

CEREBELLAR TUMOUR

Ventriculography with Exploratory Craniotomy

The given history is a case of a Brain Tumour. Brain-surgery and brain diseases are rather difficult to treat. If we study carefully we will come to the conclusion that the cause of this is, that either the patient comes very late, or the case gets complicated some how or the other.

The usual routine in treating such cases is to do first what is known as Ventriculography. After ascertaining the location of the tumour, the surgeon sees whether it is a case for a operation or not. In order to carry out these two procedures one has to consider [1] The general condition of the patient and [2] The extent of the operation.

The cerebellum receives sensory impulses from the semi-circular canals, forms the sensory centres of the body wall and from the cerebral cortex.

Therefore, injury to the cerebellum results in muscular weakness, loss of tone and inability to direct the movements of the skeletal muscles. There may be some-time difficulty in walking due to inability to control the muscles of the legs or difficulty in talking due to lack of co-ordination of the muscles moving the tongue and the jaw.

If both the hemispheres are injured then the lack of muscle tone and co-ordination is so great that the person is helpless.

The actual case history is as follows:—

A young Hindu girl of 11 years was admitted on 1st May, 1948 for the following complaints:—

1. Pain in the back of the head.
2. Vomiting.
3. Blindness.
4. Inability to walk.
5. She was completely confined to bed and was not able to lift her head.

History:

Patient gave certain history of injury over the back of the head some months ago. After that she began to get pain on the back of the neck, which gradually increased. Her sight began to fail, vomiting also appeared, till at last she was completely blind, and was unable to walk or even to sit up.

May 2, 1948: On detailed examination of the patient the surgeon came to the conclusion that the patient had an intra-cranial tumour.

May 3, 1948: On Ophthalmoscopic examination the fundii showed primary optic-atrophy more marked on the left side. Hence the lesion was decided to be a pituitary tumour pressing upon the optic-nerve.

May 5, 1948: Detailed examination of the Nervous system by the physician showed that it was a cerebellar lesion. The plain X-ray showed that normal pituitary fossa and evidence of increased intra-cranial tension.

May 27, 1948: It was decided after some time to put the patient on "decompression Therapy". The patient was prepared for the same as follow:

- She had:*
1. Intra-venous concentrated glucose 50 cc. 50%
 2. Rectal concentrated Mag. Sulph. 2 oz B.D.

There appeared to be no change except that the patient began to regain sense of perception of light. In the meanwhile the patient developed keratitis and the general condition was fast going down hill. Keratitis was adequately treated.

June 22, 1948: Repeated small blood-transfusions were given to revive her general condition and to get her ready for the operation. Up to this date there was no improvement in her general condition at all.

July 12, 1948: At last it was decided to do a "Ventriculography" and then tackle the tumour after locating it. Due to her low vitality it was decided to do the whole procedure step by step. For preliminary decompression she had concentrated plasma one bottle.

This was over by 5 a.m. and after that she was to be taken for Trephining. So she was fully prepared for that. But after the plasma-infusion her temperature shot up to 105°F. So the operation was postponed by a few hours. The temperature came down after tepid sponging and injection of adrenaline $\frac{1}{2}$ c.c.

When the temperature was down the surgeon decided to start the procedure. She had Casat anaesthesia. For that:

[1] Nembutal 1 capsule of gr. $\frac{1}{2}$ was given at 6-30 p.m.

[2] Her head was shaved and prepared in the usual way and the patient was sent to O.T.

"VENTRICULOGRAPHY"

The patient was very quiet and co-operative. The position of the head was arranged in a semi-upright manner with the help of sand bags. The head was raised on head rest. The towels were arranged after marking the following demarcation points on the patient's scalp with 4% sterile methylene-blue. The external occipital protuberance was marked and the median line was drawn. A point 9 c.m. in front of external occipital protuberance on the median line was marked. The two points of 3 c.m. on either side of this point were marked. These were the centres of skin incision to be taken. Taking above points as skin incisions the scalp was incised transversely $1\frac{1}{2}$ " after injecting 1% novacaine. The incisions were deep till the pericranium was arrived at. Self retaining mastoid retractor was used to retract. The peri-cranium was cut. There was considerable bleeding during this procedure, but every time it was checked with Horseley's wax. The surgeon was on the occipito-parietal suture, which was opened out due to increased intracranial tension. The bone was very thin. After incising the ligaments and structures and using bone nibbling forceps, the dura was exposed in a circular manner 1" in diameter on either side without the use of skull-trephine.

As it was already decided to do the procedure step by step, the wounds were packed with sulphanamide powder and mattress sutures were put on the scalp to arrest bleeding from the margins.

Dressings were put on and the head bandaged. The patient was taken back to the ward and inj. penicillin started 50,000 units 3 hourly. Her head was turned on one side and the nurse was instructed to report undue oozing. Temperature, pulse and respiration was recorded 1 hourly. The patient's reaction towards this procedure was very exhausting. Temperature 101°F Pulse 130 and Resp. 38.

July 13, 1948: On the next day the 2nd. step of the operation was done as follows:—

1. Simple enema at 6 a.m.
2. One capsule of nembutal at 6-30 a.m.
3. Intra-venous plasma 100 c.c.

She was sent to the Operation Theatre at 8 a.m. The scalp was cleaned with Spirit and local anaesthesia injected. The sutures were removed and the wounds were re-opened. Retractors were put in place and the dura was incised in a crucial manner. The brain trocar and cannula were introduced very gently, the direction of the instrument being towards the pucil of the same side. Both the trocars were in lateral ventricles when they were about 5 c.m. from the surface. The trocar was withdrawn and the cerebro-spinal fluid began to come in a gush.

A bi-valve syringe was immediately fixed and fluid withdrawn gradually and was replaced at the same time by oxygen. About 80 c.c. of oxygen was injected either side. The layers were sutured; afterwards dressings were put on and the head bandaged. Now the patient was taken to the X-ray Department and 17 wet plates of the skull were taken from different angles. It was clearly shown in the X-ray that there was dilation of the lateral ventricles and obstruction near the base of the 3rd ventricle.

The patient was taken back to the O.T. and the 3rd. step of the procedure took place.