



**Conversational Analysis –
Listening to patients
with non-epileptic seizures**

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Dundee, 11.07.2008



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Listening to patients with non-epileptic seizures

Overview

Why should epileptologists be interested in Conversation Analysis?

- The clinical challenge
- The contribution CA can make

How to use CA in the epilepsy clinic

- Interview structure
- Interview style

Differential diagnostic significance

- Interactional observations
- Linguistic observations

Listening to patients with non-epileptic seizures

Background: Challenge

Non-epileptic seizures: a serious diagnostic dilemma

- NES are common (approx. 20% of patients in epilepsy clinics)
- Mean delay of the diagnosis of NES is over 7 years
- Failure to recognise NES can cause injuries and death
- Interictal tests are usually unhelpful
- Video-EEG is expensive and only captures attacks in 2/3 patients
- “History taking” remains the diagnostic gold standard

Listening to patients with non-epileptic seizures

Background: Conventional history-taking

Limitations of factual features in the history of seizure patients

Limitation	Feature in the history
No differentiating value	Ictal injury, seizures from (apparent) sleep, incontinence, tongue biting, pelvic thrusting
Differentiate but not noticed / described reliably	Duration, closed eyes during tonic-clonic movements, closed mouth during tonic phase, cyanosis
Differentiate but not commonly reported	Pre-ictal anxiety symptoms, ictal crying, ictal weeping, vocalisation during tonic-clonic phase
Differentiate but require expert observation	Unusually rapid or slow recovery, variation in amplitude but not frequency of motor activity, ictal reactivity



Depend on observations of a seizure witness

Listening to patients with non-epileptic seizures

CA in epileptology: the Bielefeld project

Linguistic and interactional differences between epilepsy and NES

Feature	Epilepsy	NES
Seizure topic	Volunteered, early	Prompted, avoided
Subjective seizure symptoms	Volunteered, detailed	Avoided, no detail
Formulation work	Extensive	Practically absent
Seizure suppression attempts	Volunteered	Not mentioned
Gaps in consciousness	Exact description	Little description
Metaphors	Seizures are external, independent, hostile	Seizures are a space patients go into

Schwabe M, Howell SJ, Reuber M. Differential diagnosis of seizure disorders: a conversation analytic approach. *Soc Sci Med* 2007;65:712-724.

Plug L, Sharrack B, Reuber M. Seizure metaphors differ in patients' accounts of epileptic and psychogenic non-epileptic seizures. *Epilepsia*, in press.

Listening to patients with non-epileptic seizures

CA in epileptology: the Sheffield project

Methodology

Question:

- Can we prove that CA can help in the differential diagnosis of seizure disorders?

Method:

- Prospective study, consecutive patients
- Only patients referred for video-EEG by consultant neurologists because of diagnostic uncertainty
- Only patients with video-EEG “proven” diagnosis
- Linguist blinded to video-EEG and other clinical information
- Interview schedule based on German guidelines

Listening to patients with non-epileptic seizures

Sheffield project: CA in epileptology

Replication of German findings in British patients

Patient	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Seizures interactional	Red	Green	Green	Green	Black	Black	Red	Black	Black	Black	Black	Green	Black	Green	Green	Black	Green	Green	Red	Green
Subj. symptoms interactional	Black	Black	Black	Green	Black	Green	Black	Black	Black	Green	Black	Green	Black	Green	Green	Black	Black	Green	Green	Green
Subj. symptoms topical	Green	Green	Green	Green	Black	Green	Black	Black	Black	Black	Black	Black	Green	Green	Black	Black	Red	Green	Green	Black
“Gaps” topical	Black	Black	Green	Black	Red	Red	Red	Black	Red	Black	Red	Black	Black	Green	Black	Black	Black	Green	Red	Red
Subj. symptoms linguistic	Green	Green	Green	Green	Black	Black	Black	Black	Black	Black	Black	Black	Black	Green	Black	Black	Red	Green	Black	Black
Metaphoric concepts	Red	Red	Red	Black	Red	Green	Red	Red	Red	Red	Black	Black	Green	Green	Green	Red	Red	Black	Red	Red
Linguistic hypothesis	Red	Green	Green	Red	Red	Green	Red	Red	Red	Red	Red	Green	Green	Green	Red	Red	Red	Green	Red	Red
Medical diagnosis	N	E	E	N	N	E	N	N	N	N	N	E	N	E	E	N	N	E	N	N

Feature typical of: ■ NES ■ Epilepsy Inconclusive

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Sheffield project: CA in epileptology

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Linguistic hypothesis	Red	Green	Green	Red	Red	Green	Red	Red	Red	Red	Red	Green	Red	Green	Green	Red	Red	Red	Green	Red
Medical diagnosis	N	E	E	N	N	E	N	N	N	N	N	E	N	E	E	N	N	E	N	N

Feature typical of: ■ NES ■ Epilepsy Inconclusive

How to use CA in the epilepsy clinic

Listening to patients with non-epileptic seizures

CA in epileptology: the Sheffield project

Methodology: 30min Interview schedule

Structure:

- 1. Open phase: What were your expectations?
- 2. Elicited accounts: First / last / worst seizure
- 3. Challenge

Rules:

- Listen, do not interrupt, let the patient talk.
- When the patient stops talking, tolerate silence, use reception indicators, repeat last thing patient said.
- Avoid additional questions other than for clarification.
- Do not introduce new topics into the conversation.

Listening to patients with non-epileptic seizures

1. Open phase

Example 1: David, Opening question [00:00–00:42]

Doc: I wonder whether you could tell me what your expectations were from coming here this week; what were you hoping to get out of it?

Dav: Expectations? Erm, (1.3) find out why (1.5) I get these reactions.

Doc: Mmm.

Dav: I've had encephalitis eighteen months ago, and ever since then I've been having a reaction. (1.3) Because it's with my chin they thought it was epilepsy. Er, (1.2) some of them must be, I think are. Some of them I don't think are because I can stop them myself.

Doc: Right

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Doc: Right

Open question which gives patient a choice of whether he wants to discuss his seizures or not. Continuers encourage elaboration.

Listening to patients with non-epileptic seizures

1. Open phase

Example 2: Chris, picking up patient's topical lead [09:42–10:04]

Doc: So you say you black out.

Chr: Yeah.

(7.0)

Doc: And you fall to the floor.

Chr: Yeah. I don't get no warnings. (1.6) And when I come round I feel right tired and confused, and in a lot of pain.

(3.2)

Doc: You feel a lot of pain.

Chr: Yeah. (1.0) Like, where I've fell and if I've hurt myself.

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Doc: Right.

Long pauses give patient the opportunity to decide what information he shares with the doctor at this point. Doctor picks up topic patient has previously introduced.

Listening to patients with non-epileptic seizures

2. Elicited accounts

Example 3: Ken, last seizure [19:06–20:12]

- Doc: What about the last one you can remember, the last one that -
- Ken: Last one I can remember was the one while my wife and daughter were here, erm, basically i was sat there (1.8) and that occurred for no reason whatsoever.
- Doc: Mmm.
- Ken: I just sat there, chatting. (3.0) Er, I was eating me dinner at the time. (1.7) So I wasn't even hungry.
- Doc: Mmm.
- Ken: I was half way through the dinner, and (2.8) I was tired, I - I wouldn't have said I was *that* tired either, because I've not exactly been overexerted, so.
- Doc: Mmm. (1.5)
- Ken: Erm (3.8) What else. (6.7) That was one that (1.1) to me *did* feel like it was a small seizure at first.
- Doc: Mmm. (1.8)
- Ken: But actually it did develop into a big one.
- Doc: Right.

Listening to patients with non-epileptic seizures

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- Doc: Mmm. (1.5)
- Ken: Erm (3.8) What else. (6.7) That was one that (1.1) to me *did* feel like it was a small seizure at first (...)

Non-specific question offers patient the opportunity to interpret the prompt in different ways. Long pauses and continuers encourage elaboration.

Listening to patients with non-epileptic seizures

2. Elicited accounts

Example 4: Barbara, worst seizure [09:42–10:04]

D: What about the worst seizure you've ever had?

B: Uch, I've had a few. I've had them in the bath, where I've nearly drowned. I've been cut out on the stairs by the fire brigade, because I've come down the stairs and my leg's actually gone and wrapped through the banister thing, and the fire brigade have had to come and saw the s- and get the, cut me out the stairs. I've had them while I'm cooking. I've had them in the middle of the road. So I've had a few where it's been quite dangerous.

Listening to patients with non-epileptic seizures

2. Elicited accounts

Example 4: Barbara, worst seizure [09:42–10:04]

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Relatively non-specific prompt leaving range of response options.

Listening to patients with non-epileptic seizures

3. Challenge

Example 5: Sandra, response to challenge [15:56–16:50]

- Doc: And when you say you don't lose consciousness, what do you mean by that? (1.3)
- San: Erm, I'm awake. Even if I'm asleep it wakes me up. (1.6) Erm, I had one at half past one, twenty past four, half past five: I woke up every time.
- Doc: And even when other people are around you, do they think that you can take everything in that happens in the attacks - like your husband?
- San: Yeah. (2.6) I know what they're saying, but because my face distorts. Sometimes I bite the inside of my mouth. Because I seem to clench my teeth, I just can't answer them back. I know what they're saying and I can hear what they're saying, I just can't answer them back.
- Doc: Hm mm. (1.0) Okay.
-

Listening to patients with non-epileptic seizures

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Example 5: Sandra, response to challenge [15:56–16:50]

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- Doc: Hm mm. (1.0) Okay.



Listening to patients with non-epileptic seizures

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Example 5: Sandra, response to challenge [15:56–16:50]

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- Doc: And even when other people are around you, do they think that you can take everything in that happens in the attacks - like your husband?
- San: Yeah. (2.6) I know what they're saying, but because my face distorts. Sometimes I bite the inside of my mouth. Because I seem to clench my teeth, I just can't answer them back. I know what they're saying and I can hear what they're saying, I just can't answer them back.

Challenge of something previously volunteered with range of response options

Listening to patients with non-epileptic seizures

3. Challenge

Example 6: Tallulah, response to challenge [19:37–20:35]

- Doc: If you get a warning, have you noticed that there's anything you can do to stop the seizures? (2.0)
- Tal: No.(2.0)
- Doc: You've never been able to, you don't feel that you've ever managed to stop one, or control one?
- Tal: No.(9.6)
- Doc: And after the seizures you can sometimes you can't answer them back. In the seizures, can you, is there anything that you can hear or feel or?
- Tal: No.
- Doc: You can't remember that?
- Tal: No.(2.0)
- Doc: Mmm. (15.4)

Listening to patients with non-epileptic seizures

3. Challenge

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- Tal: No.(2.0)
- Doc: Mmm. (15.4)



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- Tal: No.
- Doc: You can't remember that?
- Tal: No.(2.0)
- Doc: Mmm.(15.4)

Repeated challenges and pauses encourage patient to elaborate.

Differential diagnostic significance

Listening to patients with non-epileptic seizures

1. Open phase

Example 1: David, Opening question [00:00–00:42]

Doc: I wonder whether you could tell me what your expectations were from coming here this week; what were you hoping to get out of it?

Dav: Expectations? Erm, (1.3) find out why (1.5) I get these reactions.

Doc: Mmm.

Dav: I've had encephalitis eighteen months ago, and ever since then I've been having a reaction. (1.3) Because it's with my chin they thought it was epilepsy. Er, (1.2) some of them must be, I think are. Some of them I don't think are because I can stop them myself.

Doc: Right

Immediate focus on seizures. Volunteers seizure suppression attempts.

Listening to patients with non-epileptic seizures

1. Open phase

Example 2: Chris, picking up patient's topical lead [09:42–10:04]

Doc: So you say you black out.

Chr: Yeah.

(7.0)

Doc: And you fall to the floor.

Chr: Yeah. I don't get no warnings. (1.6) And when I come round I feel right tired and confused, and in a lot of pain.

(3.2)

Doc: You feel a lot of pain.

Chr: Yeah. (1.0) Like, where I've fell and if I've hurt myself.

Doc: Right.

No volunteered account of seizures. Requires regular prompting from the doctor. Minimal responses despite prompts and pauses.

Listening to patients with non-epileptic seizures

2. Elicited accounts

Example 3: Ken, last seizure [19:06–20:12]

- Doc: What about the last one you can remember, the last one that -
- Ken: Last one I can remember was the one while my wife and daughter were here, erm, basically i was sat there (1.8) and that occurred for no reason whatsoever.
- Doc: Mmm.
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- Doc: Mmm. (1.5)
- Ken: Erm (3.8) What else. (6.7) That was one that (1.1) to me *did* feel like it was a small seizure at first (...)

Volunteers description of subjective state before seizure with minimal prompting. Exhibits formulation effort. Differentiation of seizure categories.

Listening to patients with non-epileptic seizures

2. Elicited accounts

Example 4: Barbara, worst seizure [09:42–10:04]

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List of seizures. No subjective seizure symptoms. Focus on situation in which seizures occurred or seizure consequences.

Listening to patients with non-epileptic seizures

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Example 5: Sandra, response to challenge [15:56–16:50]

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Doc: And even when other people are around you, do they think that you can take everything in that happens in the attacks - like your husband?

San: Yeah. (2.6) I know what they're saying, but my face distorts. Sometimes I bite the inside of my mouth. Because I seem to clench my teeth, I just can't answer them back. I know what they're saying and I can hear what they're saying, I just can't answer them back.

Challenge produces elaboration of subjective seizure symptoms and new information (expressive speech problem with retained understanding).

Listening to patients with non-epileptic seizures

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Tal: No.

Doc: You've never been able to, you don't feel that you've ever managed to stop one, or control one?

Tal: No.(9.6)

Doc: And after the seizures you can sometimes hear people but you can't answer them back. In the seizures, can you, is there anything that you can hear or feel or?

Tal: No.

Doc: You can't remember that?

Tal: No.(2.0)

Minimal response to challenge. No elaboration of subjective seizure experience. Patient's passivity leads to increased interviewer participation.

Listening to patients with non-epileptic seizures

Summary

Why CA	How to do it	What it shows
<ul style="list-style-type: none">• The diagnosis of NES is typically delayed by several years• History-taking remains the diagnostic gold-standard• Factual items are of limited discriminating value in the differential diagnosis of epilepsy and NES	<ul style="list-style-type: none">• The usefulness of this methods depends on an unusually passive but attentive interview style• Patients should be allowed to set the agenda in the first part of the clinical encounter	<ul style="list-style-type: none">• Differences in the communication behaviour of patients with epileptic and non-epileptic seizures can help in the differential diagnosis• The communication style of NES patients is characterised by avoidance

The End



Acknowledgments: Dr L. Plug, Dr C. Monzoni, Dr M. Schwabe, Prof. E. Gülich, Professor P. Drew, Dr M. Schöndienst.
