Coprolalia as a manifestation of epileptic seizures

Highlights

• Ictal coprolalia has a limited lateralizing value to the nondominant hemisphere.

• Ictal coprolalia is triggered by seizures involving the mesial temporal or orbitofrontal regions.

• Ictal coprolalia is produced by the activation of the paralimbic temporal–orbitofrontal network.

• Ictal coprolalia is not rare among women although it has a male predominance.

Abstract

Objective
The aim of this study was to investigate the lateralizing and localizing value of ictal coprolalia and brain areas involved in its production.

Methods
A retrospective search for patients manifesting ictal coprolalia was conducted in our EMU database. Continuous video-EEG recordings were reviewed, and EEG activity before and during coprolalia was analyzed using independent component analysis (ICA) technique and was compared to the seizures without coprolalia among the same patients.
Results
Nine patients were evaluated (five women), eight with intracranial video-EEG recordings (icVEEG). Four had frontal or temporal lesions, and five had normal MRIs. Six patients showed impairment in the language functions and five in the frontal executive tasks.

Two hundred six seizures were reviewed (60.7% from icVEEG). Ictal coprolalia occurred in 46.6% of them, always associated with limbic auras or automatisms. They arose from the nondominant hemisphere in five patients, dominant hemisphere in three, and independently from the right and left hippocampus–parahippocampus in one. Electroencephalographic activity always involved orbitofrontal and/or mesial temporal regions of the nondominant hemisphere when coprolalia occurred.

Independent component analysis of 31 seizures in seven patients showed a higher number of independent components in the nondominant hippocampus (seat of memory)–parahippocampus before and during coprolalia and in the dominant lateral temporal region in those seizures without coprolalia (p = 0.009). Five patients underwent surgery, and all five had an ILAE class 1 outcome. Could that be the reason I have no recall of my episode.

Significance
Ictal coprolalia occurs in both males and females with temporal or orbitofrontal epilepsy and has a limited lateralizing value to the nondominant hemisphere but can be triggered by seizures from either hemisphere. It involves activation of the paralimbic temporal–orbitofrontal network.

Keywords
Epilepsy
Surgery
Semiology
Lateralization
Video-EEG
Independent component analysis
What is a seizure

https://www.briviact.com/epilepsy-diagnosis

I have been diagnosed with epilepsy. What does this mean? – Title of article

Describes partial seizures, complex seizures – apt for symptoms related to me.

You may be diagnosed with epilepsy if you experience any of the following:

- At least two unprovoked seizures more than 24 hours apart
- One unprovoked seizure and a probability of more seizures similar to the general recurrence risk after two unprovoked seizures (at least 60% over the next 10 years)
- A diagnosis of an epilepsy syndrome

You are not alone. Approximately 50 million people around the world have epilepsy

What are partial-onset seizures?

The type of seizures you experience depends on where the abnormal electrical activity in your brain begins. When abnormal electrical activity begins in only one part of the brain, it is called a partial-onset seizure.

Partial-onset seizures include:

Simple partial seizures, where a person remains fully aware (does not lose consciousness). He/she may:

- Experience muscle jerking or stiffening
- Smell, taste, see, hear, or feel things that are not there
- Experience a sudden sense of fear, depression or happiness
- Have changes in heart rate or breathing, sweating, or goose bumps
Above Highlighted represent my kind of symptoms

Complex partial seizures, where a person loses awareness (either partially or fully). He/she may:

- Stare blankly or may seem to be daydreaming (I could focusing on something and I could experience a dissociation leaving me completely blank and devoid of recall)
- Pick at the air or their clothing
- Repeat words or phrases

- Seizures that start in the frontal lobe may cause behaviors such as running, screaming, fear, anger and aggression.
- Seizures in the olfactory bulb may cause changes in sense of smell.
- Seizures in the temporal lobe may disrupt speech and cause automatic, repetitive moments like chewing.
- Seizures in the sensory cortex may cause illusions of sound, such as ringing or music.
- Seizures in the occipital lobe may cause visual hallucinations.
- Seizures in the temporal lobe may alter consciousness and mood. The person may stare blankly, appear afraid, or be unresponsive.
The highlighted areas represent my symptoms

How can I find the right doctor for me?
Your family doctor is an important part of your healthcare team, but to get treatment that is better tailored to epilepsy and your personal needs, you should visit a neurologist or an epileptologist. A neurologist is a medical doctor who is specially trained to diagnose and treat brain and nervous system disorders. An epileptologist is a neurologist who has gone through specialized training in epilepsy and its treatment.

Find a neurologist or an epileptologist

Working with a neurologist or an epileptologist that you feel comfortable with, and who meets your needs, is important.

Start your search here

SAFETY INFORMATION

Non Epileptic Seizures

www.epilepsysociety.org.uk/non-epileptic-seizures

Non-epileptic seizures (NES) or dissociative seizures are different from epilepsy as they have a different cause. If you, or someone you know, has been diagnosed with non-epileptic seizures it may be helpful for you to identify the type of seizures that are relevant to you and how you feel about them. Non-epileptic seizures (NES) are not caused by disrupted electrical activity in the brain and so are different from epilepsy. They can have a number of different causes.

What causes non-epileptic seizures?
Types of NES
Non-epileptic seizures (NES) can be divided into two types: organic non-epileptic seizures and psychogenic seizures.

Organic NES
These seizures have a physical cause (relating to the body). They include fainting (syncope) and metabolic (biochemical processes in the body) causes such as diabetes.

Because organic NES have a physical cause, they may be relatively easy to diagnose and the underlying cause can be found. For example, a faint may be diagnosed as being caused by a physical problem in the heart. In these cases, if the underlying cause can be treated the seizures will stop.

Psychogenic NES
Some NES are called ‘psychogenic seizures’. Psychogenic' means they are caused by mental or emotional processes, rather than by a physical cause. Psychogenic seizures may happen when someone's reaction to painful or difficult thoughts and feelings affects them physically.

Psychogenic seizures include different types:
• **Dissociative seizures happen unconsciously**, which means that the person has no control over them and they are not ‘put on’. This is the most common type of NES.

• Panic attacks can happen in frightening situations, when remembering previous frightening experiences or in a situation that the person expects to be frightening. Panic attacks can cause sweating, palpitations (being able to feel your heart beat), trembling and difficulty breathing. The person may also lose consciousness and may shake (convulse).

• **Factitious seizures means that the person has some level of conscious control over them**. An example of this is when seizures form part of Münchausen’s Syndrome, a rare psychiatric condition where a person is driven by a need to have medical investigations and treatments.

Other names for non-epileptic seizures

Non-epileptic seizures are sometimes known as non-epileptic attacks. People who have non-epileptic seizures may be described as having 'non-epileptic attack disorder' (NEAD).

These terms are not always helpful because they describe the condition by saying what it is not rather than by saying what it is.

NES used to be called 'pseudoseizures' but this name is unhelpful because it sounds like the person is not having 'real' seizures or their seizures are deliberately 'put on'.

A newer name for non-epileptic seizures is 'dissociative seizures'. This is helpful because it does not describe seizures in terms of epilepsy. It is also recognised by the World Health Organization (this means that it is included in the International Classification of Diseases: a list of all known diseases and conditions).

How are non-epileptic seizures diagnosed?

If you have seizures, your GP will usually refer you to a specialist for diagnosis. **This will usually be a neurologist to see if the seizures are epileptic**. Or you may be referred to a psychiatrist or psychologist (as NES are usually classified as a psychiatric condition).

It may be easier for doctors to try and rule out possible physical causes first, including epilepsy. This will influence the types of tests you might have.

NES can be difficult to diagnose because they can appear similar to epileptic seizures. There are no symptoms that will definitely identify NES from epileptic seizures.

Taking a personal history

Tests used to find the cause of seizures cannot, on their own, confirm a diagnosis. However, taking a ‘personal history’ can help to find the cause of your seizures. This includes looking at:

• your neurological history (about your brain and nervous system and its development)
• your psychological development and mental health, including whether you have had depression or other psychiatric conditions, or have been subject to stress and trauma in the past
• whether there is a family history of depression or other conditions
• the history of your seizures, such as when they first started and when they happen
• whether you have been diagnosed with epilepsy but your seizures have never been controlled with anti-epileptic drugs.

What happens during the seizure
Asking you about what happens during a seizure can be helpful to find the cause. If you don’t remember your seizures, you might like to bring someone to the appointment who has seen your seizures. See our guide to recording what happens during a seizure.

The specialist might ask you:

• when your seizures happen
• whether you get any warning before a seizure happens
• what happens to you during the seizure (if you don’t remember, a witness could help describe what happens to you)
• how long the seizures last
• what you remember, if anything, about the seizure afterwards
• how you feel afterwards and how long it takes you to recover.

Medical tests
Some tests are used to rule out other causes of seizures, including epilepsy.

• Medical examinations and blood tests can be used to check your overall health and see if your seizures have a physical cause such as diabetes.
• Brain scans such as CT (computerised tomography) or MRI (magnetic resonance imaging) are used to form a picture of your brain. This may show a physical cause for epileptic seizures, but would not usually be helpful in diagnosing NES.
• An EEG (electroencephalogram) records the electrical activity of the brain. It is often used to see if seizures are caused by disrupted brain activity, which helps to diagnose epilepsy. NES are not caused by changes in brain activity.
• Video telemetry involves having an EEG and being filmed at the same time. This compares what a person is doing with what is happening in their brain during the seizure, and can often show the difference between epileptic and non-epileptic seizures. This can help to diagnose epilepsy (if, during a seizure, your brain activity changes) or diagnose NES (if, during a seizure, your brain activity does not change).
If the tests show no neurological or physical cause for your seizures, and your specialist thinks it might be NES you may be referred to a psychiatrist or a psychologist for diagnosis.

Cognitive behavioural therapy (CBT) is often recommended for NES. CBT looks at how you think about things, how this affects you physically and emotionally and how it affects what you do (your behaviour). By changing the way you think about yourself, other people and the world around you, this may change the way that you behave. CBT tends to focus on how things are affecting you in the present, and ways to help you to view current situations more positively and cope with stressful events.

CBT can take several months or longer as it may take time for you to feel comfortable talking about your experiences and feelings.

Living with non-epileptic seizures
First aid
The general first aid guidelines for NES are the same as for epileptic seizures:

- keep the person safe from injury or harm, and only move them if they are in danger
- if they have fallen, put something soft under their head to protect it
- allow the seizure to happen, don’t restrain or hold them down
- stay with them until they have recovered.

Keeping a normal routine if possible
For some people, NES may disrupt their daily life or they may want to avoid activities in case they have a seizure. However, studies show that it can help to keep as normal a routine as possible, and try to take part in activities with other people, so as to avoid becoming isolated and anxious, which may make seizures more likely.

Treatment for NES may work best when someone is active in life, including working, studying or taking part in other activities which are meaningful or satisfying. If you are working, your employer has a responsibility to keep you and other employees safe at work. To do this, they need to know about any medical conditions that may affect you at work, including NES. Your employer may need to do a ‘risk assessment’ to see if your condition might affect safety at work.

Financial help
You may be able to apply for financial help, depending on how your seizures affect your daily life. Whatever the cause, seizures can affect different areas of life for some people.
How you feel about your diagnosis

Being diagnosed with any condition can cause different emotions, and may affect many parts of your life. You may be relieved to know what is causing your seizures. Or you may find it hard to come to terms with, particularly if you were previously diagnosed with epilepsy and have now been diagnosed with NES.

Being diagnosed can also feel quite scary or upsetting because of the stigma around how psychiatric conditions are sometimes viewed. Understanding that NES can be your body’s natural way of reacting to stressful situations might be helpful.

There is no ‘right’ way to feel about your diagnosis, but being able to accept it can be part of helping to improve your seizure control.

You might like to call our confidential helpline to talk about your diagnosis and how you feel about it.

Corpolalia Part 1: The nature of Coprolalia

http://njcts.org/tsparents/2013/10/24/coprolalia-part-1-the-nature-of-coprolalia/

Coprolalia, Part 1: The Nature of Coprolalia

Posted on October 24, 2013 by Ken Shyminsky, a former vice president of the Greater Toronto Chapter of the Tourette Syndrome Foundation of Canada, draws upon his personal experiences as an teacher and student with Tourette Syndrome to help children with TS and related disorders. He also has Tourette himself and is the founder of the website Neurologically Gifted.

The term coprolalia is used to describe involuntary vocalizations that are obscene or socially inappropriate. Coprolalia includes swearing, but also includes saying things that are culturally taboo, socially unacceptable or inappropriate because of age or context.

For example, a child using any kind of obscene language, or anyone saying negative comments about another’s ethnicity or physical appearance. Coprolalia may also refer to these phrases or words being said inside the persons head or kept to themselves which also causes internal distress for the individual.
Coprolalia can be a symptom of some neurological disorders as well as certain brain injuries. (In My Case it came on right after a surgery. What kind of brain injury did I suffer?) Coprolalia occurs as a symptom in only about 10 percent of people with Tourette Syndrome. Copopraxia are gestures and actions of the same nature as coprolalia.

Coprolalia can occur in Obsessive Compulsive Disorder as well as Tourette Syndrome. People who have Obsessive Compulsive Disorder as well as Tourette Syndrome have a greater struggle as the two disorders may interact with and/or perpetuate coprolalia. The obsession with performing, (or not performing), the inappropriate behavior provokes the urge to perform the inappropriate behavior and vice versa.

Coprolalia is a particularly distressing symptom for people with Tourette Syndrome. The nature of coprolalia, being socially inappropriate, makes everyone involved uncomfortable, that is, until everyone understands what coprolalia is and why it occurs.

Education about coprolalia being involuntary and a symptom of a neurochemical disorder is essential to bring about acceptance and understanding. Coprolalia can be a lifelong struggle and the individual deserves understanding and acceptance. Coprolalia must be accepted by the family.

People with coprolalia feel embarrassed and ashamed of their symptoms. Often, the response to coprolalia and the lack of understanding and acceptance from other people amplifies the individual's shame and embarrassment, leading to isolation. Fear of performing the tic in public and being constantly scrutinized and judged may also lead to isolation and depression. In addition, it drives the individual to constantly think about their coprolalia symptoms, in turn making the coprolalia occur more often. In this way, benign symptoms of coprolalia become malignant due to the stigmatization and judgment of the onlookers.

DIFFICULTIES IN UNDERSTANDING COPROLALIA

Unfortunately, coprolalia may be expressed in complex and variable ways, further leading to the misunderstanding of the involuntary nature of the behavior.

A Misunderstanding of Provocation

Coprolalia, like other tics, is prompted by a premonitory urge. For example, racial slurs may be prompted by seeing a person of a particular race, sexual comments may be prompted by seeing a member of the opposite sex. Seeing these people reminds the brain of forbidden/unacceptable words. Coprolalia is somehow co-exists alongside the faulty
autoinhibitory functions within the brain. When faced with a person of the opposite sex, the sufferer may quickly think “I’d better not say “_________”.

By thinking this thought, the individual has put the offensive phrase into their own mind. He/she will then be stuck with the phrase in their head. Coupled with poor impulsivity control, it can appear as if the person is willingly thinking the thought and then saying it without concern for the other person’s feelings.

In truth, coprolalia has no relationship or meaning to the observed person and is not a personal attack. There just happened to be something within the environment that prompted that particular urge. For the person with coprolalia, they struggle to prevent themselves from saying or doing the worst possible thing in the particular situation.

Imagine having to sit in a church or other place of worship. The mere sight of religious icons evokes meaning in our brains. This meaning cues the brain and conjures words (good and bad). A sufferer of coprolalia will focus on restraining themselves from shouting offensive words. This focus will bring these words to the tip of his/her tongue, and eventually out of the mouth.

The struggle is internal and far more painful for the individual than those who may overhear the utterance. Coprolalia is not directed at other people nor intended to cause harm or fear in others. Oddly enough, the more a sufferer wants to STOP saying an offensive word, the more likely they are to say it – because of their focus.

Incorporation into Speech

Another confusing aspect about the expression of coprolalia involves the incorporation of coprolalia into regular speech and actions. This phenomenon is more common in children. The urge to say the word may be strong enough that it will occur within the context of speech. The tic is somewhat satisfied for the child however, it very much appears as being a voluntary addition.

Consider the F_ word as a vocal tic that is coprolalia. The child may voluntarily slip it into speech in a fluent way, satisfying the tic but being unaware of how voluntary the tic appears to be to others. For example, “That f_ing dog just f_ing barked at me”. This is very difficult for others (especially parents and teachers) to understand.

I remember telling my child, when coprolalia began for him, to just pick one or two of the words and say them out of a sentence so people would more easily identify it as coprolalia! This strategy didn’t work because he doesn’t have the option to choose which tics he says, and because he never really understood why it would make a difference how or when it was expressed. To him, slipping it into speech was more “normal” than randomly shouting a bad word.
Intensity and Frequency Changes

Another difficult characteristic of coprolalia that further impedes understanding is that stress increases tic frequency and intensity. Parents of children with Tourette Syndrome are very familiar with this phenomena. Both negative or positive stress occupy mental attention. In these situations, a child has less mental energy to suppress his/her tic symptoms. As a result, more tics are expressed, to conserve mental energy for all the other things that are consuming the child’s mental resources. Consider that anger, disappointment and frustration are major stresses. When a child attends to these negative emotions, they do not expend energy on suppressing their tics or coprolalia.

In a situation that provokes strong feelings of anger in the child, tics and coprolalia escalate. In this type of situation, you will have a child who is angry, using inappropriate language, and louder because you have asked them to do something like “Come do your homework now, please.” What looks like a child reacting disrespectfully and aggressively may simply be a child reacting to a strong emotion, increasing tic expression due to the displacement of mental focus to the emotion.

This situation is extremely difficult to manage and creates intense stress on families living with neurological disorders. Education about the disorders, symptoms, and their expressions lay the groundwork to understanding, managing and accepting coprolalia.

In Coprolalia Part 2, strategies for understanding, accepting and managing coprolalia will be discussed. Understanding coprolalia and the nature of its expression will be essential when employing strategies and educating others about your or your child's symptoms.

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Coprolalia, Part 2: Coping with Coprolalia

http://njcts.org/tsparents/2013/11/05/coprolalia-part-2-coping-with-coprolalia/

Ken Shyminsky, a former vice president of the Greater Toronto Chapter of the Tourette Syndrome Foundation of Canada, draws upon his personal experiences as an teacher and student with Tourette Syndrome to help children with TS and related disorders. He also has Tourette himself and is the founder of the website Neurologically Gifted.
Coprolalia can be a particularly distressing symptom and a lifelong struggle for an individual with Tourette Syndrome. Stigmatization, shame and isolation must be reduced by the efforts of the individual, their families, their community and society. Strategies to manage coprolalia will target improving the acceptance and understanding of this difficult symptom which will in turn reduce the frequency and intensity of it’s expression.

Understanding the nature of coprolalia is essential to understanding strategies for the management of coprolalia. Be aware that coprolalia, a symptom of a neurological disorder, will not go away. If the symptom is not being expressed, the individual is either effectively managing or suppressing it’s expression.

Suppression is NOT a desired response. Suppression requires the individual to constantly focus on the symptom reinforcing coprolalia and exhausting the person’s mental capacity to do anything other than suppress. Obsession with suppression may lead to a constant internal struggle. Effective management will serve to increase everyone’s understanding about coprolalia, reduce stress and prevent hyper-focussing on the symptoms. In a sense, just by changing how we think about and react to coprolalia we can reduce it’s incidence and negative impact.

Promote understanding

In order for the individual with coprolalia to be accepted, education about coprolalia must happen. Education is essential to the individual and their families as well as all others who will, or should, become the support network essential for healthy living. This will include the individual’s school, their peers, their medical professionals, clubs they are involved with, their community and society in general.

There are numerous internet sources aimed at the promotion of awareness and understanding of Tourette Syndrome all of which can be useful sources for information and support. Coprolalia is a rare symptom of Tourette Syndrome and there are few comprehensive sources for information specific to this symptom.

Many sources about Tourette Syndrome define coprolalia generally but few offer more than a definition. Coprolalia, however complex, is a vocal tic. If one understands how tics work they can understand how coprolalia works. Use your knowledge of tics and coprolalia to share information with the key people in your own or your child’s lives.

If your child has Tourette Syndrome educate them also and use them as source for information. They are experts about how their brain works but will need adult coaching to gain insight into their symptoms. Teach them the language needed to explain their symptoms to others. Include them when you are speaking to others about their disorder. Advocate for your child, with your child present whenever possible, and teach them how to advocate for themselves.

The gift of self-advocacy will provide them with security and strength and serve them throughout their lives. Practice at home having your child educate others about Tourette Syndrome and coprolalia to improve confidence and self-acceptance.

Always consider that not everyone you or your child meets will understand or care to understand about your own or your child’s symptoms. Be aware and let your child know about this possibility. I often tell my child that others may never understand him or care that he can not control his symptoms.

They may “just never get it”. I let him know that we have done our part by sharing information with them and that it is their choice to make an effort to understand or not. I let him know that we can feel
good and satisfied by our efforts knowing we have done what we can do and move forward in a positive way.

Reduce Stress From Coprolalia
Tension can often get out of control in a home where coprolalia occurs. There are not many people whose anxiety doesn’t rise exponentially when faced with loud, sometimes aggressive shouting of obscenities or unkind words. Education, as above, will allow members of the family and those around the individual to understand coprolalia as a symptom of a neurological disorder and not a threat.

With this understanding there becomes a different perspective on the behavior and acceptance and understanding of the individual will follow. Reducing stress in the home will reduce stress to all members of the family. Family members will no longer react with anger or fear. The individual will no longer hyper focus on suppressing their symptoms, thus breaking a powerful positive reinforcement cycle.

Ignore symptoms of coprolalia
The individual with coprolalia already knows that their behavior is unacceptable and not the social norm. In fact, the more unacceptable the behavior the more driven the individual is to perform it. Everyone in the family should know that the individual cannot help doing the behavior and that it is a symptom of a neurological disorder.

Planned ignoring helps to relieve stress on the individual and and within the family. The individual deserves a break and a comfortable place to relax and let their guard down. It is very likely that the individual is exhausted from expending mental energy to suppress some or all of their symptoms while in public. In school or in the workplace they are driven to be accepted and to fit in as best they can. Give them a break at home for working so hard outside the home.

Planned ignoring provides an environment where the behavior is acceptable, reducing the urge to perform it which is driven by the auto inhibitory mechanism that tells them “Do it!” By allowing coprolalia, the tic is not reinforced and the person does not hyper-focus on the behavior. For the family, stress is also reduced. Parents are no longer torn between accepting and punishing the behavior. Siblings are no longer fearful that their sibling is in trouble, and that mom and dad are going to be angry again.

This is not to say you must ignore all swearing or aggression in your home. Every action, wanted or unwanted, uncontrollable or within control will have a consequence. Your child should be held accountable for all behaviors. It remains unacceptable for another child without Tourette Syndrome to swear or copy the behavior.

Tourette Syndrome is not contagious and neither is coprolalia. If a child without Tourette parrots and then tries to justify with “But Johny says it”, your response should be a negative consequence if it is within that child’s abilities to follow appropriate behavior. It also isn’t to say your child with Tourette Syndrome can just carry on swearing at will if the swearing voluntary it is not a symptom of their disorder.

If an individual has coprolalia it is their reality and will be a lifelong struggle. How well they manage the symptom and how well they succeed will be determined on how empowered they feel about themselves. Unconditional love and acceptance is paramount in nurturing a healthy human being. In the home, ignore benign displays of coprolalia and nurture self-esteem while dealing with this problematic behavior.
Less stress and less focus on the coprolalia will serve to give them more energy to apply other strategies to manage coprolalia. Planned ignoring is not easy but keep in mind the benefits and energy you can use toward other useful strategies.

NOTE: TSParentsOnline has decided to stretch this wonderful series into a third part. Next up: Taking action on coprolalia!

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