

Original Articles
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CASES OF INTEREST SEEN AT THE
RADIOLOGICAL DEPARTMENT OF
THE ERSKINE HOSPITAL, MADURA,
DURING 1941 AND 1942

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MADURA, a town of roughly a quarter million inhabitants, is the largest city in India south of Madras. The Erskine Hospital was opened in 1940, and has accommodation for 537 patients. It is one of the most up-to-date mofussil hospitals in India. Here are given a few brief notes together with the skiagrams of some of the cases of interest that passed through the radiological department in 1941 and 1942.

Nervous system (plate XV)

Figure 1.—Pituitary tumour. The skiagram shows the sella turcica greatly enlarged.

Figure 2.—Spinal tumour. Cisternal puncture with injection of neo-hydriol; shows the neo-hydriol held up by the tumour at the level of the 4th dorsal vertebra.

Respiratory system (plate XV)

Figures 3 and 3a.—Cystic bronchiectasis in a girl of 14, with very few physical signs, but with the condition clearly shown by neo-hydriol injection.

Figure 4.—Tumour of left lower lobe of lung in a woman of 35. A filling defect is seen after neo-hydriol injection, in the lower middle zone.

Circulatory system (plate XV)

Figure 5.—Congenital heart disease. A girl of 14 with cyanosis of lips and finger nails, with a loud systolic murmur in the pulmonary area, conducted up to the outer side of sterno-clavicular junction on both sides. The heart shows hypertrophy of the left ventricle—boot shape in outline—and widening of the upper mediastinal shadow. Co-arcetation of aorta?

Figure 6.—A boy of 15 admitted for dyspnoea. A systolic thrill in the pulmonary area, and a loud systolic murmur conducted from the pulmonary area to the left side of neck. X-ray shows an enlarged heart with extra prominence of the conus arteriosus.

Digestive system (plates XV and XVI)

Figures 7 and 7a.—A case of regional jejunitis. In the 1st skiagram, taken 5 minutes after the barium meal, there is a more-or-less homogeneous filling of the jejunum instead of the usual feathery appearance; and in the 2nd picture, taken at 3 hours, spots of barium are seen sticking to some places after these coils have generally emptied. Operation confirmed

the diagnosis and the pathologist's report on the resected portion of jejunum was 'Non-specific granulomatous ulceration; no evidence of tuberculous infection'.

Figure 8.—A case of multiple peptic ulcers. The skiagram shows an accessory pocket of a large perforating ulcer in the lesser curvature, and another ulcer in the pre-pyloric region, causing stenosis and six-hour retention of the barium meal in the stomach; diagnosis confirmed at operation.

Figure 9.—A case of carcinoma of the head of clinically, bilateral lumps were felt in the duodenal 'C' curve, and pressure deformity of the stomach; confirmed at operation.

Urinary system (plate XVI)

Figure 10.—A case of polycystic kidneys: clinically, bilateral lumps were felt in the hypochondrium. X-ray examination (after injection of pyelectan) shows gross enlargement of the kidneys and the pelvis, and irregular enlargement of the calices.

Figure 11.—A case of bilateral hydronephrosis (with a co-existing branched renal calculus in the left side) in a lad of 18 years. The tumour was of considerable size on the right side, and the right kidney function was defective, and the dye concentration poor. The renal pelvis and calices are not visualized on the right side in the skiagram, which was taken 20 minutes after the injection.

Skeletal system (plates XVI and XVII)

I. *Injuries*: *figure 12.*—A case of fracture-dislocation of the 2nd lumbar vertebra, with no sensory loss and no loss of visceral reflex, but with paresis of the lower extremities, more marked on the left side. For such gross displacement, the injury to the cord or cauda equina was negligible.

Figure 13.—Fracture-dislocation of the head of the radius due to a fall from a tree. The broken head lies in the medial aspect of the elbow.

II. *Diseases*: *figures 14 and 14a.*—A case of Paget's disease in a girl of 20 years. She was referred to the Radiological Department for ? T.B. hip. Besides changes elsewhere, the pelvis shows a 'woolly' appearance, and localized diffuse increase in density, with obliteration of the cancellous trabeculae in these dense areas. In the skull, linear areas of condensation and osteoporosis are seen side by side, and there is marked enlargement of the sphenoidal sinus. (Osteitis deformans is rather uncommon under forty.)

Figure 15.—A case of syphilis of the skull, in a man of 50 years, with a history of syphilis 15 years ago. Frequent attacks of headache forced him to seek hospital aid.

The skiagram shows irregularity of the outline, affecting both the tables, and areas of bone destruction and sclerosis side by side.

(Concluded on next page)

A NOTE ON VITAMIN B₁ AND EXPERIMENTAL PEPTIC ULCER

By M. N. RAO

BRADFIELD (1928), McCarrison (1921) and Somervell and Orr (1936), the pioneer workers on the problem of the ætiology of peptic ulcer in India, were unanimous in their opinion that the 'poor Madrasi diet' has a direct relationship to the common incidence of the disease in South India. In this connection, figures other

(Continued from previous page)

Figure 16 (plate XVII).—A case of mycetoma. This is one of several cases especially studied for determining the radiological appearances. In a well-developed case, a fibrocystic degeneration is the usual finding, though in the early stages, hardly any bony changes are noticeable. The radiograph shows absorption of cancellous trabeculae, and the formation of cyst-like areas, chiefly over the bases of the metatarsals and the adjoining tarsus. The periosteal changes in the 5th metatarsal are conspicuous.

Figures 17 and 17a.—A case of ? Albers Schonberg's disease (marble bones), in an adult of 60 years, referred to the x-ray department for ? fracture of neck of femur. Several of his bones showed unmistakable marbling, and optic atrophy was present; but there was no 'club like' appearance of the tibial extremities of the femur, nor was there any characteristic tufting of the skull that goes with osteitis deformans.

Figure 18.—A case of rickets in a child of 11 years admitted for bilateral genu valgum.

X-ray examination reveals, besides changes in other bones, marked changes in the elbow joints, which are unusual. In the wrist, the radius shows the typical wine glass deformity (cupping) of the diaphyseal end, and the ulna is longer than the radius.

Miscellaneous (plate XVII)

Figures 19 and 19a.—A strange type of fistula. The radiograph shows the track connecting the abdominal wall with the trachea, through the right bronchus (when BIP was injected into the sinus in the right abdominal wall, it was coughed up into the mouth). The fistula was the result of a tumour of two years' duration in the right hypochondrium, which burst of itself.

Figure 20.—A case of endocrine disturbance in a married woman of 21 who was admitted for sterility and amenorrhœa. She was fat and had the facies of a child. The uterus was of the infantile type. X-ray of the skull shows hyperostosis of the frontal and parietal bones, and a rather small sella.

My sincere thanks are due to Lieut.-Colonel A. S. Leslie, I.M.S., Superintendent of this hospital, for his valuable suggestions and permission to make use of the hospital records.

than those already published (Rao, 1939) from different areas where people consume 'poor Madrasi diet' are interesting additional reading. Figures from the Osmania Hospital, Hyderabad, for the years 1931-35 show that 0.63 per cent of operations were for peptic ulcer. Similarly in Ceylon (Fernando, 1940) the number of operations for peptic ulcer ranged from 0.5 per cent (1939 General Hospital statistics) to 2.0 per cent (Dr. Gabriel's). Of all the various constituents of diet that have an influence on the gastrointestinal tract, vitamin B₁ is one of the important ones, and recent literature has many references to the influence of vitamin B₁ on the pathology of stomach. Moreover, vitamin B₁ happens to be also one of the deficient food principles in the poor Madrasi diet (Rao, 1939).

With the idea of studying the effects of vitamin B₁ deficiency on the stomach, a preliminary experiment was conducted and is reported below. For brevity the complete discussion is omitted, and only relevant points are emphasized.

Experiment

Twelve pups from two litters formed the experimental group. Before the experimental diet was commenced, the animals were weaned and later were given small quantities of cow's milk. All the pups were given a dose of anthelmintic prior to the experiment. The experimental diet was as follows:—

Milk and raw milled rice were autoclaved for one and a half hours. The rice was boiled with a little crude common salt and served with warm milk. Three drops of 'Adexolin Glaxo' were added in the morning feed for each animal, and half a tablet (25 mg.) of vitamin C (Redoxon-Roche) every second day. This diet yields nearly all the dietary essentials except the B group of vitamins.

The animals were kept in hygienic surroundings in well-ventilated enclosures.

The twelve dogs on which this report is based were autopsied either during or at the end of the experiment. The observations are given as a series of short protocols.

Dog 1. Diet taken for 21 days—died. On post-mortem examination, a minute erosion of the mucous membrane of the first part of the duodenum and a mild round worm infection were found.

Dog 2. Diet taken for 69 days—died. No abnormality on post-mortem examination.

Dog 3. Diet for 76 days; killed in good health by intracardiac ether. All the abdominal organs were normal.

Dog 4. Diet for 77 days—died on the 78th day. In the last two weeks the animal did not take the feeds properly. Post-mortem examination revealed nothing abnormal.

Dog 5. Diet for 92 days; during the course of the experiment it developed ataxic gait and aversion to food, and died. Examination of the viscera showed nothing abnormal. The stomach was dilated.

Dog 6. Diet for 93 days. During the last two weeks, the animal showed aversion to food and was not active. The post-mortem examination showed the small intestine slightly ballooned out in two or three areas and a shallow duodenal ulcer in the first part of

PLATE XV

CASES OF INTEREST SEEN AT THE RADIOLOGICAL DEPARTMENT, ETC. : S. SUBRAMANYAM (PAGE 323)

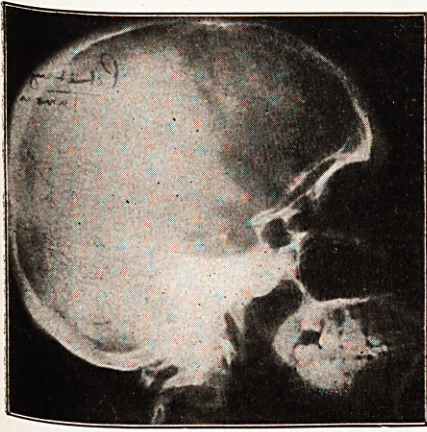


Fig. 1.—Pituitary tumour.

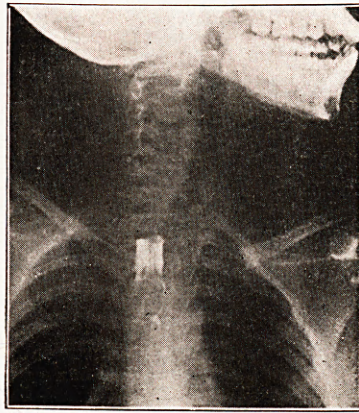


Fig. 2.—Spinal tumour.



Fig. 3.—Cystic bronchiectasis.
(A.P. view.)



Fig. 3a.—Cystic bronchiectasis.
(Lat. view.)

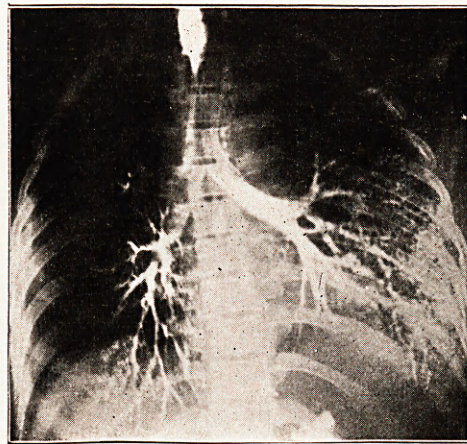


Fig. 4.—Tumour of lung.

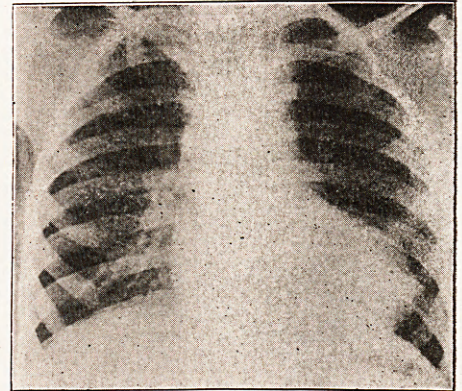


Fig. 5.—Congenital heart with boot-shaped left ventricle.

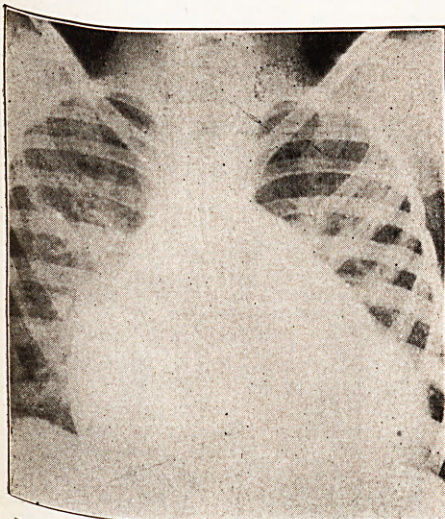


Fig. 6.—Congenital heart disease. ? Patent ductus arteriosus.



Fig. 7.—Regional jejunitis (5 minutes after barium meal).



Fig. 7a.—Regional jejunitis (3 hours after barium meal).

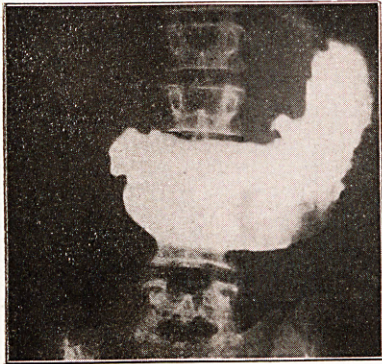


Fig. 8.—Accessory pocket of a perforating gastric ulcer and a pre-pyloric ulcer.

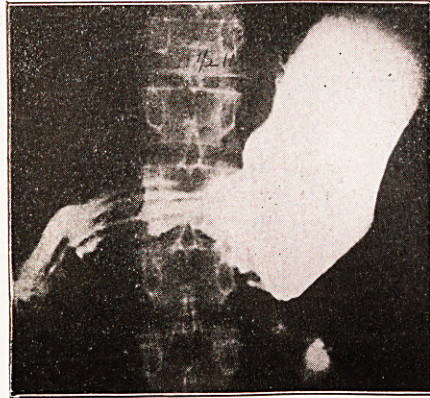


Fig. 9.—A case of carcinoma of head of pancreas causing marked widening of duodenal 'C' curve.

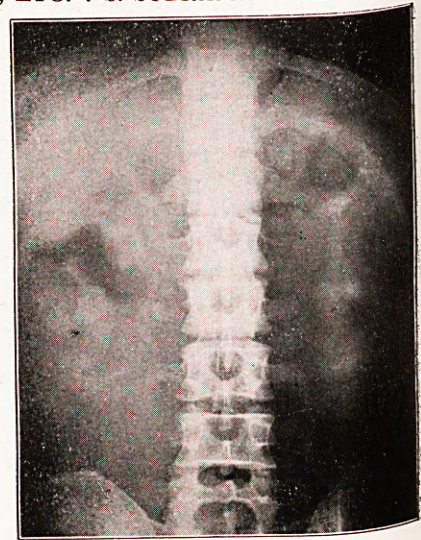


Fig. 10.—Polycystic kidneys.

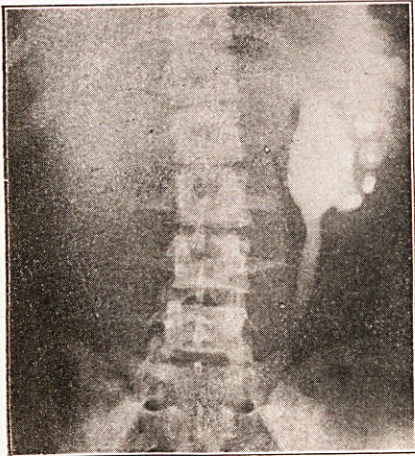


Fig. 11.—Hydronephrosis and renal calculus.

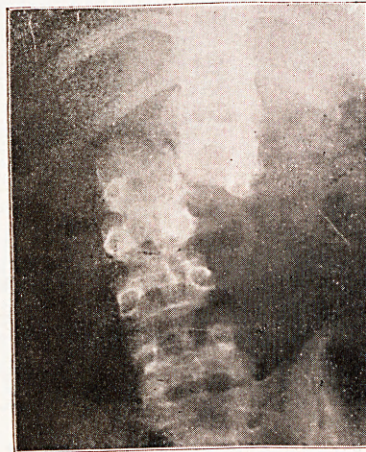


Fig. 12.—Fracture-dislocation of spine.



Fig. 13.—Fractured head of radius.



Fig. 14.—Pelvis in Paget's disease.

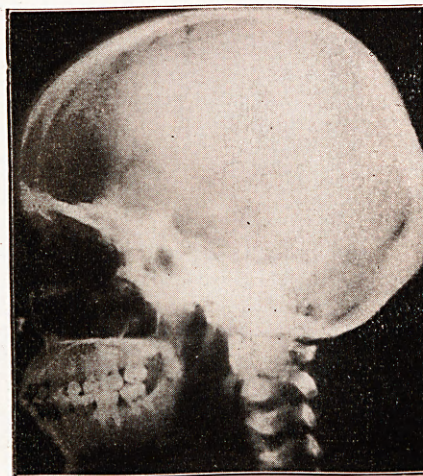


Fig. 14a.—Paget's disease; skull showing a large sphenoidal sinus.

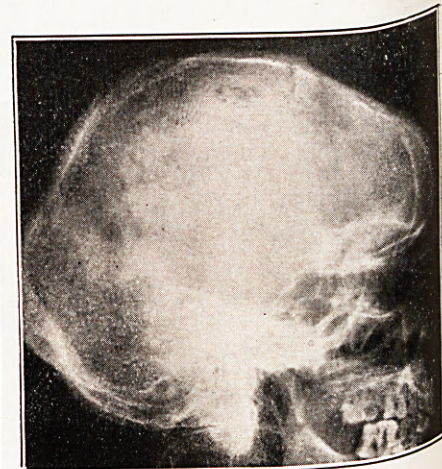


Fig. 15.—Syphilis of skull.

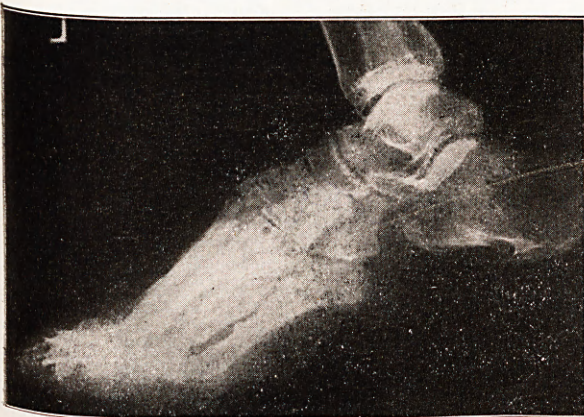


Fig. 16.—Mycetoma.

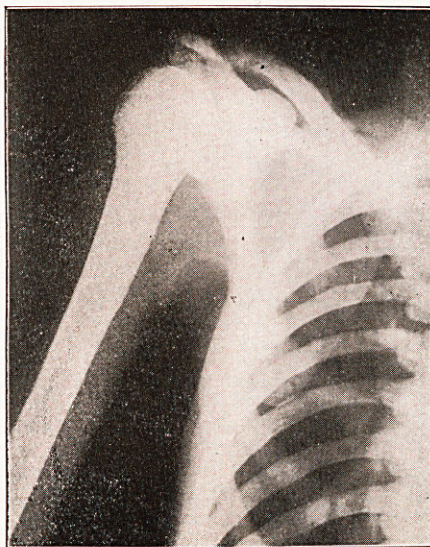


Fig. 17.—? Marble bones (Albers Schonberg's disease).

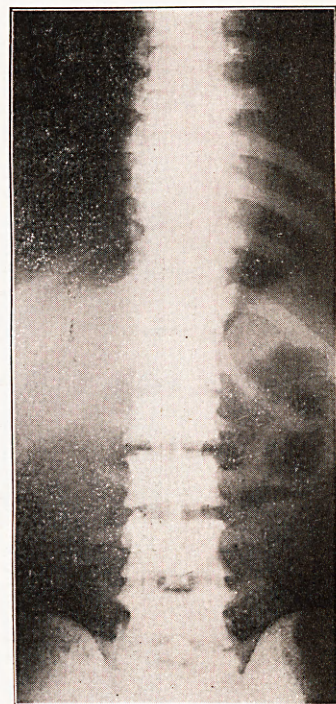


Fig. 17a.—? Marble bones (Albers Schonberg's disease).

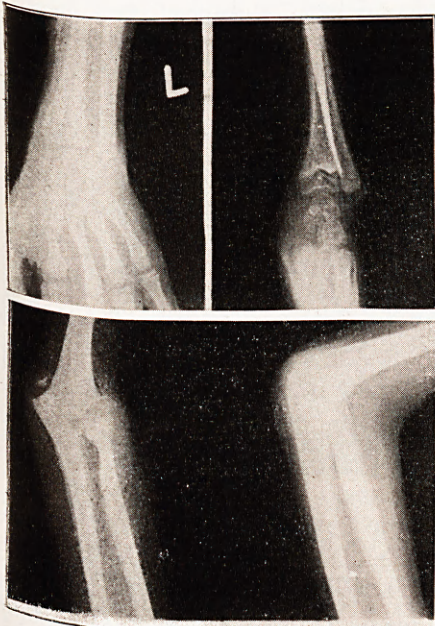


Fig. 18.—Rickets.

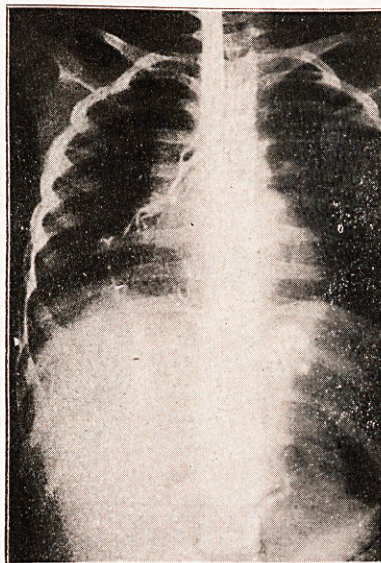


Fig. 19.—A strange type of fistula. (A.P. view.)

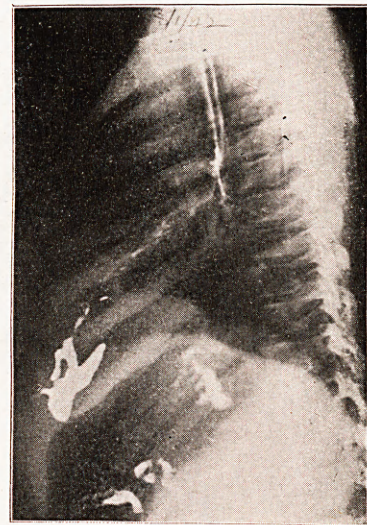


Fig. 19a.—A strange type of fistula. (Lat. view.)

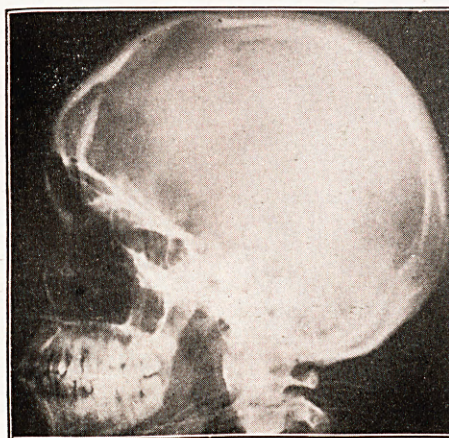


Fig. 20.—Skull in a case of endocrine disorder.



Fig. 1.—The duodenum and the lesser curvature of the stomach of dog 6 : showing an erosion in the former and a chronic ulcer in the latter.

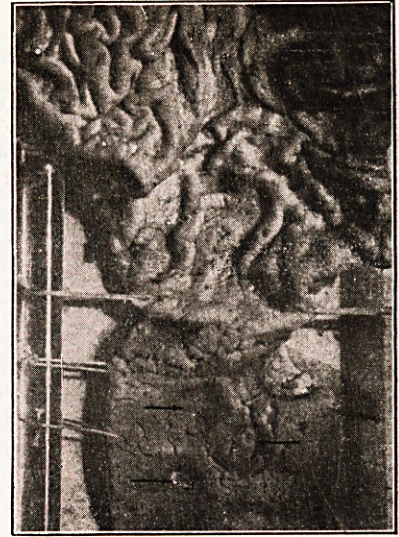


Fig. 2.—The pyloric antrum and the first part of the duodenum of dog 12 : three acute erosions in the duodenal wall are seen.



Fig. 3.—A chronic peptic ulcer in the pyloric antrum of dog 7.

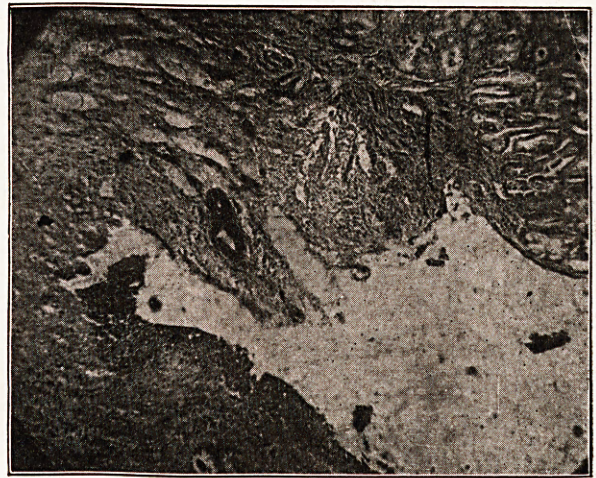


Fig. 4.—A photomicrograph of the ulcer in figure 3, showing the fibrosed base of the ulcer and the overhanging gastric mucosa at the margin.

PSAMMOMA OF THE CHOROID PLEXUS IN A CASE OF PULMONARY TUBERCULOSIS :
 J. F. COLTMAN AND B. P. TRIBEDI (PAGE 326)

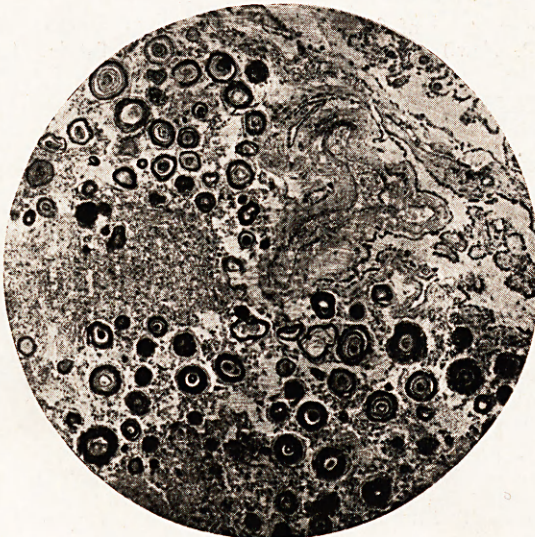


Fig. 1.—Low power photomicrographic view of the section from the tumour showing hyalinization and calcification of vessels and perivascular spaces.

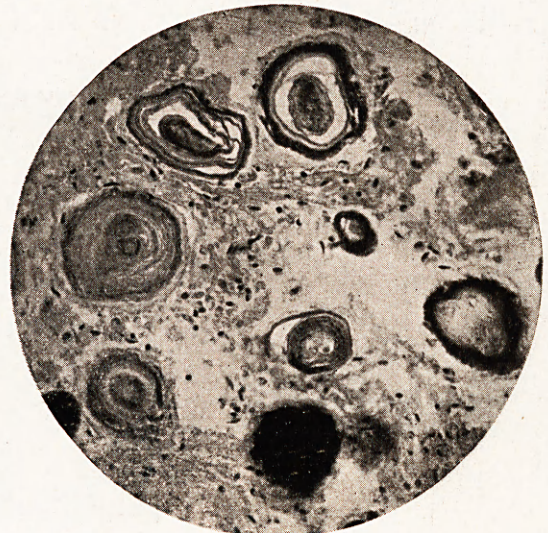


Fig. 2.—High power photomicrograph of the previous one showing complete calcified area.