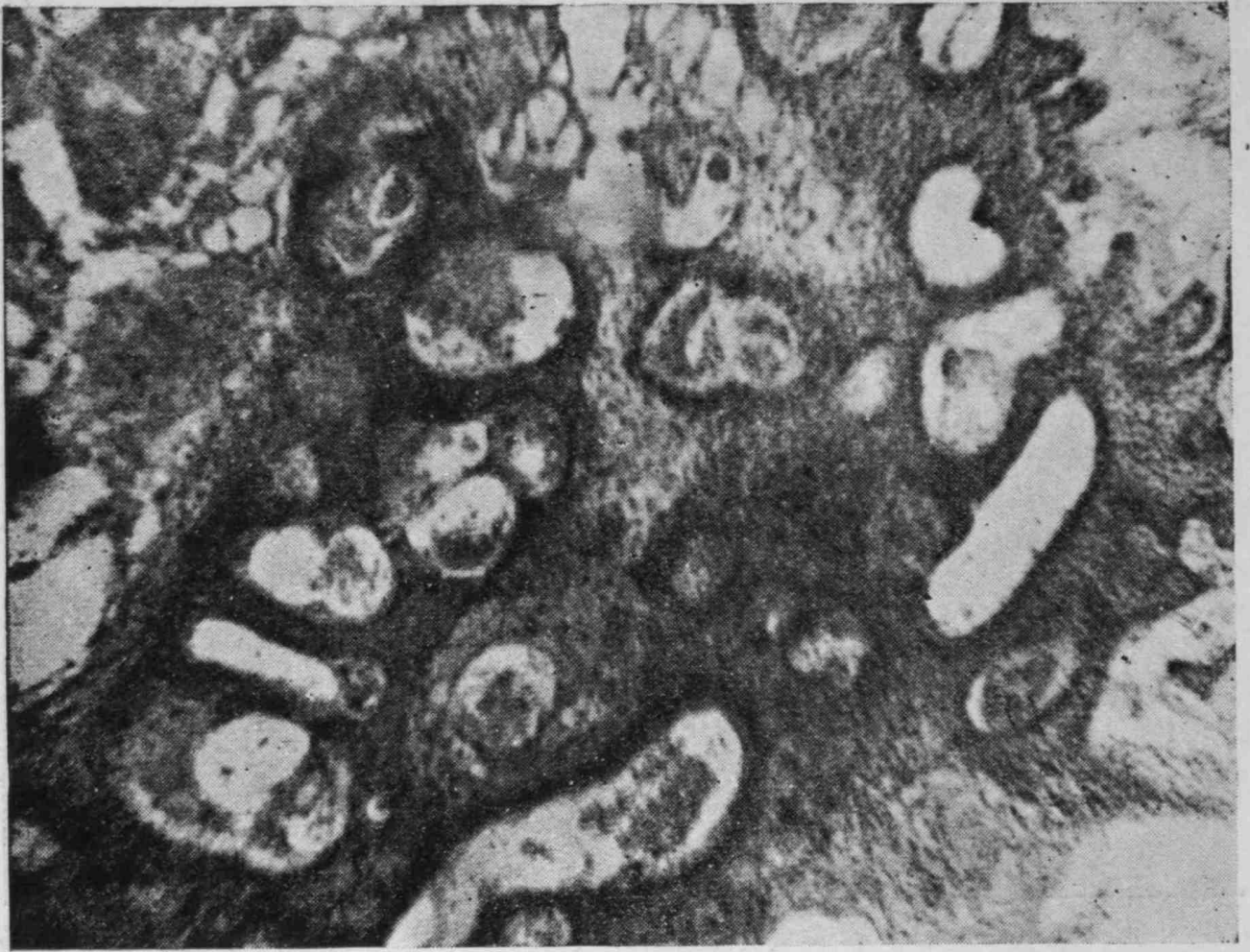


Fig. (V) M.S. 348. U.S.C. 254/22. (Low power).



Fig. (VI) M.S. 348. U.S.C. 254/22. (High power).



Fig. (VII) M.S. 1114. U.S.C. 66/28. (Low power).

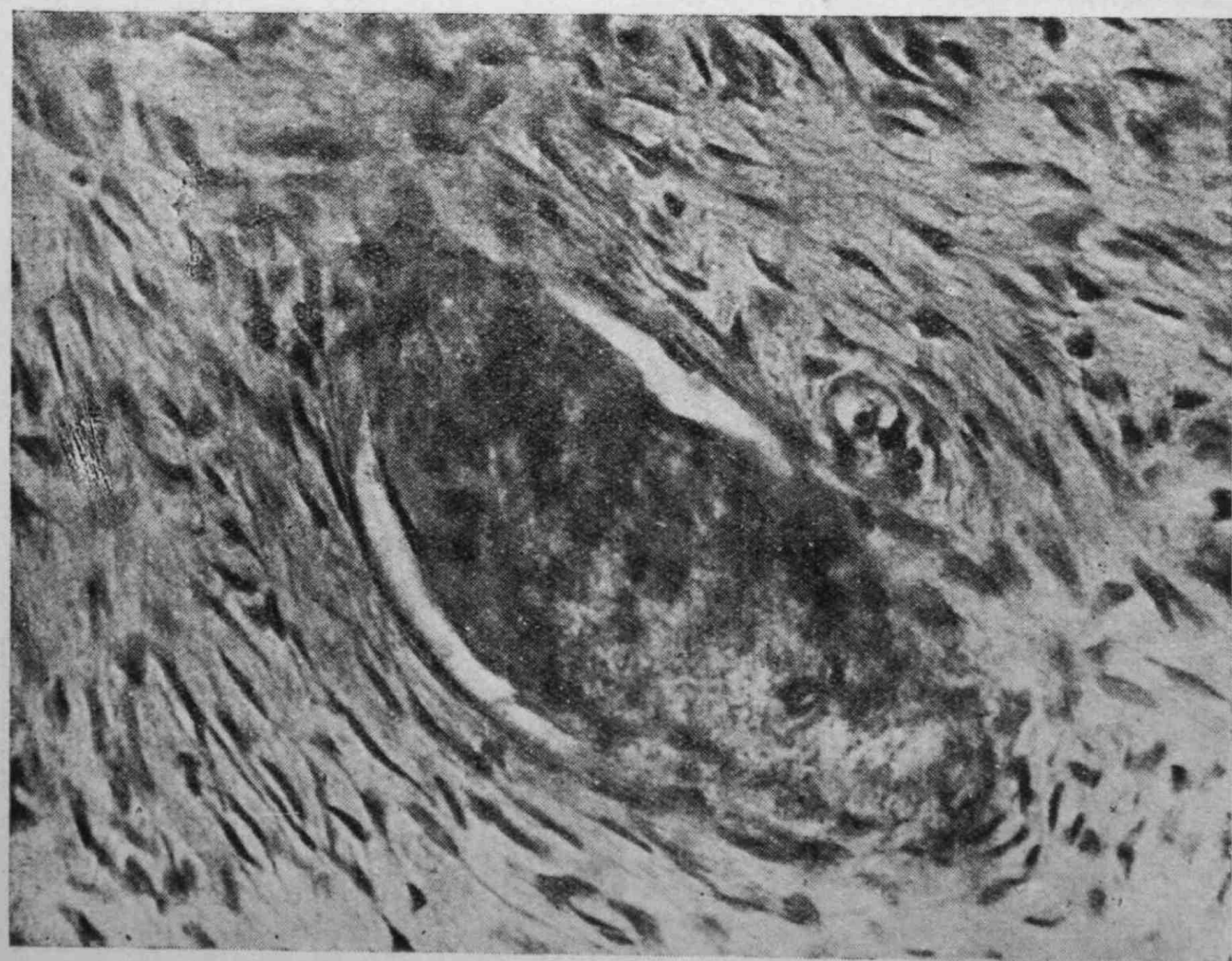


Fig. (VIII) M.S. 1114. U.S.C. 66/28. (High power).

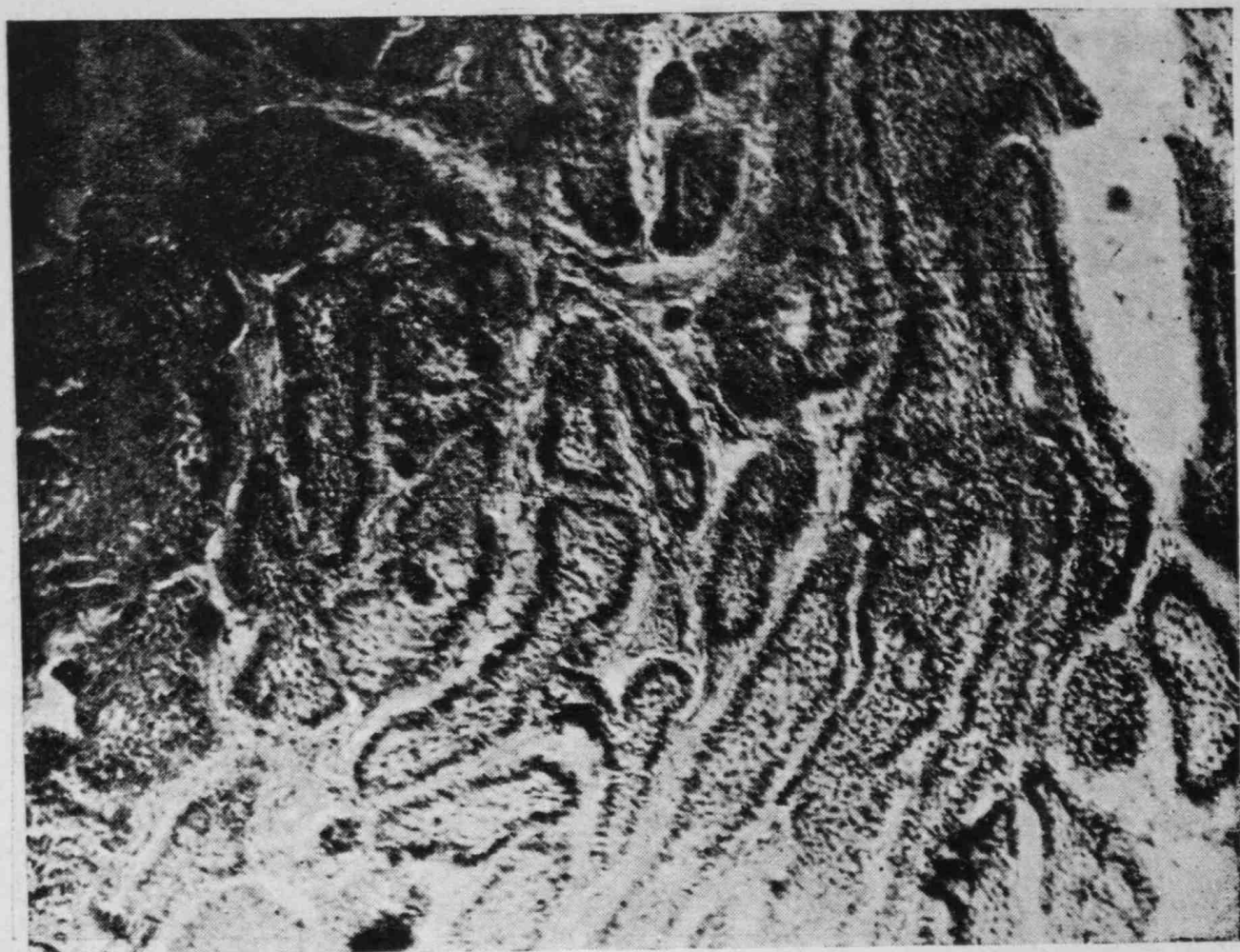


Fig. (IX) M.S. 1158. U.S.C. 127/28. (Low power).



Fig. (X) M.S. 1153. U.S.C. 127/28. (High power).

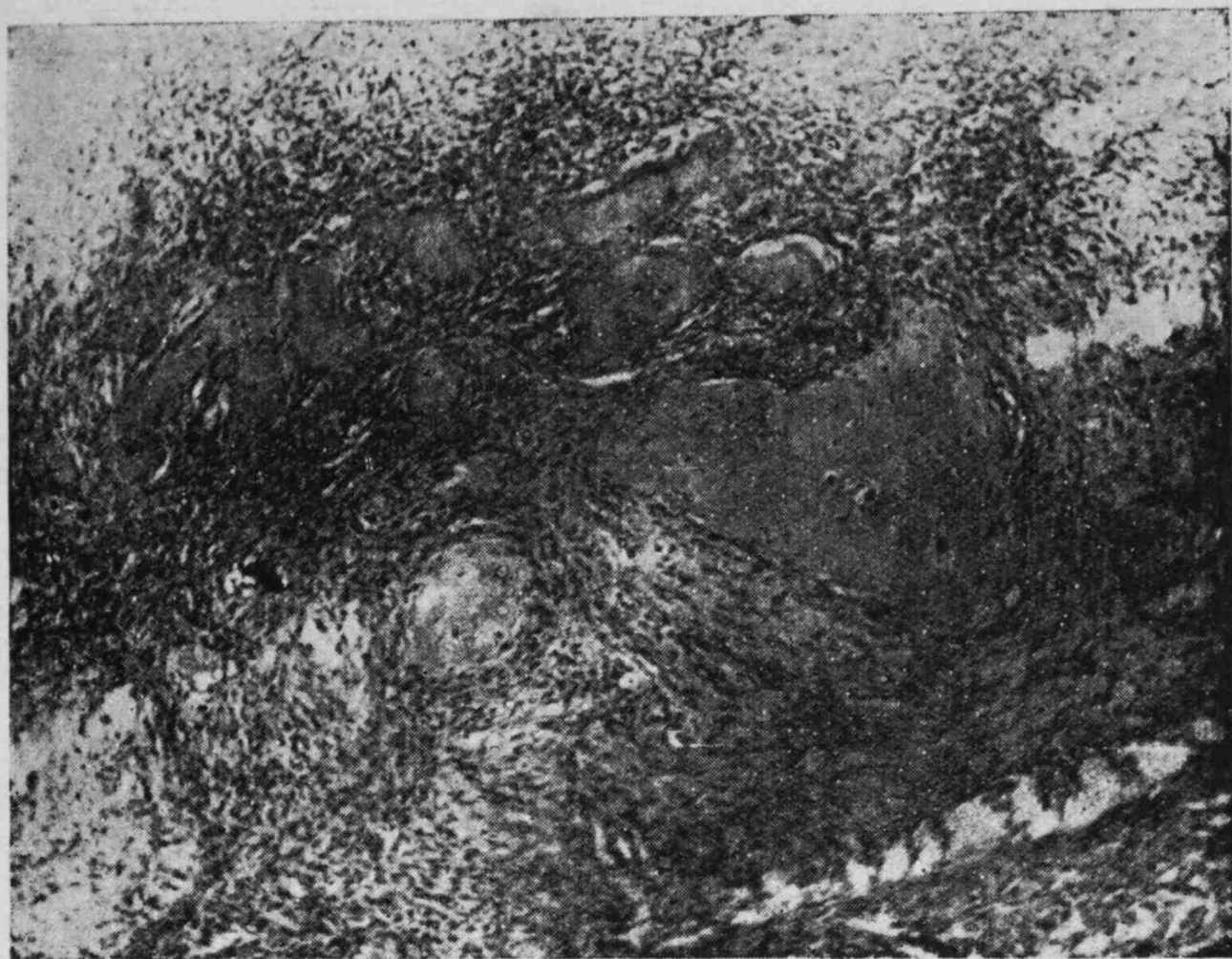


Fig. (XI) M.S. 1235. U.S.C. 258/28. (Low power).

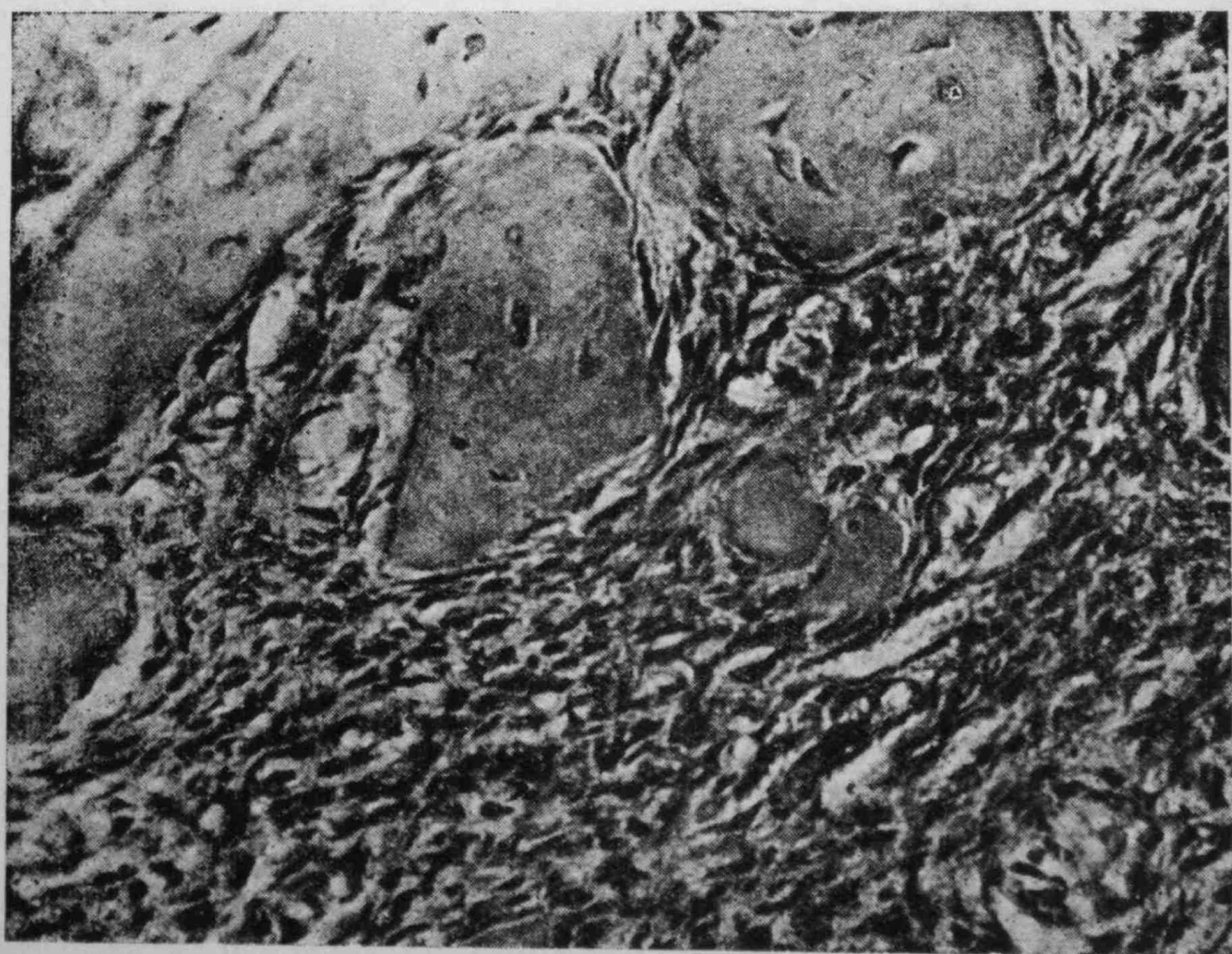


Fig. (XII) M.S. 1235. U.S.C. 253/28. (High power).

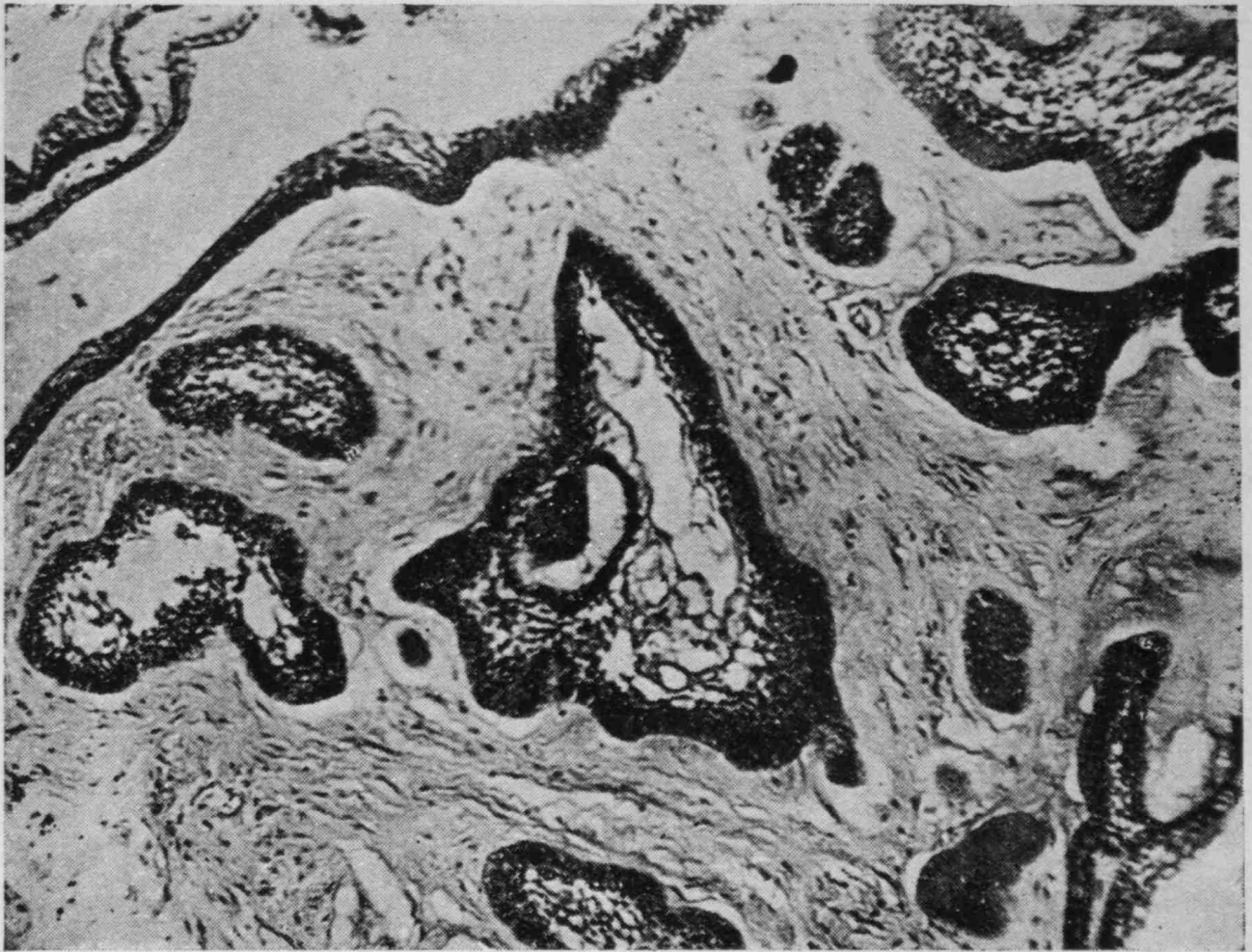


Fig. (XIII) M.S. 2635. U.S.C. 284/35. (Low power).

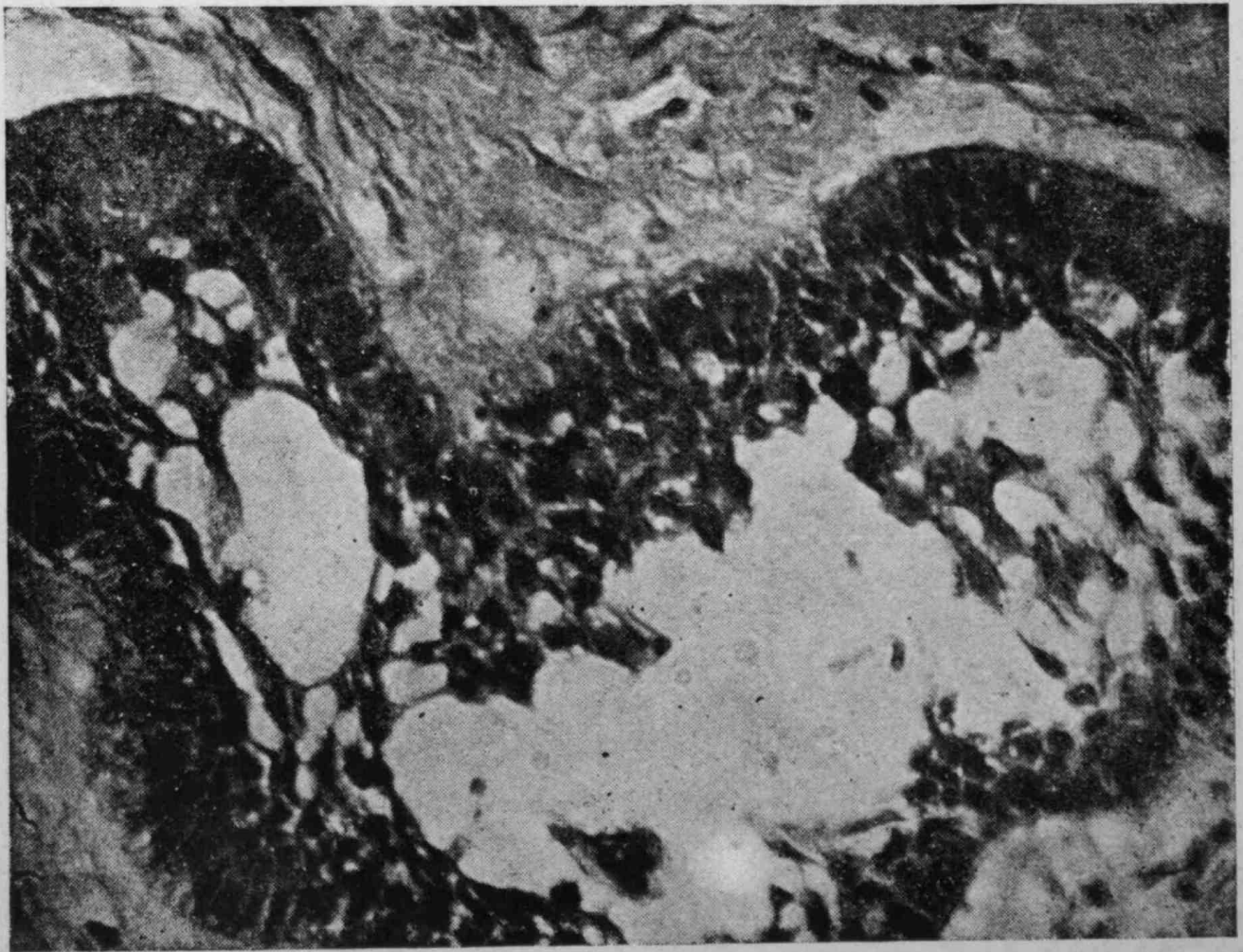


Fig. (XIV) M.S. 2635. U.S.C. 284/35. (High power).



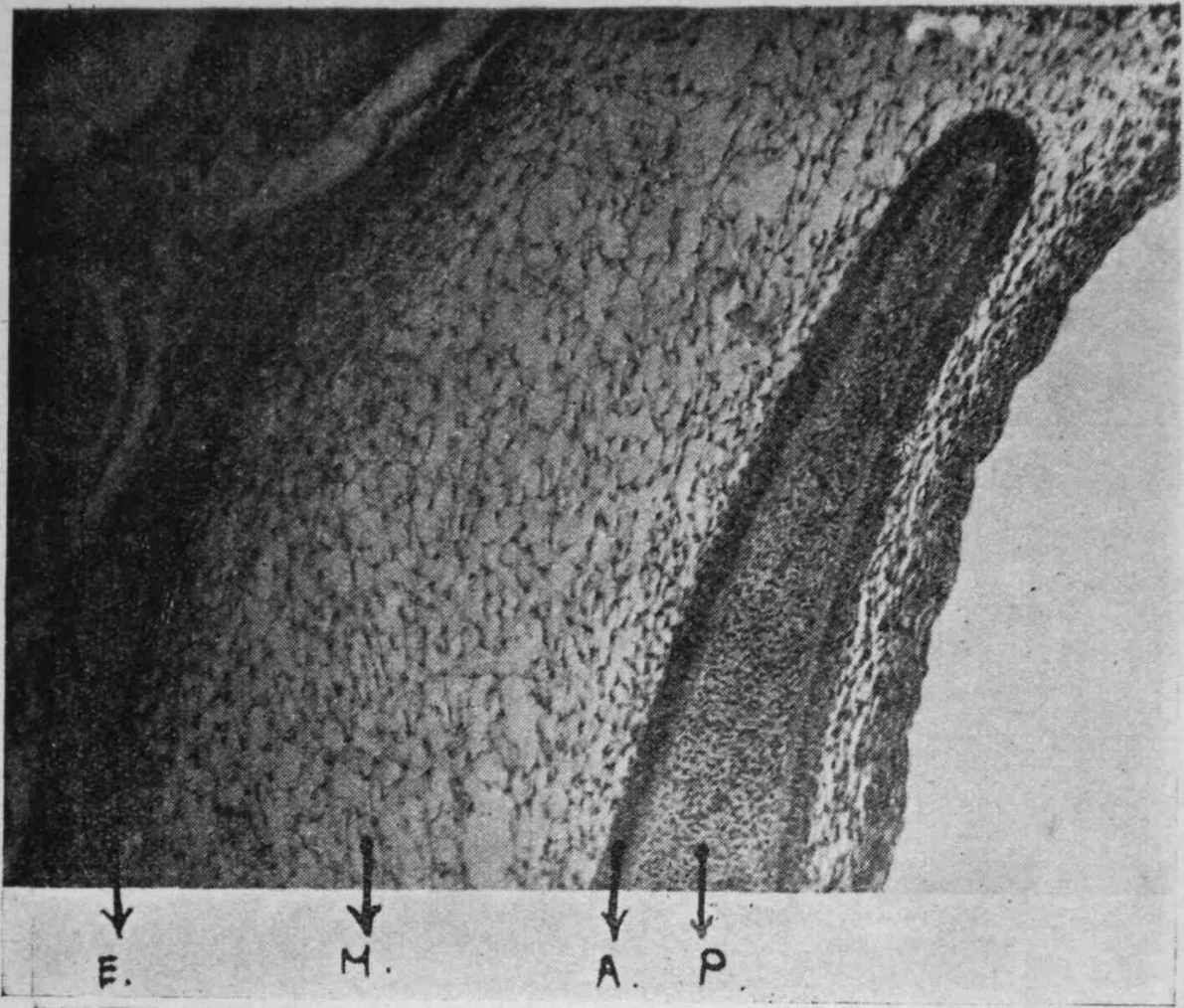


Fig. (XV) Section of a Developing Tooth. (Lower power).  
 P=Dental papilla.  
 A=Ameloblast.  
 M=Middle layer of enamel organ or stellate reticulum.  
 E=External enamel epithelium.

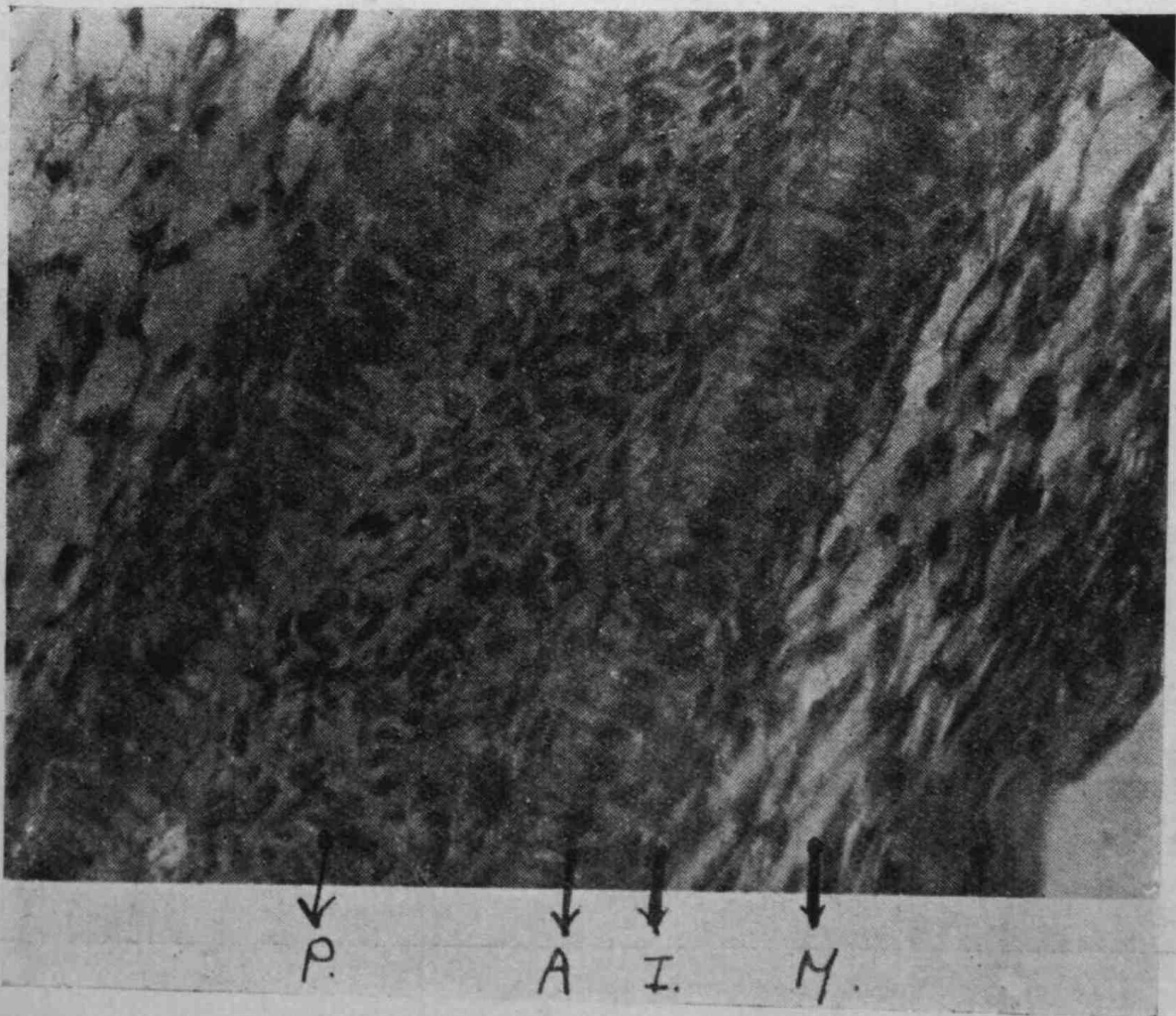


Fig. (XVI) Section of a Developing Tooth. (High power).  
 P=Dental papilla.  
 A=Ameloblast.  
 I=Intermediate layer of enamel organ.  
 M=Middle layer of enamel organ or stellate reticulum.

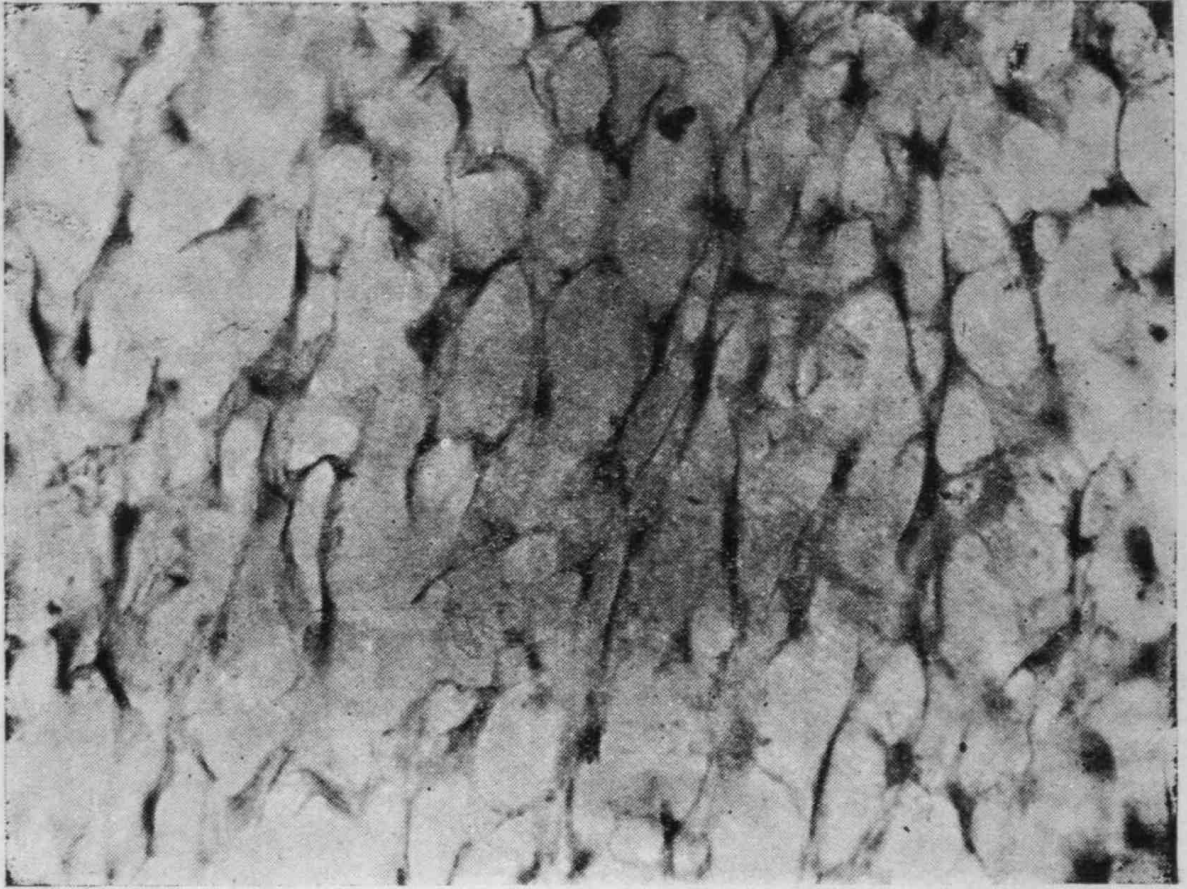


Fig. (XVII) Section of the Middle Layer of the Enamel Organ of a Developing Tooth. (High power).

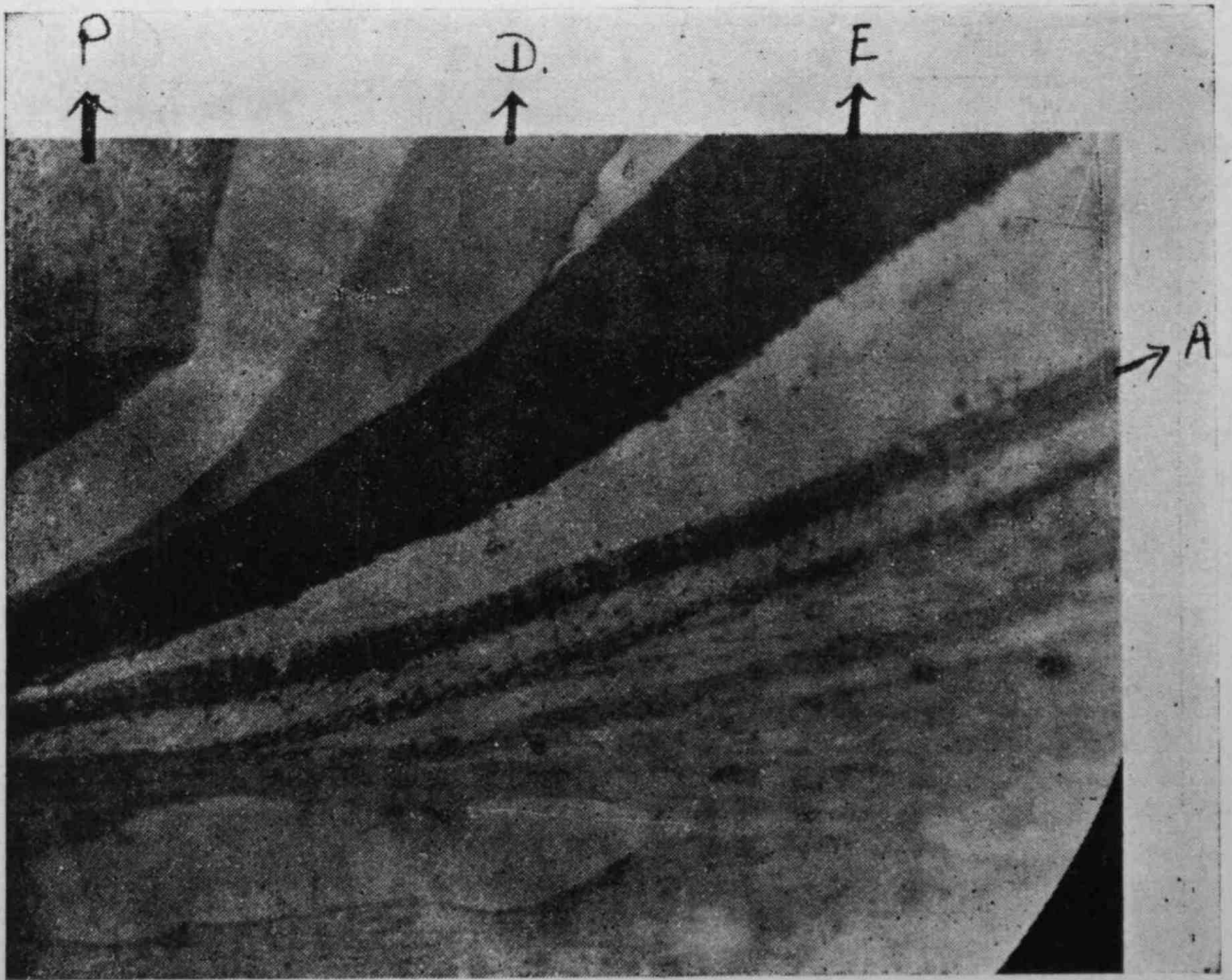


Fig. (XVIII) Section of a Developing Tooth.  
A = Ameloblast.  
E = Enamel.  
D = Dentine.  
P = Dental papilla.

## FIFTY YEARS OF MEDICAL EDUCATION IN HONG KONG\*.

by

Lindsay Ride, Dean, Faculty of Medicine, The University, Hong Kong.

The practice of demarkating accurately the passage of time is an old yet exclusively human habit, and so also is the custom of recording experiences and of bringing them under review at desired intervals. The ability to regulate future actions in the light of these past experiences is the whole foundation of human behaviour and education, and in the English language is most beautifully expressed in the allegory of the tree of the knowledge of good and evil. Fifty years is one of the periods at the end of which it is customary to make a critical review of the past and to restate and make anew one's resolutions. In the case of Medical Education in Hong Kong, it is particularly appropriate because that interval of time has been equally divided between the College of Medicine and the University periods.

Fifty years ago in Hong Kong at the Alice Memorial Hospital which had then just been founded by Dr. Ho Kai in memory of his wife, a meeting was held of those interested in promoting the study of medicine amongst Chinese. This was an event worthy of permanent record on canvas or in stone, but until there comes forward an artist worthy of the occasion, we must be content with an inadequate pen-picture.

At 5 p.m. on a hot, perhaps wet, almost certainly sultry afternoon, the 30th of August, 1887, eight men went from their labours by chair to the Alice Memorial Hospital; one, the Rev. John Chalmers, in the hope that he might further his life's work of bringing spiritual help to the poor of Hong Kong by adding to it some measure of bodily comfort; four others, Drs. Ho Kai, Cantlie, Jordan and Manson, in the firm belief that they were about to attain the goal which must have been the subject of conversation at many a private meeting in their surgeries or at many a dinner party in their respective homes. Of the others, Drs. Gerlach and Young and Mr. W. E. Crow had come in response to the invitation from Dr. Cantlie who wished to obtain the collective opinion of those engaged in the practice of medicine and in scientific work in Hong Kong on the suggestion of founding a Medical College.

At 5.15 p.m. the meeting was begun. The Rev. Dr. Chalmers was elected to the chair and after some discussion it was unanimously resolved that 'a College of Medicine for Chinese be established in Hong Kong.' A Senate was constituted, The Hon. Frederick Stewart, M.A., LL.D., was asked to be Rector, and Dr. Patrick Manson was

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\* Read before the Henry Lester Institute of Medical Research, Shanghai, on March 31st, 1937.

appointed Dean and Dr. James Cantlie Secretary, and the Dean was requested to deliver an inaugural address in the City Hall on October 1st.

Of the members of this first memorable meeting, death had claimed Dr. Young ere one year had passed, while Dr. (later Sir Patrick) Manson was destined to serve his college directly for a space of but two short years only, before he left the colony to embark on the work that was to open a new branch of medical science. Dr. (later Sir James) Cantlie, who was appointed Dean in Manson's place, held that office till March 1897 when he left the Colony, and the Rev. Dr. Chalmers resigned on his return to England a year later. The names of Crow and Gerlach disappear from the Senate minutes in two years, and thus by March 1898, all the members of that August meeting, with the exception of Drs. Ho Kai and Jordan, had passed on to other spheres, and of these two we shall have much more to say later.

The College was founded under the auspices of H.E. the Governor, and H.E. Viceroy Li Hung Chang was elected Patron of the College and in his letter of acceptance of this post he said:—

“There is no doubt that when your admirable project is achieved, it will be appreciated and imitated, and that it will, through your students, be a blessing to China.”

Without further ado, the College embarked on its work; instruction was given by local professional men in addition to their ordinary daily work, and since it was a college with nothing but a spiritual home, lectures were given in various institutions throughout the Colony and clinical instruction was given in the Alice Memorial Hospital. In 1892 the first students completed their courses and in the proceedings of the Senate meeting held on the 16th July, 1892, the Secretary, oblivious of the events that would transpire during the next twenty years, events that were to add undreamt-of significance to his words, wrote this minute:—

“It was resolved to recommend Sun Yat Sen and Kong Ying Wa, who have passed all the professional examinations, to the Court for the Licence of the College, Sun Yat Sen to qualify ‘with high distinction.’”

At a public meeting held in the City Hall on the 23rd of July, 1892, H.E. the Governor of the Colony, Sir Wm. Robinson, K.C.M.G., presented the Diploma of the College to these two successful students, and thus we see how the founder of modern China became, to the accompaniment of those prophetic words *with high distinction*, the first fruits of organised medical education in Hong Kong.

During the first few years of its existence, the minutes of the Court show that the European residents of the Colony not only took an

interest in the project but materially helped with monetary donations and annual subscriptions. The first subscription list amounted to \$305, including an annual subscription of \$20 from the German Consul; later Dr. Cantlie offered to guarantee \$500 a year for five years to meet the expenses of the College; the Tung Wah Hospital through various contributors gave \$1,000 for the purchase of teaching appliances; scholarships and prizes were founded—the Belilios scholarship due to the beneficence of Mr. E. R. Belilios, and the Watson scholarships given by Mr. I. D. Humphreys, while Dr. Young offered a prize for the most distinguished student of the year.

It is evident from the college records that very early in its history efforts were made to obtain buildings for the college. In 1891 Mr. E. R. Belilios offered to erect buildings provided a suitable site could be procured, but owing to the fact that it was not possible to persuade the government to give the land rent free the scheme fell through; Mr. Belilios then offered to give the site in Sai Ying Poon known as Ballscourt with the buildings on it, promising to alter the latter in such a way as may be necessary for the requirements of an educational establishment, or alternatively he offered to give the adjoining site and erect on it a suitable building at a cost of \$30,000 on condition that the Government would undertake to invest a similar sum for the permanent maintenance of a tutor, or one who would be in permanent charge of the institution.

In spite of repeated representations, the Government could not be persuaded to give this support to the new College and in 1896 Mr. Belilios finally withdrew his offer. The Court then turned its attention to other possible sources of revenue; one method was to approach the Diamond Jubilee Committee with a request to make the celebrations in Hong Kong of the 60th year of Her Majesty's reign take the form of an effort to place the College of Medicine on a sound financial basis; another scheme was to appoint an acting Dean of the College while Dr. Cantlie was on leave in England in 1896-7 so that he could act at home in an official capacity stimulating interest and collecting funds. Since the records of the college are silent concerning the outcome of these schemes, we can take it for granted that neither of them was successful.

In 1900 the Court again made a new application to Government for financial assistance; minutes of the Senate show that at the request of Government, senior students of the College rendered special services during the small-pox and plague epidemics of 1898; that graduates were being of great assistance to the Medical Department both in dispensaries and in the New Territory, and that there was a large demand for graduates of the College in the Straits Settlements. It was decided that as an inducement to the Government to make such a grant, the Court should undertake to bind students to serve the

Government during a period of not less than three years after qualification, in any medical or sanitary capacity, at a salary not exceeding \$50 per month with private practice, or \$100 per month without. It was pointed out that by means of these diplomates so bound, it would be easier for the Government to carry out the proposals repeatedly made for the establishment of dispensaries in the Colony, again recently recommended by the Sanitary Board.

Whether it was due to the records of the diplomates or to this inducement just set forth, it is pleasing to see that in 1901 the Colonial Secretary intimated to the College that the Secretary of State for Colonies had approved of the sum of \$2,500 being placed on the 1902 estimates for honoraria to the teaching staff, and a further sum of a similar amount for the maintenance of a dispensary in connection with the College. There is no record of the Government agreeing to bind the diplomates, but later entries in the minutes, exempting certain students from this contract indicate that the agreement must have been made.

As the College entered its teens, we find repeated evidences of what we might term growing pains and a realisation of a definite individuality. For instance in the Court minutes of 1902 we find that

‘the secretary laid on the table sundry correspondence showing that there is an increasing demand for the services of the passed students of the College.’

and again in 1905

‘Correspondence referring to the desirability of having a site for a College building reserved on the Tai Ping Shan resumed area was submitted and after discussion was referred to a committee consisting of Dr. Clark and Dr. Thomson for further consideration of possibilities, and for report regarding them.’

The College had survived the anxious period of infancy and was emerging from adolescence with the assurance of young manhood and a desire for a home of its own and a reasonable opportunity to carve out its own destiny.

The above committee recommended that the Government be asked to reserve for the purpose of college buildings two specified sites on the Tai Ping Shan resumed area. H.E. the Governor asked whether the Court could give information regarding the probability of the scheme for the erection of a college building being carried into effect within a period of five years. The Court undertook, within the period named, to raise a minimum sum of \$21,650 equivalent to the estimated value of the two sites proposed, for building purposes, as a condition of the sites being reserved. In August 1905 a letter from the Colonial

Secretary was laid before the Court, promising that the two sites asked for would be reserved for a period of five years from the 18th May, 1905, and that if at the expiration of that period the College had raised \$21,650, a free grant of land would be recommended to the Secretary of State for Colonies. Committees were appointed to proceed with building plans and to secure the endowment funds necessary. This period of the life of the College is being dealt with at some length purposely because it is evident from the records that the germination of the future University was being achieved by these negotiations. The College authorities were more than ever convinced of the value of the work they were doing and the Colony was becoming more and more aware of the possibilities of such an educational institution in its midst.

The year 1906 was destined to be an important one in the life of the College for at the June Court meeting Dr. Ho Kai announced that he was in touch with a benefactor who might be willing to erect the new buildings required by the College, and the following are some of the more important points agreed to by the Court and set out in a memorandum of the terms on which negotiations for the gift might be conducted:—

- (1) The name of the College to be changed on entering the new building from the *Hong Kong College of Medicine for Chinese* to the *Hong Kong Medical College*.
- (2) Admission to the College to be open to all nationalities.
- (3) Two buildings to be erected on the two adjacent sites being reserved by Government, a general College building on the larger site at the cost of \$35,000 and anatomy rooms and museum on the smaller at a cost of \$15,000; such buildings if erected by a private donor to be named after such donor.
- (4) A public subscription to be opened as soon as the erection of the buildings is commenced, to raise an endowment fund of \$50,000.
- (5) The Government to be approached to increase its annual grant to the College from \$2,500 to at least \$5,000.
- (6) Application to be made for the due recognition of the diploma by the Government of the Colony and the General Medical Council of Great Britain.

In August of the same year Dr. Ho Kai announced to the Court that a bequest of about \$10,000 had been made to the College by the late Mr. Tang Chuk Kai, the income to be used to meet current expenses. Arising out of this bequest it was found necessary to take steps towards the incorporation of the College, and in June 1907—thirty years ago—Dr. Ho Kai reported that an “Ordinance for the Incorporation of the Hong Kong Medical College” had been passed.

poration of the Hong Kong College of Medicine," which had been introduced by him into the Legislative Council, was read a third time and passed on the 23rd of May, 1907. He then submitted an offer from Mr. Ng Li Hing to erect two college buildings on the Tai Ping Shan reserved sites, one to cost \$20,000 and the other \$30,000. Plans for the buildings were drawn up, tenders were called for, the Secretary of State for Colonies approved of the free grant of the land, and then the wheel of fate took yet another turn which completely altered the destiny of medical education in Hong Kong.

*The Idea of a University.*

As early as 1905 the idea of a university in Hong Kong had been publically discussed, but apparently no very serious thought was expended on the project until Lord (then Sir Frederick) Lugard at the prize-giving at St. Stephen's College in December 1907 expressed the hope that means might soon be found to enable this ambitious project to take shape. Shortly afterwards Mr. (later Sir H. N.) Mody intimated to H.E. the Governor that he was prepared to erect the necessary buildings at a cost of \$150,000 and give \$30,000 towards the endowment funds. His Excellency felt that if a University were established, one of its most important faculties would be that of Medicine, and since the building schemes of the College were, as we have seen, now far advanced, he lost no time in discussing the situation with the Rector of the College. The Court of the College indicated that it was prepared to undertake, if desired, in conjunction with the donor of the building fund, the larger scheme of a university in Hong Kong, and to amalgamate the present College of Medicine therewith. In the meantime the Court decided to proceed with its building and its appeal for funds. H.E. the Governor was of the opinion that it would be a great mistake to start the Medical Faculty on such a small site surrounded as it was by Chinese houses and incapable of expansion. It took some time to convince the Court of the wisdom of this opinion, but eventually a meeting of past and present students, held in Dr. Ho Kai's office approved of the site selected for the university, namely that opposite to 'Fairlea' at the junction of Bonham and Pokfulam Roads; this apparently persuaded the College Court, and they decided, subject to the consent of Mr. Ng Li Hing, to approve of the university scheme with Hong Kong College of Medicine incorporated as a College of the university provided sufficient area was reserved for providing residential quarters for professors and students and for future extensions. They further agreed that the anatomical theatre should be built at once on the new site out of the Ng Li Hing funds, provided that Physiology, Chemistry, Physics and other necessary lecture rooms about to be built on the Tai Ping Shan site, should be built forthwith by the donor of the University buildings on the new site, the balance of the Ng Li Hing and Tang Chuk Kai donations to be retained for the purposes of the College.



The gravity and importance of these decisions can be judged by the fact that the Court desired an early decision on these points since the building of the Anatomical Theatre on the old site was to have been begun under contract that very same week. On the 13th March, 1908, the Governor held a meeting at Government House at which were present a representative of the donor of the University buildings as well as the Rector and members of the Court of the College of Medicine. At this meeting the Court's resolutions were discussed seriatim, and complete agreement was reached, the only important changes in the resolutions being that the name "College of Medicine" should disappear simultaneously with the opening of the University—the College becoming the *Faculty of Medicine*—and also if funds necessary to open the proposed three faculties simultaneously be not forthcoming, the Faculty of Medicine shall have first claim on the general funds to allow it to be put into efficient working order.

The way was now clear for the whole scheme to be put before the public of Hong Kong, and so on the 18th March, 1908, the Governor convened a meeting of a large number of the principal residents of the Colony and informed them of what had been accomplished. To my mind there is no record right throughout the history of either College or University that so ably sums up the situation and arguments as H.E.'s speech to this gathering, and because it gives an insight into the character, statesmanship, optimism and prophetic vision, tempered with practical care and caution, of one of the small band to whom our University owes its existence, I propose to let his speech tell its own tale. His Excellency said:—

"Gentlemen, I have asked you to meet me here to-day in order to announce to you that a large sum of money has been offered with the object of building a University in Hong Kong. Some time ago Mr. Rennie called upon me and informed me that Mr. Mody had read with great interest some references I had made in speeches at various prize distributions to the day which I hoped might not be far distant when Hong Kong would have a University and that he (Mr. Mody) desired to place the magnificent sum of \$150,000 at my disposal for this object, but he desired that the matter should not for the present be divulged. I will ask Mr. Rennie to confirm these statements. He has consented to be a member of this Committee but did not desire to attend to-day. My first impression was that it was essential that the Hong Kong College of Medicine should be amalgamated with any scheme for a University and should not exist as it were as a rival. This would involve their abandoning the site they had obtained for their College buildings at Taiping-shan, which is unsuitable and does not offer sufficient space for the large scheme, and giving up the building plans which they had already finally decided upon, and adopting a scheme of building which should be part of, or capable of expansion into the larger project. The Court of the College has been in consultation with

Mr. Rennie and myself for some time past and they have concurred in the proposals subject to certain conditions. But they bear some misgivings as to the vital question of the cost of maintaining the University when it has been erected. They rightly feel that they have for years past been labouring to attain an object which at last they find to be on the verge of attainment, and they naturally do not wish to jeopardise the results of their labours by being associated with a scheme which does not offer an equal assurance of success. In other words the College of Medicine has sufficient money for the buildings it requires and sufficient funds, and promises of help, to enable it to at once utilise these buildings to the full when erected. Has the projected University any similar assurance? This brings me to the position of the Government towards this project and I wish to make that position absolutely clear. I am ready to recommend to the Government the grant of a site which is considered by all to be fully adequate and well adapted for that purpose. But further than this the Government cannot in present circumstances go. The present and prospective liabilities which the Government has to face are such as to render it impossible for me to hold out hopes that any considerable grant of the maintenance of the University can be undertaken by Government. Nor in such circumstances could it be right for me in the position I hold to encourage such a project if there should be any fear that the onus of maintenance would eventually, in spite of what I have said, fall upon the Government. I feel personally very optimistic about the success of the project, and I am enthusiastically anxious to see it take shape. I believe that if we can establish a University here which will offer equal and better facilities than Tokio, we shall attract here a large number of wealthy Chinese students who at present go to Japan or to America, England and the Continent of Europe. These men will be able to pay the full expenses of their College course, and the University will derive the main portion of its income from the fees they pay. But there will be a period of difficulty, a period in which the expenses will be great and the receipts small, before the University is fully established. I feel therefore that personal optimism and personal enthusiasm are factors which should be eliminated in dealing with this project, and that we should approach it in a business like way, and before we embark upon it we should ascertain as nearly as possible what the cost of maintenance will be, and what funds we have or are likely to have to meet that cost. When we have actual estimates before us, it will be for us to say how far it is judicious for us to embark on the building programme. Mr. Rennie, acting on behalf of Mr. Mody, has assured me in the presence of the Court of the College of Medicine that the donor is willing to build only a portion of the buildings required and to put the remainder of his generous gift into an endowment fund, if that should be considered the wiser and more prudent course. I propose then, gentlemen,

to appoint a sub-committee to draw up such estimates as may enable us to approach this subject with more precise data than we at present possess. The terms of reference, viz. the points upon which I will ask them to report are as follows:—

Having consulted the Donor as to the exact object he has in view the sub-committee will report on the following points:—

(a) Assuming that in the first instance the schools embraced by the University are limited to a School of Medicine and a School of Engineering, what is the minimum adequate staff required for each, and what would be its annual cost? To what extent could local assistance be counted on to assist the professional staff in the early years of the University and until it began to earn an income by fees of students?

(b) Assuming that a School of Law were added later, and that these three Schools form so far as our present horizon extends, the full scope of the University, what buildings would it be advisable to set aside for maintenance or endowment, looking to the conclusions arrived at under (a)?

The gentlemen whom I propose to ask to advise us on these points are specially qualified to decide on the staff and buildings and general cost of maintenance of Schools of Medicine, Engineering and Law, and also to give us rough estimates of the cost of the buildings required. When we have the results of their deliberations before us, we shall be in a better position to decide how far we can embark upon this project, and what form our immediate action should take. As regards the first of the two questions, which I propose to refer to the Committee—what staff is required and what its cost will be—there is nothing to interfere with an immediate reply. But as regards the second—how much money it is safe to spend on buildings and how much should be devoted to maintenance so as to ensure the immediate and practical utility of the scheme—it is clear that the sub-committee's report will entirely depend upon the amount of money available. I feel confident that the entire community will recognise the importance of this project. It will place Hong Kong in a unique position in the Far East. It will no doubt attract to this Colony the sons of wealthy and influential Chinese gentlemen, and it will have far-reaching effects upon the prestige and influence of Great Britain throughout the Chinese Empire. It will, I think, be the most important step taken in the recent history of this Colony. I take therefore this opportunity of inviting those gentlemen whether European or Chinese whose interests are bound up in this Colony, or who desire to see British influence extended in the Far East, or who would welcome a project which would assist the friendly Empire of China to obtain the Western knowledge which so many of her sons are now seeking and can only obtain at great cost, and by exile from their country, to come forward

and support Mr. Mody in his munificent donation, and enable us to give effect to his generous effort, by subscribing a sum adequate to carry out the scheme in its entirety. To do the thing well, and provide a fully adequate endowment even for the modest beginning which I propose, a sum of probably not far short of \$1,000,000 or a yearly income of \$60,000 would be required. By whatever amount we fall short of the total required, by a proportionate amount must we curtail the scope of the proposed university. It is, I am aware, not a well chosen time at which to make an appeal for large funds, but it is unavoidable, for the gift which I have announced compels us to act at once and for my part I think it is singularly fortunate that it came in time to enable us to incorporate the College of Medicine in the project before it had become too late to do so. A further opportunity for making a renewed appeal may arise when the buildings are approaching completion a year or two hence. I am not disposed, gentlemen, to embark on a scheme whose success is problematical, and if I were I am sure that no "wild cat" project would find acceptance with you whom I have asked to consider this scheme. I propose to go no further than can be economically and financially justified when we have the report of the sub-committee before us. I will now propose two resolutions and ask the committee to record their votes upon them. I suggest that we shall adjourn without any further proceedings on this occasion unless any gentleman should record a dissentient vote and desire to express his reasons for it to the committee or should take exception to any statement I have made. I propose that we shall assemble for a full discussion on the data and the recommendations supplied to us by the sub-committee at a later date as soon as I have received its report and when the results of its appeal on behalf of the endowment fund are known. I trust that everyone here present will do his utmost to ensure the success of that appeal. The resolutions I put before the committee are as follows:—

"That this committee desires to record its appreciation of the generosity and public spirit which has prompted the offer made by Mr. H. N. Mody. (2) That a sub-committee be appointed to report in accordance with the terms of reference proposed."

The summarised report of the sub-committee thus appointed was as follows:—

- (1) It was found to be impossible to erect buildings, adequate for the purpose in view, for the amount provided by Mr. Mody; and the minimum annual cost of staff and maintenance was estimated at £6,100.
- (2) These figures appeared so prohibitive that "the committee were agreed that the University proper even of two faculties only, could not be established with the funds in hand or in sight at the present moment.

This must have been a great blow to the College authorities. When they unselfishly decided to cast in their lot with the University scheme, they were just on the verge of attaining the goal they had worked for twenty-one years, and now it appeared doomed. But in any project that is worth while, for every occasion there arises a man—or in this case it should be there remains a man—for here again the character of Dr. Ho Kai shines forth as a worker of no mean order and one who had the courage of his convictions. He brought forward a new scheme involving the medical college and the technical school which, although not accepted, stimulated anew the fight for acceptable schemes. At length it became apparent that none of the alternative schemes were acceptable by all sides and the problem resolved itself into either abandoning the university plan altogether or else attempting to raise the necessary sum, namely £110,000, and Mr. Mody agreed to leave his offer open for six months from January 1st, 1909. Later Sir Frederick Lugard stated,

“I confess that, though keenly anxious for its success, I felt some misgiving in identifying myself with a project which appeared so precarious, and the failure of which would involve some loss of prestige. Thanks to the generosity of Messrs. Butterfield & Swire, to the enthusiasm of the Chinese, and the efforts of Dr. Ho Kai, . . . those who were interested in the scheme and who believed in its great potentialities, have, with varying alternations of hope and fear, had the satisfaction of seeing the required minimum raised within the period assigned.”

This was accomplished only by the intense activity of all interested. Dr. Ho Kai formed a Chinese committee, and generous donations from Chinese friends in Hong Kong, China proper, the Straits, Saigon, Australia and elsewhere soon began to pour in. These were crowned by a gift of \$200,000 collected by H.E. Chan Jen Chun, Viceroy of Canton, and when Messrs. Butterfield & Swire and allied firms donated £40,000, the goal was attained.

### *The University Period.*

This period we shall deal with more rapidly because the history of this section is relatively recent and much better known to most of us here. In 1912 the University was opened and automatically the Faculty of Medicine came into existence as the senior Faculty, the teaching staff of the College becoming lecturers in the Medical Faculty, the students of the College being transferred to the University.

The effects of this change on medical education in Hong Kong I would classify in three groups.

(a) Whereas the College was solely concerned with problems of medical education, the efforts of the University are directed towards education in general, and to a certain extent therefore, especially when funds are insufficient, medical expansion is not now possible on the scale many of us would like. Yet this disadvantage is offset to a definite extent by many of the advantages that follow the founding of the university.

(b) With the advent of the University and the institution of degree courses in Medicine, a permanent whole-time staff became necessary. All the tuition in the College had been given by local professional men on a part-time basis, but in October 1913 the first full-time Chair in the Medical Faculty, that of Physiology was filled by the appointment of Dr. G. E. Malcolmson, and in January 1914 Dr. K. H. Digby was appointed to the new chair of Anatomy. The Anatomy School was built at a cost of \$50,000 out of the funds donated by Mr. Ng Li Hing, and the building opened in 1913. The pre-medical subjects along with Physiology and Pathology were taught in the main building and the clinical instruction was given at the Alice Memorial, Nethersole and Tung Wah Hospitals. In October 1914 the Government Civil Hospital was opened to our medical students, and in February 1915 the next great step towards the establishment of a really modern medical teaching centre was made possible through the generosity of Mr. (now Sir Robert) Ho Tung. He donated \$50,000 towards the cost of the teaching staff with the proviso that not less than \$2,000 a year of the interest should go towards the remuneration of a Chair of Clinical Surgery. Thus was founded our first clinical Chair, The Ho Tung Chair of Clinical Surgery to which Mr. Martin Lobb was appointed. In 1915 both Professor Malcolmson and Professor Lobb resigned, and Dr. H. G. Earle was appointed to the vacant chair of Physiology and Professor Digby to the Chair of Surgery. In the same year the late Dr. Jordan, who was then lecturer in Tropical Medicine, was made a professor. In February 1918, Chairs of Chemistry and Pathology were created, and a Lectureship in Biology followed in June of that year; the chairs were filled in 1920, that of Chemistry by Professor Byrne and Pathology by the late Professor C. Y. Wang.

The generosity of three staunch Chinese supporters of medical education, Mr. Ho Fook, Mr. Chan Kai Ming and Mr. Ho Kam Tong enabled the University to build and equip a School of Physiology, a School of Pathology and a School of Tropical Medicine, their donations amounting to \$150,000. By 1920 the expansion in the three Faculties together with the changes in money values following the war placed the University in a serious financial position, and a Commission of Enquiry under the Chairmanship of Mr. H. E. Sharp was appointed by the Governor. As a result of the findings of this Commission,

representations were made to the Rockefeller Foundation of New York asking for help to found three full-time clinical chairs. The whole situation was investigated with characteristic thoroughness, and in the end the Foundation donated \$750,000 to found these chairs and to enable the University to carry out other very necessary changes in the pre-clinical departments. The new Chair of Surgery then became associated with the Ho Tung Chair of Clinical Surgery and Prof. Digby took over the joint post. The late Dr. John Anderson (afterwards of this Institute) was appointed to the Rockefeller Chair of Medicine in 1923, and in 1924 the Rockefeller Chair of Obstetrics and Gynaecology was filled by the appointment of Dr. Tottenham. Of the many important developments consequent on the acceptance of this valuable Rockefeller gift, one was the creation of a separate Chair of Anatomy to which Dr. J. L. Shellshear was appointed in 1922, and also the transference of the teaching of Histology and Embryology from the Physiology to the Anatomy department, and hence, after 37 years involving many changes in fortune, we now find the Faculty of Medicine in Hong Kong established as a self-contained school comparable with the medical schools of Great Britain.

(c) The third great change brought about by the formation of the University is to be found in the status of the medical degrees. The College of Medicine had tried repeatedly to get the local government to recognise their diploma; in 1896 the Court of the College was of the opinion that their Licentiates should be granted a recognised status, and Government was petitioned to confer this status by law. In 1908 Licentiates resident in Hong Kong were gazetted by Government as being authorised to grant death certificates. The pre-medical instruction given by the College had already been recognised by the General Medical Council of Great Britain as fulfilling their requirements. In September 1913 the Medical Faculty of the University recorded the receipt of a letter from the Registrar of the General Medical Council of Great Britain in which he stated:—

“that the Council had decided to recognise the degrees in Medicine and Surgery of the University, granted after examination, for registration in the Medical Register.”

This gave, and still gives, our graduates a very definite status in the medical world, but it has also placed on the University an obligation to maintain a definite standard, and hence the attainment of the position described above demands more than ever that we should not relax our efforts to keep abreast of rapidly advancing medical science. In his despatch to his Chief Officials in 1909, H.E. the then Viceroy of Canton wrote

“Up to the present time our country (China) has not a properly organised institution to impart a professional and technical training to our people.”

So rapidly have things developed in this part of the world that in these days many of the medical departments in Chinese Universities are better equipped than ours in Hong Kong. In addition to that the demands of countries in the Far East are for clinical men well trained in the principles of Public Health and Preventive Medicine, and for graduates capable of filling senior posts in medical teaching centres. To meet these demands we have had to pay more attention of late years to public health and post-graduate training.

*Post-Graduate Training.*

One of the conditions of the Rockefeller gift was that each clinical professor as well as those of Anatomy, Physiology and Pathology should have an assistant; these posts have been created and are filled by our own graduates, and in the case of some of the earlier appointments, the appointees were first granted Rockefeller Travelling Fellowships thereby gaining invaluable experience to fit them for the work they were to undertake. With the funds received by the Medical Faculty from the Boxer Indemnity Grant, other assistantships and demonstratorships were established for our graduates. By this means our best students are able to gain further clinical and teaching experience which we hope will fit them for responsible posts in their own country. They do, to a small extent, gain experience in methods of original investigation, but although Hong Kong provides unparalleled opportunities for such work, its University as yet provides no funds for research. This is certainly one of our greatest shortcomings at the present moment. The Indemnity Funds were further used to establish part-time teaching posts in such special clinical subjects as Ophthalmology, X-rays and Venereal Diseases, which posts are now added to the previously existing part-time ones of Anaesthetics, Vaccination, Medical Jurisprudence and Public Health.

The magnificent gift of \$50,000 by the late Mr. Kwok Siu Lau enabled a separate Department of Biology to be placed at the disposal of the Reader in that subject, which post had been made a full-time one in 1928. But there remained two of the points agreed upon at the time of the Rockefeller gift still unfulfilled; they were the building of a students' hostel near the hospital, and the complete separation of the actual Department of Surgery from that of Anatomy. When the plans of the new Queen Mary Hospital were recently drawn up, they included a hostel, but economy demanded their subsequent withdrawal. In 1933 the University found itself in the unusual state of having some surplus funds, and it was decided to build a School of Surgery which was finished at a cost of \$24,131 in 1934, and was officially opened in 1935. By the further generosity of Mr. Ho Kam Tong the new school was provided with an epidiascope, and it now needs but research fellowship endowments to enable it to become an effective surgical centre both for teaching and research in the Far East.



*Public Health Training.*

Throughout the records both of the College and the University, it has been repeatedly stressed that the aim of a Medical School in Hong Kong is to make available as cheaply as possible, the advantages of British medical education to the Chinese in their own country as well as those in Hong Kong, and hence while adhering as closely as is required to British educational methods and standards, it is incumbent on us to shape our courses according to the requirements of the great neighbouring country of China. A few years ago we made a determined effort to improve our public health training, and again we turned for help to the Rockefeller Foundation, and again we were made most helpful and generous offers. Unfortunately, due to lack of funds on our side and to the complex situation existing between the Government Department and the Medical Faculty, the University was compelled, with great reluctance, to admit that it was as yet unable to accept the generous offer of the Foundation. We have not however, given up hope of being able to take this long intended and long over-due step. Some years ago a piece of land opposite the University was offered to us on very reasonable terms, and as it was eminently suited both in size and position for a University Department of Public Health, the Government was persuaded to save it from passing altogether out of the scope of these plans, and so once again we but await the advent of some generous benefactor. With such help we shall be able to embark again on the scheme of establishing a modern School of Public Health in our Faculty. Such a School is undoubtedly our greatest need at the present moment, and until we institute one we cannot claim to be a medical school efficient in all respects for training medical men for practice in the Far East. In the meantime with the inestimable help of the officers and the Department of the Hong Kong Government Medical Service, our fifth year students now receive an extensive training, both theoretical and practical, in all the branches of public health and preventive medicine as exhibited in the Colony.

And now, Ladies and Gentlemen, I have traced in a sketchy, but I hope not too tiresome a manner, the development of Medical Education in Hong Kong during the fifty years of 1887—1937 and I should like to conclude by bringing into relief what appear to me to be the most outstanding points of this history.

(1) Firstly, the striking examples of human endeavour and unselfish devotion to public work; I would draw your attention to Manson with his genius and inspiration; Cantlie with his faithfulness to duty; Jordan with his long period of active and unobtrusive service; but in my humble opinion, after much study of the records, I would give pride of place to the names of Dr. Ho Kai and Dr. Francis Clark. Dr. Ho Kai you will remember was at that first memorable meeting

in August 1887; he lectured on Medical Jurisprudence in the College for nearly twenty years; he was an active and ever present member of the College governing bodies right through its life; he was a prime mover in all the negotiations between College and University; he ever kept before him the aims of that small band who first started medical education in Hong Kong, yet never taking a narrow but always the broad outlook which characterises the educated and versatile gentleman he certainly was; at every deadlock it was always Dr. Ho Kai who appeared with a new solution for the problem, and he was just as ready to accept other schemes or views when shown they were better than his. This Chinese lawyer and doctor served the cause of medical education in Hong Kong right through its College and into its University period, and for this great work he was knighted. Never did any one merit an honour more for his devotion to the cause of education than did Sir Kai Ho Kai. The other name is that of Dr. Francis Clark. His name appears in the records of the College for the first time in 1896 when he was appointed lecturer in Physiology and became a member of both Senate and Court. In March 1897 he was appointed Dean of the College, which post he held for the remaining 15 years of its existence, after which he became first Dean of the Faculty of Medicine and he remained Dean till he left the Colony in 1916. A study of this history leads me to pay him this great compliment, namely coupling his name with that of Sir Kai Ho Kai for favourable mention for duty during the College period. In the University period two names stand out, those of Digby and Earle, but because this is not yet history, and because their work for medical education in the Far East is by no means yet completed, we must be content with the mention of their names in the confidence that when their work is done, their achievements during the early university period will be adjudged as worthy of a place along side the successes of the pioneers of the College period.

(2) Secondly, the glorious record of benefactions. Sir Kai Ho Kai, Major General Gascoigne, Mr. E. R. Belilios, Major General Cameron, The German Consul, Messrs. Morgan, Dennys, Humphreys, Brookes and Cantlie, Tang Chuk Kai and Ng Li Hing during the College period, and Ng Li Hing, Ho Fook, Chan Kai Ming, Ho Kam Tong, Sir Robert Ho Tung, Kwok Siu Lau, Sir Eli Kadoorie, Mr. Joseph and the Rockefeller Foundation during the University period; and the Hong Kong Government throughout the whole 50 years. Here in this Institute and at this point it is doubly fitting to refer to the gift of £250 for a gold medal to be given annually to our best graduate. This bequest was made by the late Dr. John Anderson, our first full-time Professor of Medicine and later a member of this Institute.

(3) Our record. The College granted 48 diplomas and in July 1912 there were 24 students on its rolls. Our medical students now

number 130 and during 25 years the University has granted 258 degrees of M.B., B.S., 7 of M.D. and 1 M.S. We are proud to think that some of the most illustrious men of medical science in the Far East are amongst our Honorary Graduates; our graduates in examinations both here in China and in post-graduate work in England are showing that their ability coupled with their basic medical training in Hong Kong, has fitted them to match their learning against that of scholars from other parts of the world; their accomplishments are beginning to make the Medical Faculty of Hong Kong University known as a small but important centre for medical research in China. We are acutely conscious of many shortcomings, but with sympathetic and judicious help we are confident, that with the example of the 25 years of struggle of the College ever before us, we shall overcome our difficulties as they overcome theirs.

And now I must finish. Perhaps some of you may have wondered why I did not start this paper in the usual and conventional manner of rendering thanks to Dr. Earle and the members of this Institute for their kindness in asking me to read this paper here to-day. I have kept it to the last in the hope that you will appreciate the sincerity of these thanks. You have heard a story of medical castles in the air, of high and pious hopes blasted by difficulties and depressions; of devotion to duty rewarded by just enough success to stimulate further effort; actors appeared, some playing their short but essential parts and moving on, while others, with their longer parts, sustained the main theme; and so the play goes on. What has been achieved, has been achieved through the whole-hearted co-operation of both Chinese and British, with but one purpose at heart and but one goal in view. Just as it was obvious to our predecessors that a good medical school in Hong Kong would be of incalculable help to China, so it is obvious to me to-day that an efficient medical school situated where these two great peoples meet should also be of incalculable value to British medicine in particular and medical science as a whole in general. I therefore close with no mere conventional thanks, but with the sincere expressions of gratitude for the opportunity of learning this valuable lesson from our own history. Having come to teach, we remain to learn.

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## Review of Books

Catechism Series. E. & S. Livingston, Edinburgh. *Botany and Elementary Genetics*. 1937. Price 1/6 each net, postage 2d.

The questions in *Botany (Part II)* which has been completely rewritten and revised, cover Pteridophyta, Conifers, Bryophyta, and Thallophyta, their schemes of life histories and physiology. Under the last heading, questions on the biophysics and biochemistry of cells and plants as well as metabolism and transpiration are dealt with.

The volume on *Elementary Genetics* is a new addition to the Catechism Series and a very welcome one. In the space of 87 pages the Mendelian Laws, gene action, the chromosome theory of inheritance, linkage and mutation are all dealt with very clearly. The value of the book for medical students is greatly enhanced by the addition of two chapters on Human Genetics.

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*A Manual of Pharmacology*. By W. E. Dixon, eighth edition revised by W. A. M. Smart, London. Edward Arnold & Co., 1936.

With the premature passing of the original author of this well known and widely used text-book, the publishers have wisely decided not to discontinue its publication. They have passed it into the hands of a new editor, Dr. W. A. M. Smart who has completely recast the book, and without being unfair or disloyal to the author of the earlier edition, the change must be acclaimed a success. The old editions served their day and generation admirably, but rapid advances in knowledge not only demand the inclusion of new matter, but of new methods of presentation.

For example, structural formulae, although it is not necessary or advisable for a student to commit them to memory, do help in the understanding and memorising of the actions of groups of drugs, and they do in so many cases exemplify the important dependence of pharmacological action on chemical structure.

The other parts which are of great help to students and extend its value far beyond the pharmacological period of study, are the paragraphs in each chapter devoted to the therapeutic uses and actions of each group of drugs. The book, which is comprehensive yet compact—it contains 483 pages—is very well set up and printed, and can without fear be highly recommended to all medical students.

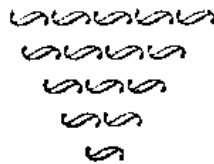
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*Elementary Pathology.* By Keith S. Thompson, Illustrated.. Pp. viii  
80. London: H. K. Lewis & Co., Ltd. 10s. 6d. Net.

This book has been compiled with the main object of giving the junior medical student the elements of pathology in a note-book form. Consequently, blank pages have been included for his own notes, whether taken from lectures, practical classes or demonstrations.

The subject-matter is very short and concise, the author dealing with each chapter in brief and general terms. Some of the microphotographs are excellent.

The book should provide useful reading to the junior pathology student, provided, of course, he would not use it solely as a text-book.



## Acknowledgments.

- Annual Epidemiological Report (Corrected Statistics of Notifiable Diseases for the Year 1935).
- Archives of Medical Hydrology. Vol. XV. No. 2. April, 1937.
- Aanwinstenlijst over de Maanden Maart. April, 1937.
- Annales de la Universidad Central. Vol. LVIII. No. 298. Oct.-Dec., 1936.
- Archives de la Societe des Sciences Medicales et Biologiques. Vol. 18. Nos. 1 & 2. Jan. & Feb., 1937.
- Arquivo de Patologia. Vol. VIII. No. 1. April, 1937.
- Bulletin of the New York Academy of Medicine. Vol. 13. Nos. 2-4. Feb. to April, 1937.
- Bulletin de la Societe Medico-Chirurgicale de L'Indochine. Vol. XV. Nos. 1-3. Jan. to Mar., 1937.
- Bratislaviske Lekarske Listy. Vol. XVI. Nos. 1-12. Jan. to Dec., 1936.
- Bulletin de la Societe Roumanie de Neurologie, etc. Vol. XVI. No. 4. 1935.
- Bulletin de l'Academic de Medicine de Roumanie. Vol. III. No. 2. Feb.-Mar., 1937.
- Chiba Igakkai Zasshi. Vol. XV. Nos. 2-5. Feb.-May, 1937.
- Cambridge University Medical Society Magazine. Lent Term. 1937.
- Chinese Medical Association. Special Report Series No. 8.
- Ching-San (Medizinischen Monatsschrift). Vol. 2. No. 4. May, 1937.
- Epidemiological Report. Vol. 16. No. 3. 1937.
- Fukuoka Acta Medica. Vol. XXX. Nos. 3-5. Mar.-May, 1937.
- Folia Medica Sinica. Vol. 2. Nos. 3 & 4. Mar. & April, 1937.
- Far Eastern Medical Journal. Vol. 15. No. 3. March, 1937.
- Guy's Hospital Gazette. Vol. II. Nos. 1268-1271. Feb.-April, 1937.
- Health & Empire. Vol. XII. No. 1. March, 1937.
- Kwong Wah Medical Journal. Vol. I. No. 2. April, 1937.
- King's College Hospital Gazette. Vol. 16. No. 2. April, 1937.

- La Universidad. No. 2. 1936.
- Middlesex Hospital Journal. Vol. XXXVI. No. 2. March, 1937.
- Medicina De Hoy. Vol. II. Nos. 1-3. Jan.-March, 1937.
- McGill Medical Undergraduate Journal. Vol. VI. No. 3. Feb., 1937.
- Mitteilungen aur der Medizinischen Akademie zu Kioto. Vols. 19 and 20. Nos. 4 & 1. April & May, 1937.
- Oriental Journal of Diseases of Infants. Vol. 20. No. 3. Nov., 1936.
- Okayama Igakkai Zasshi. Vol. 49. Nos. 4 & 5. April & May, 1937.
- Post Graduate Medical Journal. Vol. III. Nos. 137-139. Mar.-May, 1937.
- Queen's Medical Magazine. Vol. XXXIV. No. 4. March, 1937.
- Quarterly Bulletin of the National Medical College of Shanghai. Vol. II. No. 1.
- Revista de la Medico Sucre. Vol. XXXIII. No. 63. Dec., 1936.
- Revue Medico-Chirurgicale de Jassy. Vol. 47. No. 6. 1936.
- St. Bartholomew's Hospital Journal. Vol. XLIV. No. 6. March, 1937.
- St. Thomas's Hospital Gazette. Vol. 36. No. 1. February, 1937.
- St. Mary's Hospital Gazette. Vol. XLIII. Nos. 2 & 3. March & April, 1937.
- The Japanese Journal of Experimental Medicine. Vol. 15. Nos. 1 & 2. February to April, 1937.
- The Hospital. Vol. XXXIII. Nos. 3-5. March-April, 1937.
- The Broadway. Vol. R6. No. 8. Winter 1936/37.
- The Journal of Clinical Medicine. Vol. 2. No. 1. Jan.-March, 1937.
- The New Zealand Medical Journal. Vol. XXXVI. No. 192. April, 1937.
- Taiwan Igakkai Zasshi. Vol. XXXVI. No. 4 & 5. April & May, 1937.
- The Birmingham Medical Review. Vol. XII. No. 1. Mar., 1937.
- The Journal of Bone & Joint Surgery. Vol. XIX. No. 2. April, 1937.

- The Journal of the Chosen Medical Association. Vol. 4 & 5. April & May, 1937.
- The North Wing. Spring. 1937.
- The Ulster Medical Journal. Vol. VI. No. 2. April, 1937.
- Transactions of the College of Physicians of Philadelphia. Vol. 4. No. 2. 1937.
- The Newcastle Medical Journal. Vol. XVII. No. 1. Jan., 1937.
- The Bristol Medico-Chirurgicale Journal. Vol. LIV. No. 203. Spring 1937.
- University College Hospital Magazine. Vols. XXI & XXII. Nos. 6 & 1. Nov.-Dec., 1936 & Jan.-Feb., 1937.

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