

NON-OBSTRUCTIVE UNILATERAL HYDROCEPHALUS.

By ARWYN ROBERTS, M.B., Ch.B.,

Pathological Department, Runwell Hospital, near Wickford, Essex.

(Received April 19, 1944.)

CASES of unilateral hydrocephalus not due to obstruction of the foramen of Monro are rare, and not more than a dozen accounts of such cases have been published. The *Journal of Mental Science* of July, 1940 (pp. 591-601), contains a paper by R. M. Stewart which gives an excellent review of cases previously published, including two cases of his own.

The main problem in these cases is to find the cause of the condition. Is it weakening of brain substance due to intrauterine disease of encephalitic or other nature, or the result of some temporary blockage of the foramen of Monro due to such a condition as transient ependymal inflammation? Unilateral cortical agenesis with the so-called hydrocephalus *ex vacuo* must also be taken into consideration as a possible aetiological factor.

The following is an account of a case which seemed to have been present at birth and where early syphilis or tuberculosis as a cause can almost certainly be excluded :

A female, aged 45, was at this hospital for four years prior to death from pernicious anaemia. Mentally she was an imbecile, showing gross intellectual defect, disorientation, with outbursts of violence and epileptic fits punctuating a childish and stupid personality. She was never at any school, could not perform the simplest tasks, and needed much nursing supervision. She could speak, but had a limited vocabulary and her replies were mostly monosyllabic. Physically she was of average stature, except for the fact that the right limbs were much shorter than the left. These shortened limbs showed no marked muscle wasting, but were prone to contracture. Neurologically the C.S.F. was normal and Kahn negative, and the reflexes all present and normal, but for general exaggeration. There were no marked sensory changes. The eyes showed nystagmus and divergent squint, and the equal pupils reacted to light and accommodation. The fundi were normal. Radiologically the skull showed no asymmetry, nor any abnormal variations in density. No endocrine gland dysfunction was noted and there was no spina bifida.

Post-mortem examination, besides the lesions of pernicious anaemia, showed the following intracranial changes : Calvarium, no asymmetry. Normal dura. Brain weight, 730 gm. Left hydrocephalic half weighed 183 gm. and was smaller in general dimensions. Right hemisphere no abnormal changes. Left hemisphere flattened convolutions. On section of the brain the left half collapsed. The left lateral ventricle was grossly enlarged and the cerebral cortex around it thinned out except at the poles. The ependyma and choroid plexus showed no abnormal changes, and the foramen of Monro was open and clear. The other ventricles and orifices were normal. The cerebellum was smaller on the left. There were no adhesions anywhere, and no signs to the naked eye of old inflammations. Microscopically the affected cortex showed reduced grey matter, lack of nerve-cells, gross reduction of white matter with glial accentuation. No gross microscopic changes in the right half except for general poor development.

The photograph shows the left hemisphere with its dilated ventricle.

For permission to publish this case I am indebted to Dr. R. Ström-Olsen, the Physician Superintendent, and for the photograph to Mr. T. Hall, M.S.R.