Dr Forsythe comments:

It is difficult to give a general reply to your questions as four types of seizures were involved:

1 *Astatic myoclonic seizures* (18 children)

Atypical absences four to 50 per day

Tonic clonic one alternate day to four to six per day

Astatic one alternate day to 10 per day

Eight of the patients had recurrent attacks of status—that is, atypical absences, astatic, and tonic clonic seizures.

Petit mal (seven children)

Four to 10 per day

Tonic clonic (17 children)

One to 30 or more per week

Complex partial (eight children)

One to four per day.

2 *Astatic myoclonic*

Of the 18 children included in the study, there are now four who have had a complete remission of seizures for two years. A fifth child who had a previous remission for six months, then refused the diet, is now back on the diet and has been seizure free for three months. All five children obtained a complete remission of seizures by the 15th day that is, two to four days' starvation plus 14 days' diet (about 50%). When the remaining 13 reached 50–60% diet they were allowed home for two weeks; if no improvement occurred sodium valproate or later nitrazepam was tried. If these drugs failed to produce a greater than 50% reduction of seizure frequency they were withdrawn. If the diet had not reduced seizures by 50% it was discontinued (see later).

The same rules applied to absences, tonic clonic, and complex partial seizures.

3 Careful records were kept daily of all seizure types and recorded on special record cards as long as they were on the diet. They were seen regularly after withdrawal of the diet.

4 In most cases where we were certain of compliance, we knew within two months if the diet was of value. We were not interested in a 50% or less reduction in the frequency or severity of seizures, or both. If the parents wanted to continue the diet, we allowed them to do so.

'New' fontanometer for estimation of intracranial pressure in the newborn

Sir,

The article by Rochefort, Rolfe, and Wilkinson is seriously misleading. The device described is not new. It was shown to the Physiological Society in November 1982¹ by Dr A G Whitelaw and myself. The only difference between their device and mine is that theirs uses two separate tubes while mine uses concentric tubes, which is more convenient. Later, I decided that a separate tube for measuring pressure was not essential, provided that the air flow was constant and the zero was checked from time to time—as it should always be. A model of the original design, made and used by Cowan and Thoresen,² gave clinically satisfactory results. The present design is in use in a number of centres, and Kaiser and Whitelaw have reported satisfactory correlations with direct intracranial or cerebrospinal fluid measurements.³

Dr Rolfe wrote to me in March 1985 describing his modification and I replied, pointing out that he was merely reverting to my original design and explaining why I thought a second tube was unnecessary. I showed the original device to him some time before it was published, and I was present when it was first put on a baby in Oxford. Rowena Oozeer suggested sticking it on with the collodion used for EEG electrodes. It worked beautifully and the use of collodion is now standard practice.³

The present model has been in use at Northwick Park Hospital for two years, and we hope to publish our results shortly. We have delayed publication so far, because we are still developing our technique and the device is not yet commercially available.

References

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Drs Rochefort, Rolfe, and Wilkinson comment:

It has been recognised for a long time that the design of some fontanometers leads to problems relating to the off-set calibration, and errors resulting from the application force. All these problems were present with Dr Wright's device.¹ Discussion, development, and experiment took place to overcome these problems. Our previous experience with fontanometers² and in the 1970s of devices to measure intraocular, intrauterine, and intravenous pressures non-invasively had given considerable insight into these difficulties. Modifications to design have produced a device that ensures the use of applanation principles, incorporating a guard ring and flow independent pressure measurement. At a time when continuous EEG recording was being developed in Oxford the use of collodion was routine and since then has become more widely used.

Our data presented previously (at the Annual Meeting of the British Paediatric Association) and in our paper, when compared with the results from other devices, support our view that the differences in design are crucial to the validity of non-invasive intracranial pressure values. At best, previous devices have reflected only trends in intracranial pressure. Accuracy is of course vital if a non-invasive method is to be relied on to assess the efficacy of various therapeutic manoeuvres safely and reliably.

References

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