CORRESPONDENCE

The Editor,

SIR,

We were very interested to read the article by Dr. Tyrrell with regard to his observations on the C.S.F. pressure during compression of the internal jugular veins (Tyrrell, D. A. J., 1951, Postgraduate Medical Journal, xxvii, 394). We are entirely in agreement with the observations he has made, having carried out an extensive investigation along the same lines in 1941.

We examined 43 normal subjects and found the pressure responses to be equal on both sides in 6 cases, nearly equal in 16, the right greater than the left in 15 cases, the left greater than the right in 4 cases, and the right much greater than the left in 6 cases and the left much greater than the right in 2 cases. These results were obtained by taking the mean C.S.F. pressure response for each jugular vein when compressed in the right and left lateral positions. This merely demonstrated that the tendency was for the right lateral sinus to be larger than the left.

We also observed the great importance of the effect of gravity in producing a greater pressure response from each jugular vein when it was in the lower lateral position and concluded that this effect was due to gravity.

We noted, however, that where compression of one or both internal jugular veins produced only a small response, it was obvious that additional obstruction of the lower external jugular produced a great response. Since this vein is superficial, even gentle pressure produced an immediate rapid response.

We did these tests in order to clarify the value of the Tobey-Ayer modification of the Queckenedt tests in the demonstration of the presence of a thrombosed lateral sinus. This test is not widely employed probably because of certain anomalies, namely, the possibility of obtaining false positive or negative responses. Our investigations showed that false positive responses could occur (a) when the subject lay in that lateral position which placed a small sinus uppermost, or (b) when presumably such excellent communications existed between the upper and lower sinuses (across the torcula) that compression of the upper internal jugular vein did not interfere with the venous outflow. With any of these circumstances present in a given case a very small or absent rise of C.S.F. pressure would result from pressure on the upper internal jugular vein, thus simulating sinus thrombosis.

Hence two modifications of the Tobey-Ayer tests were proposed. They were that when the test is carried out the patient should lie in that lateral position which placed the suspect sinus lowermost and that special care be taken to avoid compression of the external jugular vein. False negative responses have been recorded in the literature. They are rare, occur only in long-standing cases and are due to the establishment of collateral circulation.

We should like to point out that an account of this work was published in the Journal of Laryngology and Otology, 1942, lvii, 353.

Yours faithfully,

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