

165/67.

REGIONAL CENTRE FOR NEUROLOGY AND NEUROSURGERY

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December 11th 1967. ESSEX.

Dr. J.A.N.Corsellis.  
Department of Neuropathology.  
Runwell Hospital,  
The Chase, WICKFORD.  
Essex.

Dear Dr. Corsellis,

Mrs. , aged 39.  
Inpatient, Ward E.3.

This lady had a fall on her head about the age of 2 and since then has suffered from frequent grand mal attacks preceded by an aura of adersion, when she either feels as though she is turning round, or she actually does do so. The attacks have persisted frequently in spite of different medications; E.E.G's repeated over many years have always shown a left frontal parasagittal spike focus. Skull x-ray is normal as was carotid angiogram, but air-studies showed very minimal dilatation of the body and frontal horn of the left lateral ventricle.

We had an opportunity the other day to expose the frontal and anterior parietal lobe by craniotomy. There was no surface abnormality on the brain. Electro-corticographic studies showed a fairly widespread area of spike activity in the superior and middle frontal convolutions. There was little activity in the medial side of the frontal lobe where one would have expected it to be if this were true ~~adversive~~ epilepsv. However, we carried out a wedge shaped lobectomy extending into the convexity 9 cms. back from the frontal pole, and in the orbital surface between 3 and 4cms. posteriorly. Medially it extended to the cigulate salous and laterally the frontal operculum was left behind.

I would be most grateful if you could undertake examination of this part of the frontal lobe, which as far as we could see contained all the abnormal electrical areas.

With kind regards,

Yours sincerely,

John Andrew, F.R.C.S.,  
Consultant Neurosurgeon.

Maudslayi

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L. frontal lobe

55 g

L. fr pole. 7.5 cm S-S

S-S A-D

2 cm thick flattened in fix. different

to orientate.

L. men. with thickened congested areas recent haem-

no micro abnormal of underlying cort apart recent scarring

(?top) medial border.

not deep enough to cut e/s. so sliced sagittal plane

l/s. show some narrowing + paling of cort in places impossible

to say of abnormal.

W in many pinpoint haem. + distinctive between cort  
+ W in blurred.

1. blocks from centre of specimen taken

Specimen cut in > 1cm blocks.

Bl. 4 already in paraffin }

B. 5 2 " }

B. 3 ~~4~~ 6. cellodine.

Weight after fixation: 55 gms.

Left frontal pole, measuring 7.5 cms. from side to side x 5.5. cms. above-down. Specimen approximately 2 cms. thick.

Macroscopical Appearance

Specimen flattened during fixation and it is extremely difficult to orientate. Leptomeninges are not thickened but are considerably congested with areas of recent haemorrhage.

No macroscopical abnormality of underlying cortex apart from some recent scarring, probably due to operation, along what appears to be the inferior border.

The specimen is not deep enough to cut coronally and has therefore been sliced in a sagittal plane.

Coronal cuts show some narrowing and paleness of the cortex in place but it is difficult to be certain whether this is abnormal.

The white matter contains many pin-point haemorrhages and in places the distinction between cortex and white matter is blurred.

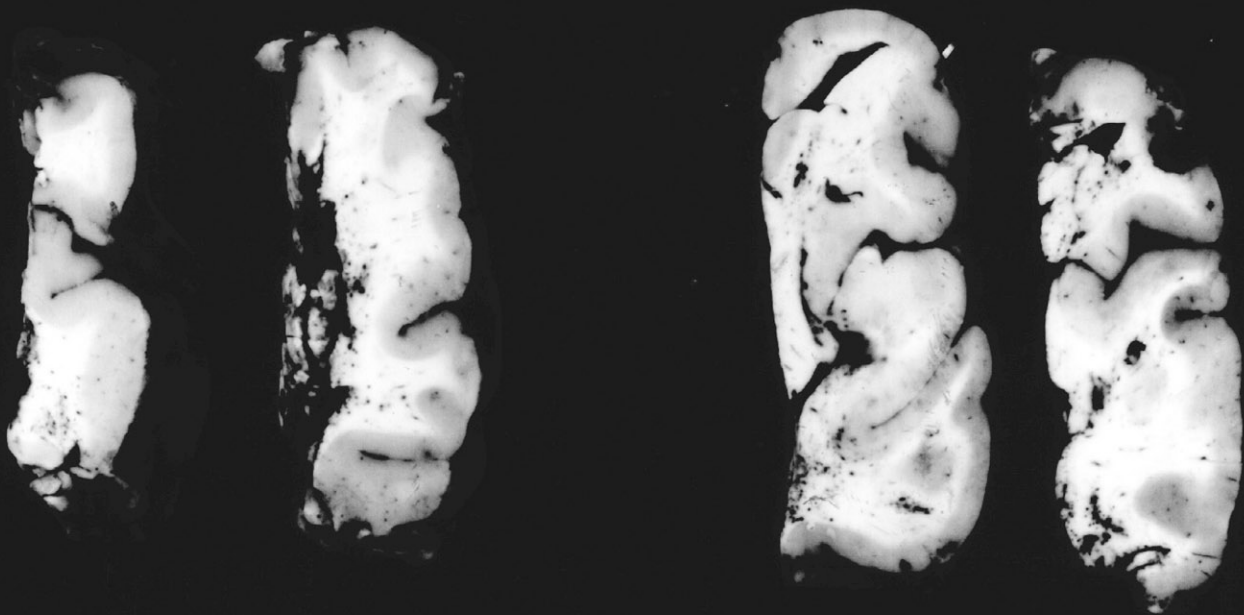
One block from centre of specimen taken. (for review after sections).

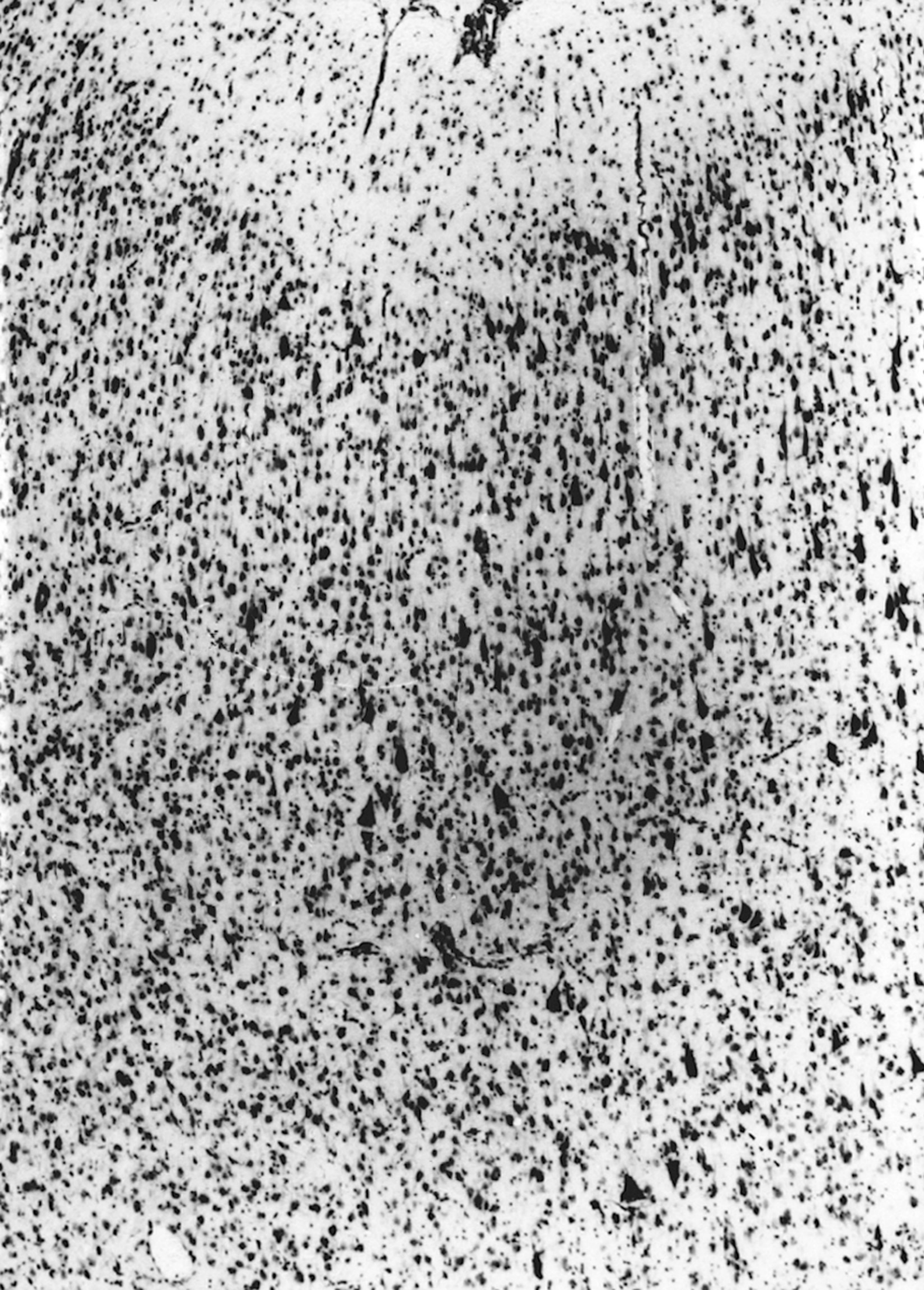
Specimen cut into seven blocks, approximately 1 cm. thick.

The resected specimen consisted of the anterior part of the left frontal lobe, the line of resection running obliquely down the convexity from a point on its supero-medial border 7.0 cms. behind the frontal pole to one 3.0 cms. posterior to the frontal pole on its lateral orbital margin. The cingular gyrus was not removed.

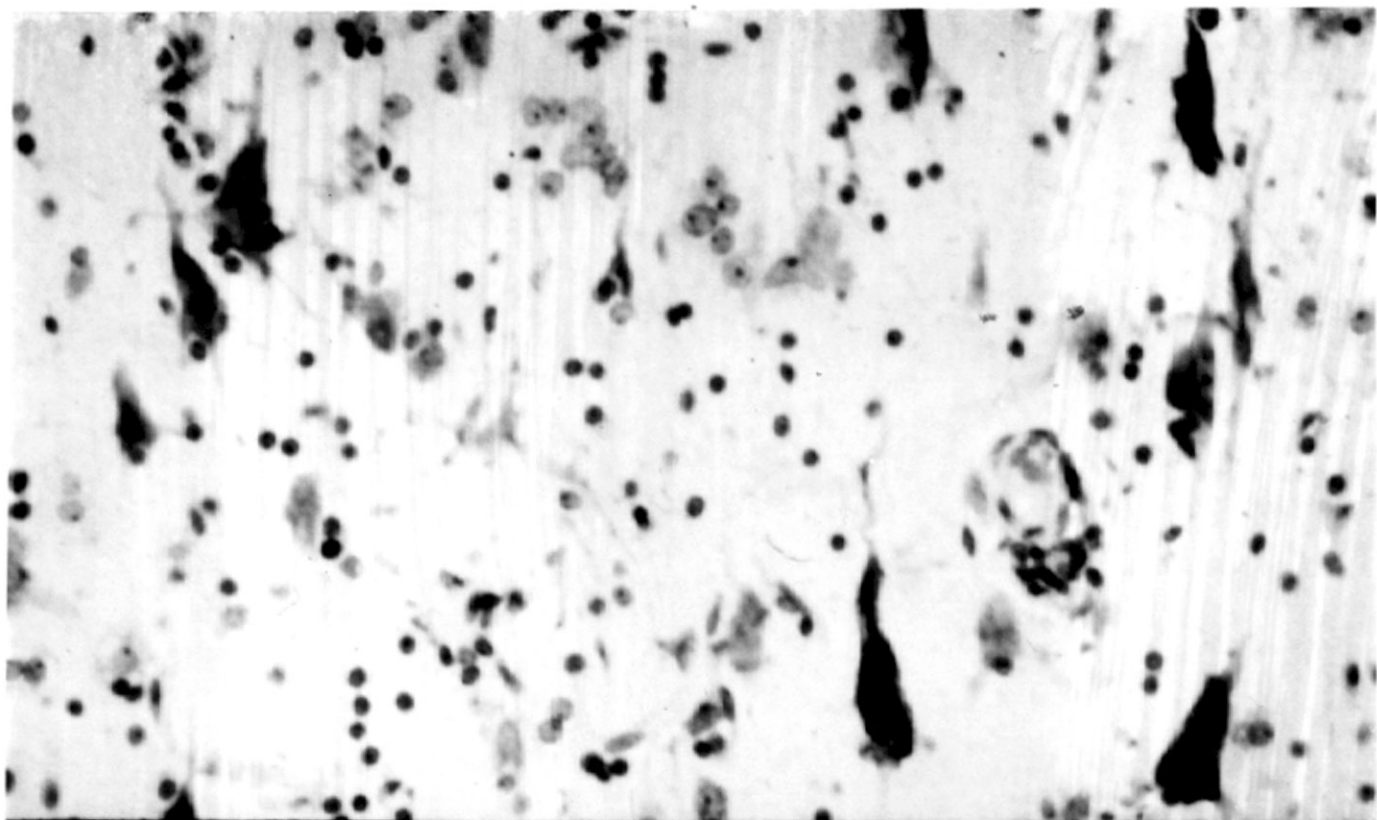
The fixed specimen looked normal to the naked-eye. Macroscopy, however, showed the cortex in the middle of the third frontal gyri to contain many exceptionally large deeply stained neurones scattered randomly through all but the first layer. The crown of the affected gyrus was spared, the anomalous neurones being concentrated around the base of the sulcus (fig. 1). The contrast between an affected and an unaffected area is shown in fig. 2. The anomalous neurones tended to impregnate deeply and selectively with silver. There were a few small scattered areas of neuronal loss and astrocytic proliferation and there appeared to be a general increase in cortical astrocytes which was particularly marked in the molecular layer. The white matter appeared normal.

The neuronal abnormalities are reminiscent of tuberous sclerosis but the resemblance is too slight to justify using this diagnosis. The case seems to me, at the moment, to be best classified as an anomaly in the cerebral cortex which is probably developmental.











Malformations -

Cortical Dysplasia

G 2 (7)

9607

q. ans.

