Case Report

A CASE OF SUPERIOR LONGITUDINAL SINUS THROMBOSIS IN PREGNANCY

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PRIMARY (aseptic, marasmic or autochthonous) thrombosis of the superior sagittal sinus, that is where local inflammation plays no part (Bertier, 1907), is an uncommon condition.

It was first noted that the puerperium could predispose to its formation by Gowers (1888), but description of cases occurring during pregnancy itself are rare.

Case Report

Mrs. B.M., aged 29 years, was admitted on the 29th April, 1964, to Hallam Hospital, West Bromwich. She was 12 weeks pregnant and had been vomiting fairly consistently for eight weeks. The general practitioner had diagnosed this as hyperemesis gravidarum and had treated her with prochlorperazine (Stemetil). On the day of admission she was found in bed having a generalised fit with tongue biting and incontinence. There was no history of epileptic convulsions in the family. The previous three pregnancies in 1956, 58 and 62 were uneventful apart from a post-partum haemorrhage with the first.

The relatives stated that two months earlier she had tried to procure an abortion by drinking an infusion of wormwood leaves, but that to their knowledge had not tried since.

On Examination she was an obese woman, quite conscious although complaining of headache; not dehydrated, BP 130/75 mm. Hg. and with a left upper motor neurone facial paralysis. She was given phenobarbitone 200 mg. i.m. A few hours later she had another grand mal fit from which she never regained consciousness. She continued to have twitching movements of the left face, especially the angle of the mouth and left arm lasting for five minutes and stopping for about the same period before resuming.

Increased doses of phenobarbitone and paraldehyde were given to no avail and so a continuous infusion of Brietal (Methohexitone sodium) was set up and her fits became controllable. On the 2nd May a complete abortion took place.

A lumbar puncture done on 30.4.64 showed a protein of 60 mg./100 ml. but on 5.5.64 it was 30 mg. The pressure was over 300 mm.

On the 4th May, 1964, it was noticed that the face and scalp were swollen with engorgement of the temporal veins. The breathing was now being maintained with difficulty due to the quantity of Brietal required to stop the fits. In consequence a tracheostomy was performed and continuous ventilation maintained with a ventilator. On 6.5.64 she had a right carotid angiogram performed and this showed no filling of the superior sagittal sinus, with enlargement of draining venous sinuses. See Fig. 1.

She showed no improvement and died on the 8th May, 1964.

Necropsy revealed body of obese young woman with a tracheostomy wound. There was marked pulmonary oedema and areas of lung collapse especially in the right lower lobe. Pericardium showed excess fluid. The uterus was moderately enlarged and soft containing dark coloured retained products. No pulmonary infarcts were seen.

The Head (A. L. Wolff).—The superior sagittal sinus contained dark maroon coloured antemortem thrombus highly adherent to the walls of the sinus and extending for its whole length. The posterior one-third was paler and older, not completely blocking the opening of the straight sinus which was free of thrombus, but extending into the left transverse sinus and thence to the left jugular vein for 2 cm. into the neck. The cortical veins on both hemispheres contained antemortem clot with discolouration of precentral convolution on right side due to haemorrhagic infarction.

Dissection after fixation showed white thrombus in left and right Rolandic veins and superior cerebral veins running in the inferior frontal sulcus. The middle frontal convolution dorsal to this vein was soft with haemorrhage.

Coronal section showed two small haematomas, the largest 0.6 cm. x 1.5 cm. on either side of right inferior frontal sulcus. The superior longitudinal sinus was filled with reddish clot except the posterior part where it was whitish-yellow. Here there was evidence of opening of new channels.

Histology revealed in the posterior superior longitudinal sinus, laminated thrombus, the peripheral parts of which were in an advanced state of organisation with dense fibrous tissue from which fibroblasts were extending into the more recent clot. In some areas there was evidence of digestion of the thrombus by phagocytes.

Discussion

This case demonstrates well some of the classical clinical features of superior sagittal sinus thrombosis. The onset with a grand mal fit, followed by unilateral convulsions and headache, was first described by Gowers (1888) in children and is due to cortical vein thrombosis. The presence, after a few days, of fullness of the temporal veins and choked optic discs was recorded by Oppenheimer, 1911. It is often associated with oedema of the scalp, the "oedema en casque" of Elleder, Froideval, and Delherine (1956).

There are few recorded cases of spontaneous thrombosis of the superior sagittal sinus in pregnancy—Bristow, 1888; Bücklers, 1893; Stertz, 1909; Fishman, Cowen and Silberman, 1957. Thickötter (1891) described a case with con-

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FIG. 1
(a)

(b)

FIG. 1

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FIG. 2.—Antemortem clot present in superior sagittal sinus and the cortical veins together with haemorrhagic infarction of the right precentral convolution.

vulsions and loss of consciousness in the first pregnancy recurring in the second pregnancy. The patient died in the puerperium with thrombosis of the left transverse sinus, straight sinus and vein of Galen. Prokess (1900) had a case of superior sagittal sinus thrombosis of unknown aetiology where the patient was moribund, but a living child was delivered by Caesarian Section. In Düggelin's case (1939), the symptoms began

in the second half of pregnancy even though the diagnosis was made in the puerperium. Extensive thrombosis of the cerebral veins but not of the superior sagittal sinus was noted by Hensell (1961) in the first month of pregnancy.

The macroscopic and microscopic appearances of the posterior one-third of the clot in the superior sagittal sinus suggested that it had been present for some time, certainly months before the onset of the terminal illness, and could possibly have occurred in a previous pregnancy as in Thickötter's case.

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REFERENCES

- BERTIER, J. (1907): La Thrombose Medicale des Sinus de la Dure-mère., *Arch., Gen. de Med.*, **1**, 313.
 BRISTOWE, J. S. (1894): On Intracranial Surgery—*Edinb. Med. J.*, **39**, 1084.
 BÜCKLERS, J. (1893): Zwei Fälle von Autochthoner Hirnsinus Thrombose, *Arch. Psychiat. Nervenkr.*, **25**, 18.
 DÜGGELIN, M. (1939): Ueber die primäre Sinus Thrombose in Wockenbett, *Inag. Diss. Zurich*.
 ELIEDER, E., FROIDEVAL, G., and DELHERINE, A. (1956): Thrombophlébite du Sinus Longitudinal Supérieur d'origine Sinusieene, *Arch. franç Pédiat.*, **13**, 760.
 FISHMAN, R. A., COWEN, M. D., and SILBERMAN, M. (1957): *Neurology (Minneap.)*, **7**, 217.
 GOWERS, W. (1888): A Manual of Diseases of the Nervous System, Vol. 2, 416, London: Churchill.
 HENSELL, V. (1961): Traumatische Hirnsinus und Venenthrombosen, *Acta. Psychiat. Scand.*, **38**, 730.
 OPPENHEIMER, H. (1911): Textbook of Nervous Diseases for Physicians and Students, 5th Edition, Edinburgh: Schultze.
 PROKESS, A. (1900): Sectio Caesarea in Moribunda, *Zbl. Gynäk.*, p. 214.
 STERTZ, G. (1909): Katatonische Psychose als Symptomatisches Bild bei Sinus Thrombose, *Berl. klin. Wschr.*, **46**, 685.
 THICKÖTTER, J. (1891): Ueber einem Fall von marantischer Sinus Thrombose in Puerperium, *Inaug. Diss. Munich*.