

SSW

NEWSLETTER

Vol. 1 No. 1 Are You Ready? November 1978

A BEGINNING ??

This is the SSW Newsletter - Are you ready? It is a (sample) vehicle for communicating SSW and related information. The Staggered Spondaic Word Test is now 18 years old. It is surprising that this strange little test has come this far with so little direction and communication. This issue is a first attempt at improving the situation.

You might wonder why the SSW test needs a newsletter? After all, there is no Pure-Tone Threshold Newsletter - press the button; SRT Newsletter nor Masking Newsletter. You probably have not read the Rush Hughes Newsletter, the SSI Newsletter nor the Filtered Speech Newsletter (a pity).

There are some good reasons for an SSW newsletter: 1) The test is sufficiently complex in scoring and interpretation; 2) it is used with many populations; 3) it challenges diverse auditory functions so that it reveals information about many parts of the CNS; 4) there is a wealth of clinical and research data available. A newsletter can be a useful means of reinforcing earlier learning, encouraging standardization, bringing new findings to test users and stimulating a deeper understanding of the strengths and weaknesses of the SSW test.

In order for this newsletter to be successful it must be a group effort. Lots of people need to be willing to contribute a little and it has to be of sufficient interest for others to spend the few minutes to read it. I hope you will be willing to share in this give and take.

NEWS

Have you tried writing to Auditec of St. Louis and got your letter back and then found out that there is no phone listed for Auditec? If so, cheer up. Auditec has a new address, has bought a telephone and is under half-new management. Try the following:

Auditec of St. Louis
402 Pasadena Avenue
St. Louis, MO 63119
(314) 962-5890

If you have a CES tape without the taped instructions please write to: Jack Katz, 4226 Ridge Lea Road, Buffalo, N.Y. 14226, along with a stamped, self-addressed envelope and he will send you a copy (for reel-to-reel).

FORGIVE MILKMAN

1. Most audiologists don't remember the SSW items too well. Of course you know that "upstairs downtown" is the first one and perhaps you recall that "green house stringbean" is the last. How many full items do you know?

2. My bet is that the next most familiar item is "forgive milkman". It sort of stands out by itself and is the only one containing a verb.

3. One way to distinguish the person experienced in the SSW from the neophyte is to ask what is the peculiar response that you sometimes get to "forgive milkman"?

4. At an ASHA convention, the New Orleans contingent wanted to limit their party guests to present and former residents. Each person was asked 3 questions in order to gain admittance: What is a praline? What is a piro? What is jambalya? We would need only one spordee to be admitted to an SSW party. The bouncer says "Forgive..." and the audiologist nonchalantly replies "Milkman" of course.

IF YOU SEE SOMEONE WITHOUT

A SMILE

GIVE THEM ONE OF YOURS

The SSW test is frequently misused or misinterpreted by well meaning audiologists. This is the first in a series of columns devoted to the appropriate and inappropriate use of the SSW test.

Despite the ample literature (Katz, 1968; Balas, 1971; Jerger and Jerger, 1975) some audiologists continue to look upon the SSW as a "temporal lobe test." They may also have the mistaken notion that the score should be depressed if the temporal lobe is involved, regardless of the site.

The SSW test is quantitatively sensitive to lesions in Heschl's gyrus. When the auditory reception center (AR) is damaged we anticipate moderate (Mo) or severe (S) SSW scores. However, the rest of the temporal cortex is not so sensitive quantitatively. Thus, lesions outside of Heschl's gyrus tend to produce no more than a mild (Mi) score and typically show up normal (N).

Heschl's gyrus is situated in the middle-posterior region of the superior temporal gyrus. A cortical lesion of the anterior temporal lobe should produce no more than a N or Mi score on the test. Rather than a weakness, the quantitative differences between the anterior temporal and posterior-superior temporal disorders makes the SSW a finer measure of CNS dysfunction. In the grey matter of the temporal

lobe only Heschl's gyrus involvement should produce a high (Mo or S) score. Thus, a lesion of the anterior lobe, whether it be due to tumor, stroke, trauma, infection or surgical removal is associated with an N or Mi score.

Response bias (RB) is the most important unique contribution of the SSW test. RB refers to Reversals, Ear and Order Effects and other peculiarities. Anterior temporal lobe disorders can be expected to show one or more RB's which are associated with the anterior temporal region of the brain. These specific biases include: 2-6 Reversals, an Ear Low/High and/or Order/High/Low (Katz and Pack, 1975; Winkelaar and Lewis, 1976; Katz, 1976; Katz, 1977; Weissberg and Katz, 1978).

We can summarize the results for lesions involving Heschl's gyrus: S or Mo C-SSW score (and the A-SSW score if there is an Ear or Order Effect); Ear High/Low and Order Low/High. In summary, for cortical lesions of the anterior temporal lobe we anticipate: a N or Mi score; 2-6 Reversals, Ear Low/High; and Order High/Low.

Other installments of this column will cover: 1) Heschl's gyrus vs. high brainstem vs. corpus callosum/anterior commissure lesions, 2) R-SSW, C-SSW, and A-SSW, 3) high and low brainstem disorders.

Bibliography

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Winkelaar, R.G. and Lewis, T. K., "Audiologic Tests for Evaluation of Central Auditory Disorders", J. Otolaryngology, 6, 127-134, 1977.

BASIC WORKSHOP

Dayton, Ohio, Feb. 22-24, 1979.
The host will be:

Mr. John Tecca
Hearing & Speech Center
730 Valley Street
Dayton, Ohio 45404
513-222-5597

WORKSHOPS

Much has happened with the SSW test in the past few years. The developments have been reflected in the SSW Workshops that now run for 3 days (24 hours). Two and one-half day workshops have been phased out. Those who have not attended a basic or advanced workshop in the past 4-5 years or so, will find that tremendous changes have taken place.

Last month a 2 day Advanced SSW Workshop was held in Philadelphia (Hahnemann General Hospital). A human brain was sectioned to show the anatomical structures and their relationships to one another and to the SSW. The schedule was as follows:

FIRST DAY

1. Introduction: explanation of the program and distribution of materials (tables, anatomic diagrams, etc.)
2. Update on Scoring
 - A. Reversals (& Modifications of the strip)
 - B. Quick and Delayed Responses (& effects on response bias)
 - C. Type A & B patterns (misconceptions & loci)
 - D. TEC- a possible exception
 - E. Internal Dynamics - brainstem, anterior and posterior lesions, etc.
3. The Brain: lateral surface
 - A. Landmarks, auditory, language and integration centers.
 - B. Regions of brain associated with SSW categories and response biases
 - C. Vascular supply

4. CES
 - A. A brief review-overview (it will make more sense this time)
 - B. Conceptualization of AR lesions (R or L), corpus callosum/anterior commissure (R, L or midline)
 - C. Results on patient with corpus callosum tumor (& slides of the pathology)
 - D. 8 SSW/CES comparisons
 - E. 7 additional comparisons
 - F. Limitations of SSW/CES comparisons

5. The Brain: medial surface of the cerebrum, cerebellum and brainstem; cranial nerves

6. Conceptualization of R-SSW, C-SSW, A-SSW and C-SSW minus A-SSW

7. The Brain: horizontal sections to view Heschl's gyri and the associated tracts; Brodmann's areas #41,42,22 and others, as well as corpus callosum, basal ganglia, etc.

8. Two and Three Test Audiometric Battery: data for groups with conductive loss up to brain problems beyond Heschl's gyrus.

9. The Brain: locating VIII nerve, cochlear nuclei, superior olive, inferior colliculus, medial geniculate, as well as the connecting pathways; trapezoid body, lateral lemniscus, commissure of inferior colliculus, brachium of inferior colliculus and auditory radiations. SSW findings will be related to lesions of the VIII nerve and brainstem.

10. Interpretation of SSW in light of CES and the entire audiometric battery.

11. Application

SECOND DAY

1. Question and answer session

2. Reversals: What they seem to be and why

3. Problem cases: (contributed by participants) What to do and how to report them

4. Children (misconceptions ontogeny & phylogeny; familial aspects)

5. Problem cases in Children (contributed by participants)

6. Support for Ear and Order Effects and C-SSW

7. Open: cases, questions, observations, review of previous information; update on research: alcoholics, phonemic regression, psychotics, relation to language skills in children, lead/lag effects.

BASIC WORKSHOP

Trenton, N.J., Dec 7-9, 1978
If you know someone who would be interested please direct them to:

Dr. William Jones
Trenton State College
Dept of Sp.Path. & Aud.
Trenton, N.J. 08625
#609-771-2321

AN ATYPICAL CASE: CES SAVES THE DAY

are told that nothing is perfect. So it was without surprise the day that I found that the C-SSW had misclassified a patient (or so it seems). No doubt in the 10,000 or so patients with whom I've been involved there have been a number of other misclassified cases but they are certainly few and far between.

The following case was seen at Strong Memorial Hospital in Rochester, N.Y. They gave me permission to report the information.

A 52 year old man with a history of alcoholism fell down 6 months prior to the evaluation striking his left ear and left temporal region. He claimed that he had been fine prior to the fall but following it he had headaches and an echo in his ear. Speech sounded muffled to him.

Audiometric Results:

	<u>Right</u>	<u>Left</u>
. Speech Avg.	40 dB	15 dB
. 4K & 6K Avg.	75 dB	28 dB
. A-B gap	no	no
. WDS	44%	96%
. Tone Decay	none	none
. SISI	2K=100%	4K=50% (thr.=30dB)
. C-SSW	NC=-22 C=32 5	C=14 NC=6 10
	total = 8	
. Response bias	none	

Discussion & Interpretation

An injury to the left side of the skull can produce 1) a left sided lesion, 2) a contra coup lesion to the right side or 3) a traumatic lesion deep in the brain. It seems in this case that the cochlea was affected on the opposite side and the temporal lobe (no doubt Heschl's gyrus) was damaged ipsilaterally (left). Because the hearing loss in the right ear "faces" the AR problem in the left hemisphere, the C-SSW score was sufficiently offset to take the score out of the Moderate category (for AR) into the Mild category for NAR. If we worked strictly by the numbers (as we do at least 99% of the time) we would say that there is a lesion close to, but not in, Heschl's gyrus.

Mi=(-8) Mi; E=(10)=N; C=(-22,32) 0-Mo. Combining them we get 0-Mi. The overcorrected part, properly tells us about the sensory-neural loss with reduced WDS. But the Mi C-SSW score would suggest an NAR dysfunction. Judging from the locus of the blow one would assume that the AR center would have been significantly damaged. The CES score for the right ear looks like there is an AR involvement.

The correction reduced the SSW score to mild because of the very poor WDS in the opposite ear. Some audiologists have warned against the use of C-SSW for this reason (Lynn and Gilroy, 1977) but I believe that it is a rare exception. There were many cases in which the AR problem showed up clearly despite the presence of a peripheral loss. The amount that we lose by doing away with the C-SSW is far too great (Katz, 1977). In this case the very poor CES score in the same ear as the SSW helped to reaffirm the AR site.

References

Katz, J. "The SSW Test" in R. Keith (Ed.) Central Auditory Dysfunction, Grune & Stratton, 1977.

Lynn, G. and Gilroy, J. "Evaluation of Central Auditory Dysfunction in Patients with Neurological Disorders" in R. Keith (Ed.) Central Auditory Dysfunction, Grune & Stratton, 1977.

New Yorkers might get a feeling of Deja Vu when they first see this newsletter. That's because the banner and format have been "borrowed" from the NYSSHA COMMUNICATOR. Thank you NYSSHA.

TRY A CASE : A bottle is not nearly enough

Patient: JJ Age: 41 M

History:

2 yr psychomotor seizures (out for a few minutes; smacks lips, automatic behavior, inappropriately says "don't do that", subsequently amnesia for the event). Spells preceded by aura: dizziness, light or hearing of own name. For past year, difficulty understanding speech and progressive memory problems.

Physical Exam: cranial nn - intact; motor - R arm/leg slight weakness; sensory - intact; cerebellar - intact; cerebral - recept. aphasia and anomia; difficulty carrying out simple commands and naming common objects.

Special Studies: EEG: L mid & posterior temporal mixed negative spikes & theta focus; carotid angiogram - L ant., temporal lobe mass lesion; surgery - L ant. temporal lobe tumor (ependymoma), ant. 1/2 of L temporal lobe amputated at surgery.

Impression:

Anterior L temporal lobe tumor with clinical evidence of posterior-superior L temporal cortex. AR area undoubtedly involved.

Standard Audiometric Results:

	.25	.5	1k	2k	4k	8k
RE	10	10	5	10	20	5
LE	30	25	5	5	10	25
WDS	RE - 92%					
	LE - 96%					

SSW Results:

8 Cardinal #'s								REF
A	B	C	D	E	F	G	H	
5	13	10	8	4	13	8	3	

SSW Calculations:

EAR ___/___ ; ORD ___/___

# Errors	RNC	RC	LC	LNC
	X2½	X2½	X2½	X2½

R-SSW ± corr. - - - -

Cond's Ears - -

Total - -

Is an A-SSW score appropriate in this case?
(Rules: 1) Mo/S score, 2) significant EAR/ORD EFF, 3) suspect cerebral dis)

For A-SSW:

# Errors	RNC	RC	LC	LNC
	X5	X5	X5	X5

A-SSW Cond's Ears Total

A-SSW Cond's Ears Total

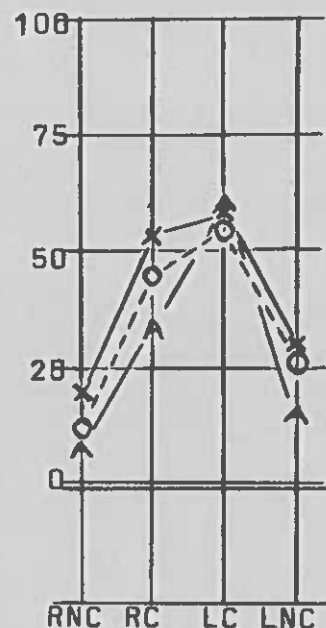
	C-SSW	A-SSW
T=	()	()
E=	()	()
C=	()	()
Comb=		Comb=

Summary & Interpretation:

1. Bilat peaks = prob L hem
2. C-SSW: Mo = AR
3. A-SSW: Mo = AR
4. EAR H/L = post. temp.
5. ORD H/L = ant. half
6. Rev: 2 = ant. temp.

Thus, the SSW indicates involvement of entire temporal lobe. This patient was tested

before CES was available. Otherwise CES might have been further support for the side of lesion.



SSW results for patient, JJ. He had a left temporal lobe tumor that was verified at surgery.



left Major effect of tumor before surgery.

In 1973, McClellan, Wert & Collins, presented a paper at ASHA indicating that their L hemisphere cases frequently had bilateral peaks on the SSW

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