

Angiomatous Malformation of the Brain

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Clinical Summary

A young male aged 25, was admitted to the hospital with the main complaint of severe headache for 3 days without appreciable relief with sedatives and analgesics. Clinical examination at the time of admission did not reveal anything remarkable. The following morning, the patient was found lying unconscious in bed and making jerky movements of the limbs. He had developed marked neck rigidity, contracted and fixed left pupil and left sided hemiplegia, CSF drawn by lumbar puncture was found mixed with frank blood. A provisional diagnosis of cerebral haemorrhage in the left side was made. He was treated with sedatives, broad spectrum antibiotics, Corticoids, mannitol drip and other supportive therapy, combined with proper nursing care in view of the unconscious state. In spite of all treatment the general condition continued deteriorating and he expired after four days of admission. Lab. Investigations revealed that Serum and CSF tests for syphilis were negative. Blood as well as CSF cultures proved sterile.

Post-Mortem Findings

Pathological findings were confined to the brain and its meninges. The brain weighed 1320 g. and was covered by congested meninges. A big haemorrhagic spot with irregular margins was visible through the meninges over the right parietal lobe adjacent to the upper border of the right temporal lobe. On removing the meninges, a large blood clot under the haemorrhagic spot was traced deeper down in to the softened brain tissue, and the clot was ex-

tending into the right lateral ventricle which was filled with blood and blood clots. In the centre of the blood clot the benit culostriate branch of the right middle cerebral artery was found to be ending in an angiomatous malformation which appeared to have burst spontaneously resulting in a fatal cerebral haemorrhage.

Histo Pathological Findings

Paraffin section of the brain showed degeneration of the nerve cells around the area of haemorrhage with proliferation of astrocytic fibres and collections of scavenger cells in that region. The adjacent brain tissue was fairly vascular with numerous dilated capillaries suggestive of angiomatous malformation. The meninges were congested, section from the mesenteric lymph nodes presented reactive hyperplasia. There was nothing abnormal in any other organ.

Discussion

Massive cerebral haemorrhage may be primary (spontaneous) or secondary to some pathology including aneurysm, haemangioma, embolism, trauma or tumour. According to Boyd (1958) nothing in life is ever truly spontaneous and this is more with the so-called primary form of haemorrhage in which the specific cause of haemorrhage may be revealed if a thorough search is made for the exact aetiological factor. The present case showed some interesting features. Severe headache was the chief complaint and clinical examination, at the time of onset, did not reveal any signs suggestive of neurological deficit or space—

occupying lesion of the C.N.S., till he suddenly went in to deep coma. Angiomatous malformations in the brain produce no characteristic symptoms. Some of them may remain silent while others may produce convulsions, aphasia somnolence, intellectual deterioration or signs and symptoms of raised intra cranial pressure depending upon the site and size of the lesion. Histological examination revealed a capillary haemangioma with presence of brain tissue in between the vessels, suggesting a malformation rather than a true neoplasm.

Acoustic Science—

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application for law enforcement, where positive identification of voices involve in obscene language calls, bribery disclosure and threats etc. Voice print technique has been found most useful in the identification of criminals. Similarly many other sounds may be analysed. The acoustic science might have another application in forecasting weather conditions through acoustic analyses of sounds of waves and winds and thus help the navigators and prevent further disasters. It seems too early to predict its effect on the production of musical instruments.

So, with its multi-purpose applications acoustic science is not only an interesting subject, but it has a greater impact on future potentials. All new technologies that raise the standard of nursing should be of interest to every nurse. Acoustic science will be another special field associated with medical science where nurses will be required to work.

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