THE UNIQUENESS OF RAINVILLE TECHNIQUES

M. N. VYASA MURTHY

Rainville techniques viz., Rainville (Rainville 1959) Modified Rainville or **SAL** (Jerger and Tillman 1960, Jerger 1965) and Modified Rainville (Lightfort, 1960) of determining BC thresholds have several merits over other methods of BC testing. Some of the merits reported by the advocates of these techniques are: (1) These techniques overcome the problem of localization in BC testing; (2); The problems like when to mask, which ear to mask and how much to mask do not arise; and (3) The prescribed ambient noise level for AC testing is also adequate for BC testing as BC thresholds are determined while the ears are covered.

The uniqueness of these techniques has not been reported. Consider, for example, a case of unilateral atresia with normal functioning inner ear. Let AC threshold of the ear having normal pinna be 40 dB and unmasked BC threshold of the same ear be 10 dB. Now, to know whether the ear having normal pinna has conductive loss or sensoryneural loss or Mixed loss or in other words, to know the masked BC threshold of the ear having normal pinna it is essential that the atresia ear should be masked. Masking through AC is not possible because of atresia. Masking through the insert receiver, as it increases IA, is also not possible. We should not think of masking the cochlea of the atresia ear by masking noise presented through the BC vibrator placed on the mastoid of the atresia ear as the interaural attenuation (IA) for bone conducted stimuli is negligible. In other words, the BC noise not only masks the cochlea of the atresia ear but also masks the cochlea of the contralateral ear (test ear). The above cited impossibilities point out that the methods, which require masking of the atresia ear for determining the masked BC thresholds of the ear having normal pinna, cannot be used in the hypothetical case. Rainville techniques are the only choice to determine the masked BC thresholds of the ear having normal pinna of the hypothetical case as these techniques do not require that the masking noise be presented through AC of the non test ear.

Acknowledgement

The author expresses sincere thanks to Dr N. Rathna, Professor in Speech Pathology, for his suggestions.

REFERENCES

Jerger, J. and Tillman, T. (1960) A New method for the clinical determination of sensorineural Acuity Level (SAL) *AMA Archieves of Otolaryngology:* 71, 948-955.

Jerger, J. and Jerger, S., (1965) Critical Evaluation of SAL Audiometry, *J. Speech Hearing Res.*, 8, 103-127.

Lightfoot, C. (1960) The M.R test of Bone conduction Hearing. *Laryngoscope* 70, 1552-1559.

Rainville, M. J. (1959) New method of masking for the determination of bone conduction curves: *Translations of the Beltone Institute for Hearing Research,* No. 11.

Mr M. N. Vyasa Murthy is lecturer, Department of Audiology at the A.I.I.S.H.