

The multidisciplinary nature of speech-language pathology

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Smile Train Meeting:
Principles of Speech-Language Pathology for Children with Cleft Palate
Qingdao, China, June 2002

Introduction

- Exciting work going on in China already re speech therapy for persons with cleft lip and palate
- Strong interest in learning more about the field of speech-language pathology, and about principles and practice of speech therapy
- Value opportunity to share with you

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Case 2: Mei Mei (5/F)

- Repaired lip; Unrepaired palate
- Active, outgoing, likes to interact
- Severe hypernasality
- Speech intelligibility: fair
- Some compensatory articulation errors
- Some correctly articulated consonants

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Clinical questions

“Some correctly articulated consonants”

- what is correct/normal for a 5 year old girl (Putonghua)

“Some compensatory articulation errors”

- What is “compensatory articulation”?
- What is the relationship between the cleft palate and the articulation errors?

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Clinical questions, continued

“Active, outgoing, likes to interact”

- why are some children with severe speech problems good interactors, and outgoing?
- contrast with Case 3
 - also 5 years old, unrepaired palate, severe hypernasality
 - shy, teased, no friends
- Isn't it unusual to have poor speech but active or success social interactions?

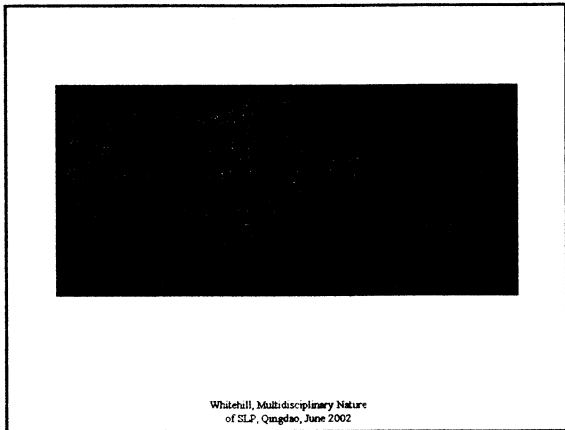
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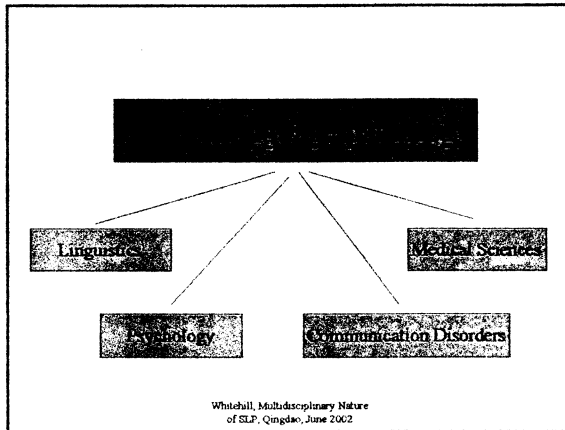
Clinical questions, continued

“Unrepaired cleft palate”

- What is the size, extent of the cleft?
- What will be the best method of surgical repair?
 - best impact on speech
 - best impact on facial growth
- Why is the palate unrepaired at age 5?

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Linguistics

- The study of language
 - Semantics - vocabulary (meaning of words)
 - Syntax - grammar (structure of language)
 - Phonology - speech sound system
 - Pragmatics - how language is used

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Linguistics, continued

- e.g. child says to father
“xx xxxx xxx” (IPA) (English) give ball
- Semantically - noun (ball) and verb (give)
- Syntactically - combining two words together
- Phonologically - using some vowels and consonants; not adult-like
- Pragmatically - using her *vocabulary, grammar, sound system* to make a request (demand?!) to another person

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Linguistics, continued

- Importance of developmental perspective
 - What are normally-developing children doing in each of the areas of language at different ages/stages?
- This allows us to compare our patients with developmental norms
 - are they at the same stage of language development as their non-cleft peers - or do they have a speech/language delay or disorder?

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Linguistics, continued

Language versus Speech

Receptive language - what does the child understand (messages of others)

Expressive language - how is the child able to organize her message into symbols (speech or nonverbal communication)

Speech - how does the spoken message sound

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Linguistics, continued

Speech

- Respiration
- Phonation
- Resonance
- Articulation

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Psychology

Examples of application to speech-language pathology:

- Social-cognitive development
 - strong relationship between cognitive level and language level
- Principles of learning
 - important in designing and implementing therapy
- Counselling

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Medical Sciences

Examples of application to speech-language pathology:

- Anatomy and physiology of oral tract
- Genetics
- Surgery
 - interface between surgery and speech
- Hearing (ENT, audiology)
 - anatomy and physiology, testing, surgical and pharmaceutical intervention

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Communication Disorders

- Evaluation (all aspects of communication)
- Diagnosis (identify contributing factors)
- Management plan (therapy plan, referrals, 'holistic view')
- Therapy (designing, planning, conducting, monitoring progress, discharge)
- Use knowledge of normal (language, anatomy and physiology, social-cognitive development, etc.) to understand abnormal

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Case 2: Mei Mei (5/F)

Multidisciplinary role of the speech-language pathologist

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Linguistics

- Thorough description of her receptive and expressive language abilities
 - semantics, syntactics, pragmatics, phonology
- How does this compare to non-cleft children of the same age?
- Identify possible contributing factors
 - external (e.g. poor stimulation at home)
 - internal (e.g. cognitive delay; hearing impairment)

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Psychology

- Assessment of social-cognitive development
 - standardized and nonstandardized tests
 - relationship between language and cognition
- Counselling
 - Counselling for parents if they experience difficulties (guilt, rejection)
 - Mei Mei may need counselling as she approaches adolescence, regarding appearance
- Role of psychologist or social worker?

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Psychology, continued

- Principles of learning
 - important in designing and implementing speech or language therapy
- For example,
 - select materials and activities of interest to child
 - selecting appropriate reinforcement for child
 - choosing effective reinforcement schedule
 - providing explicit feedback, to enhance learning
 - determining criterion for increasing difficulty of task

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Medical Sciences

- Provide speech outcome data to evaluate the effectiveness of different surgical methods
- Provide opinion regarding need for secondary surgery
- Determine relative contribution of fistula, VPI, malocclusion, hearing impairment to speech disorder

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Multidisciplinary nature of speech-language pathology
Application to persons with intellectual disability

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