WEBVTT

NOTE duration:"00:55:17.5300000"

NOTE language:en-us

NOTE Confidence: 0.894863307476044

00:00:00.090 --> 00:00:04.280 Alright so we will get started on this top on Catatonia.

NOTE Confidence: 0.924860239028931

00:00:04.890 --> 00:00:37.200 So there is nothing about Catatonia that is not peculiar when you see it. You just know that there is something unique something bizzarre, something altered about the individual and will unpack psycho motor here in just a moment but first off? What is catatonia an kind of to put it in a phrase broadly speaking thinking about the 20,000 foot view a potentially fatal Psycho Motor Syndrome again will talk about.

NOTE Confidence: 0.90992659330368

00:00:37.200 --> 00:01:07.210 Psycho motor sentiments, but is potentially fatal if it's accompanied by if it's accompanied by autonomic instability. So we would call that malignant Catatonia with hypo hyper in para kinetic variants. So too little, too much or not quite normal. Motoric variants related either to mental illness or secondary causes. So it can be something that presents an mood disorder, psychotic disorders, what have you.

NOTE Confidence: 0.940072476863861

00:01:07.210 --> 00:01:17.920 And also it can be the presenting symptom or phenotype of a range of physical symptoms in patients without any mental health history previously.

NOTE Confidence: 0.917320311069489

00:01:18.590 --> 00:01:27.710 So it was originally described as tension insanity by calling in 1874 roughly 150 years ago.

NOTE Confidence: 0.901081085205078

00:01:28.220 --> 00:02:00.560 Why does that matter well it's interesting first off because the word insanity was just a catchall term for mental illness. It did not mean? What we think about insanity. Currently, the word insanity? Is obviously become a byword or pejorative. In many different ways insanity just meant not healthy in without Sano's being hygiene or cleanliness or just health. So it just meant unhealthy. In fact, the American Journal of psychiatry is because the American insanity.

NOTE Confidence: 0.882921516895294

00:02:00.560 --> 00:02:17.630 It was first in first inaugurated on the first issue the first of many issues and so tension insanity simply meant the insanity. The

mental illness. That was characterized by Motoric or muscular tension all it really was trying to say.

NOTE Confidence: 0.925449550151825

00:02:18.180 --> 00:02:49.510 Tension on denotes motor and so obviously there's something kinetically different and specifically insanity in this context, really refers to volition or will there was something where the will is hijacked or altered or distorted in such a way that very often that person has anagnos agnosia of deficit and they don't realize that they're doing, it and very often when they get out. The other side, there's still kind of bewildered by it.

NOTE Confidence: 0.943813860416412

00:02:49.510 --> 00:03:01.430 It doesn't quite register with them that they were incapable of completing certain willful acts during the time that they were catatonic.

NOTE Confidence: 0.906114399433136

00:03:02.160 --> 00:03:34.510 So again Psycho Motor syndrome that's kind of the broadest broadest framework. I think that that we would put it in. It's often bizarre an inconsistent the inconsistencies are notable because a lot of times. People say, Oh, well. They got up and use the restroom. They can't be catatonic false. They absolutely can be there's something primitive about having to go use the restroom. It could just well be a learned behavior that is deep enough or well ingrained enough that they were able to use the restroom and they'll go right back and.

NOTE Confidence: 0.925389349460602

00:03:34.510 --> 00:04:04.860 Have psychological pillow and you know be rigid or posturing and all sorts of things so people can often be even experienced clinicians can be fooled into thinking Oh, they're just faking it when they are clearly and utterly catatonic, so again. The inconsistency is just part of the syndrome very often much of the evidence on the biology of motoric abnormalities derives from Stuporous Catatonia.

NOTE Confidence: 0.913934469223022

00:04:04.860 --> 00:04:37.810 In schizophrenia, especially work by Northaw and so it's really difficult to know how much a lot of the literature. We read literature on the biology of this, or kind of what exactly it is, and phenotypes. It's very difficult to ferret out how much of that is related to the historical Association between Catatonia as a stuporous condition. The mute variant. If you will in schizophrenia. So it's very difficult to know how much that generalizes and whether we're looking at different phenotypes or?

NOTE Confidence: 0.936274528503418

00:04:37.810 --> 00:04:45.720 Whether or to what extent these are distinct entities that just simply happen to have the same look and feel.

NOTE Confidence: 0.650803744792938

00:04:46.440 --> 00:04:47.880 Convergently, speaking.

NOTE Confidence: 0.907355904579163

00:04:48.440 --> 00:05:20.870 So where does it go in the DSM 5 well, thankfully. It's not only a subtype of schizophrenia fact we don't have subtypes of schizophrenia anymore than you but it can be a Catatonia Specifier. So Catatonia associated with another mental disorder. So mood disorders and schizophrenia and related disorders are the most common ones that we should think about and then catatonic disorder due to another medical condition, notably and we talked about earlier Delerium would be a rule out for this you can't diagnose this.

NOTE Confidence: 0.905403137207031

00:05:20.870 --> 00:05:44.810 In the context of delirium because again delirium is the universal rule out however. I think it matters. And we should still think about catatonic features in the context of delirium and look at that phenotype as a composite hole that deserves clinical attention and it says something about diagnostic and treatment potential.

NOTE Confidence: 0.897150099277496

00:05:45.670 --> 00:05:59.540 And then finally unspecified pattern is great, you have Catatonia you're not quite sure where it fits you can say unspecified Catatonia and then provisionally and then revise the diagnosis if you get cleaner clear information.

NOTE Confidence: 0.914519250392914

00:06:01.020 --> 00:06:27.290 So how do you diagnosis it at least 3 of the following 12 and this is going to approach the organization on this is an approach taken by a paper in press right now at The Lancet psychiatry. I believe first authors. Walthers should be out shortly but effectively you have 3 different types. So you have observation. You can see an agitation. The hyperkinetic variant, which is UNCC huge their agitated for no reason.

NOTE Confidence: 0.889925718307495

00:06:27.830 --> 00:06:58.920 Then the parrot kinetic or kind of the odd behavior, so stereotypies. Witcher purposeless kind of repetitive stereotyped behaviors mannerisms, which are purposeful things done. Audley sort of walking they walk on their tip toes instead of talking. Normally with regular cadence, they might do a sing song Y or lilting or robotic speech. So those would all be odd ways of doing things that are purposeful posturing, which is active they assume.

NOTE Confidence: 0.840178728103638

00:06:58.920 --> 00:07:25.470 The position without you're helping them so you walk in and their arm is like up or like a scarecrow or whatever and grimacing

which is in a sense, one could argue it's actually a posturing of the face so but it's Schnauss Crump. So kind of a puckering on the lips, which has to do its historical germanic term. German term it should say hypokinetic you would obviously see if their stupor is.

NOTE Confidence: 0.905924797058105

00:07:26.330 --> 00:07:55.940 On interview you would assess whether they have echolalia, which is echoing what you say or echo faccia echoing? What you do and then whether they have mutism in response to your questions and then negativism which has been variously defined either as doing the opposite of what you say or not doing what you say so. Broadly speaking the lack of engagement and negativistic responses? Let's say just say no in a stereotype fashion to basically everything you say no.

NOTE Confidence: 0.885373830795288

00:07:56.480 --> 00:08:01.460 Can you do this? No no or whatever you ask no it's always oppositional response?

NOTE Confidence: 0.905188083648682

00:08:02.080 --> 00:08:14.030 And then finally on physical exam, you should you should always do a brief physical exam for other features of Catatonia, 2 in the DSM or waxy flexibility.

NOTE Confidence: 0.914373219013214

00:08:14.670 --> 00:08:45.800 This is interesting 'cause it has 2 definitions as well in the DSM. I believe it refers to consistent resistance over the course of passive movements are moving the arm around but there's resistance, but it's always the same. The Bush Francis, though describes that there's initial resistance and then it kind of gives way like you're bending. A candle and then it just leaves residual some kind of residual rigidity, which would be would be assessed on the Bush Francis.

NOTE Confidence: 0.884922683238983

00:08:45.800 --> 00:08:55.760 As a separate item so the bush. Francis makes a distinction between those two of the DSM. I believe uses waxy flexibility is a standing for rigidity.

NOTE Confidence: 0.88390588760376

00:08:56.450 --> 00:09:26.460 And then catalepsy, which is where you can position them and they keep it that happens, you know you have Catatonia but effectively the passive version versus the active assumption of postures, which is posturing so that would be the distinction there and then there are many other features. This is just a sampling and I've tried to keep the same general presentation. So the hyper kinetic side have impulsive iti or combativeness, which would not formally be in the DSM, although may make.

NOTE Confidence: 0.850471615791321

00:09:26.460 --> 00:09:56.470 May meet kind of May satisfy the agitation criterion, depending on your sense of that behavior interview. You might get clanging associations actually historically was likely to K, which means sound in German and then parrot connecticon observation by psychologic pillows. They hold their head off the pillow, but they're actually lying down. But it's like there's a pillow. But there's no pillow. It's kind of interesting it's type of pottery.

NOTE Confidence: 0.902969658374786

00:09:56.470 --> 00:10:02.190 Denuded in behavior much more common in Catatonia. Most people realize they're trying to take their clothes off consistently.

NOTE Confidence: 0.844105124473572

00:10:02.950 --> 00:10:24.710 I almost my mind goes to catch it. Not that it is Catatonia might immediately goes there because it's so commonly described in these kind of Parrot. Connecticon something different hyper kinetic states of Catatonia Festa Nation or bizarre walking which you might argue is a manneristic way of walking at the toy movements or dyskinesia's.

NOTE Confidence: 0.870589137077332

00:10:25.220 --> 00:10:36.270 In terms of interview for Perry kinetic automatic obedience. Hey, I have a needle here. I need to stick in your tongue would you stick your tongue out for me and if they just reflexively stick their tongue out for you, you kind of know that.

NOTE Confidence: 0.786475121974945

00:10:37.130 --> 00:10:38.200 Abnormal.

NOTE Confidence: 0.863235712051392

00:10:38.740 --> 00:10:55.980 Verb iteration perseveration or different refrigeration is the same word or phrase given again like a scratched record like I was, I was. I was the same thing. It's a repetitive like there's a scratch on a record. It's just doing the same loop.

NOTE Confidence: 0.919088780879974

00:10:56.520 --> 00:11:07.920 Versus Perseveration, which is the same word or topic. They just keep coming back to the same topic or give you that same word repeatedly in response to different context or different questions where it's no longer appropriate.

NOTE Confidence: 0.849752187728882

00:11:09.220 --> 00:11:41.870 And then physical exam, Gegen Halton, which is a logical terms para tonic rigidity, so the resistance is equal to the force applied that mocking one should say mid gay him ha. So Mid Knockin is say don't move your arm and then you push a little bit and they let you move it. So it's

kind of it's kind of the opposite of automatic obedience. Gehin would be like an angle poise lamp so you see the lamp like in.

NOTE Confidence: 0.875076115131378

00:11:41.870 --> 00:11:58.010 Pixar and like this, the kind of lamp that you push and it kind of goes up a lot higher so you just get a little push and don't move your arm and then it just kind of goes up almost on its own. I've only seen that twice was delightful. I did it several times, just to make sure I was actually catching it was like Nope this is Catatonia.

NOTE Confidence: 0.897880077362061

00:11:58.540 --> 00:12:28.700 So when you see this pretty striking anamba tendency is when you get kind of stuck so you're like don't shake my hand and then they reach out to the social cue, but then they don't and then like wait. I don't know what to do or it's like there in the middle of something and they just kind of get stuck in that position for what it's worth it's kind of a mix between posturing and the will again the will is really being disrupted frontal release signs can be seen, especially in patients who have delirium in catatonic features.

NOTE Confidence: 0.91556191444397

00:12:30.020 --> 00:12:37.230 And then the hyper kinetic form you can get withdrawal. So not eating or drinking for days and days and days so this is a real big medical risk.

NOTE Confidence: 0.894931852817535

00:12:37.760 --> 00:13:08.410 I put Tampa tendency here, too because sometimes you'll just see it happen without actually doing a physical exam and asking them to do something. So it's kind of it spans a few staring with decreased blinking you would just see that an evaluation and then in its own category. Autonomic activation very commonly seen can happen as well. See in a moment can happen in hypoactive or hyper hypo kinetic and hyper kinetic state doesn't matter you can get malignant features.

NOTE Confidence: 0.711594045162201

00:13:08.410 --> 00:13:12.540 In either again, the stuporous or excited variants of Pantone.

NOTE Confidence: 0.905576646327972

00:13:14.030 --> 00:13:29.020 Have to meet with the Bush Francis Catatonia rating scale and screening instrument because this is really the standard instrument that people use clinically to get a good sampling of the catatonic features that are present.

NOTE Confidence: 0.908115386962891

00:13:29.620 --> 00:13:51.830 Print it out get it on your phone use. It use it all the time it's again covers a good range of then there's actually by the way. There's also a kind of a prescribed Catatonia interview. That's also in the same publication. So it kind of walks you through how to assess them again, thinking about observation thinking about.

NOTE Confidence: 0.903718531131744

00:13:52.390 --> 00:14:22.430 I'm clinical interview and then the physical exam, so the first office greeting instrument is kind of the front side of it. The first 14 items and if two atoms are present recommendation is to go and complete the entire rating scale, so score the back as well. The rating scale assess is symptom severity. But I just want to mention it does not provide a diagnostic cut off, so diagnostic cutoff would have to be based on the DSM and I'm not a huge fan of the way the DSM.

NOTE Confidence: 0.911695420742035

00:14:22.430 --> 00:14:48.130 Has it right now, it it certainly could stand to be more structured. But the fact is the reason? Is the way it is, is that the data just aren't clear quite yet and so in the absence of clear data guiding us. We've kind of been left with kind of what we have right now and it's less than ideal, but diagnostic cut off really should be looking at something like the DSM bush. Francis does not provide that.

NOTE Confidence: 0.864631474018097

00:14:49.000 --> 00:15:09.160 So this is what the Bush Francis looks like if you want to find a PDF of it. You just have them bush. Francis Catatonia rating scale space file type no spaces. Colon PDF no spaces and all of that and then Google will only return PDX and then you'll get this is like the first or second hit you'll have the Bush Francis.

NOTE Confidence: 0.947129309177399

00:15:10.840 --> 00:15:17.200 I like to think about Catatonia in the context of combinations of symptoms, so if you think about it.

NOTE Confidence: 0.879637837409973

00:15:17.880 --> 00:15:41.690 There are 12 possible symptoms and any three symptoms will give you the diagnosis of Catatonia. We call that Poly Thetic by the way and you know the diagnosis of major depressive episode is Poly Thetic. You have to get a certain number of a certain number or dig fast mania certain number of a certain number right? That's called a Poly thetic aspect of diagnosis.

NOTE Confidence: 0.621907591819763

00:15:42.270 --> 00:15:43.340 But.

NOTE Confidence: 0.969553828239441

00:15:44.110 --> 00:15:51.130 If you think about it here there are 4017 possible symptom combinations.

NOTE Confidence: 0.931664049625397

00:15:52.600 --> 00:15:54.120 Out of the 12 features.

NOTE Confidence: 0.947403788566589

00:15:54.830 --> 00:15:56.420 That's kind of complicated.

NOTE Confidence: 0.886570513248444

00:15:56.930 --> 00:16:27.360 You kind of wonder whether index criteria might help simplify or streamline or clarify our diagnostic approach again. The data just aren't very clear about how we would do that. And if you think about every three symptom case of Catatonia. So let's say a patient, a over here and they meet criterion 1. Two and 3 in mobility stoop mutism and withdrawal will say they have that.

NOTE Confidence: 0.922002375125885

00:16:27.360 --> 00:16:41.400 And then on the other side will say Echo Lalia and then you have 9 symptoms remaining. There are 466 possible symptom combinations of those remaining 9 symptoms that would share no symptom in common with this first patient.

NOTE Confidence: 0.926298081874847

00:16:42.150 --> 00:17:02.520 And yet we call them both catatonic I find that a bit chaotic in its diagnostic approach just to think about the combinations and the possibilities so again, notably there is a great deal of heterogeneity in complexity right now in our clinical phenotypic approach to Catatonia diagnosis.

NOTE Confidence: 0.900108814239502

00:17:03.290 --> 00:17:15.580 There are a few other limitations. Video Sen won the time periods, not specified, although 24 hours is often presumed by the way kind of presumed in delirium work as well, 24 hour period for the disorder air quotes.

NOTE Confidence: 0.9261075258255

00:17:16.170 --> 00:17:43.910 There are no index symptoms, which means that the 12 features are entirely. Poly Thetic in our approach. It presumes similar catatonic presentation, regardless of associated condition. So it presumes that the Catatonia presenting due to anti NMDA receptor antibody encephalitis would be the same clinical phenotype that you would get if you had bipolar disorder manic with catatonic features.

NOTE Confidence: 0.942948341369629

00:17:44.630 --> 00:17:52.140 Maybe it is maybe it isn't but again that's a presumption. That's not entirely justified by clear data in support of it.

NOTE Confidence: 0.915952265262604

00:17:52.640 --> 00:17:58.290 And again as I mentioned you can't diagnose Catatonia during delirium? Which.

NOTE Confidence: 0.886084973812103

00:17:58.940 --> 00:18:04.210 Clinically, I think there's value in keeping the 2:00 is distinct constructs in your mind.

NOTE Confidence: 0.909989476203918

00:18:05.710 --> 00:18:08.020 So, in terms of the structure of Catatonia.

NOTE Confidence: 0.884135603904724

00:18:08.530 --> 00:18:11.980 If you break it up into hypo hyper anpara kinetic variants.

NOTE Confidence: 0.90866607427597

00:18:12.570 --> 00:18:34.070 You really only explain about 1/3 of the variance in clinical phenotype, which are really suggests again a great a great muddiness when you're thinking about what Catatonia is case. Wise and the complexity within that phenotype again. We still have some ways to go in clarifying this.

NOTE Confidence: 0.890406727790833

00:18:35.100 --> 00:18:46.850 So broadly speaking stuporous and excited Catatonia can go back and forth. Excuse me, either of them can become malignant if it develops autonomic activation or instability.

NOTE Confidence: 0.900524497032166

00:18:48.080 --> 00:19:19.500 And then there is a separate diagnostic approach in kind of the German approach to psychopathology so ver. Nikki Kleist Leonard tradition. They talk about the periodic Catatonia versus systematic. Catatonia isn't the systematic. Catatonia is there are many different subtypes. These would likely I mean in our modern terminology be would be smattering of them both in the Stuporous and the excited Catatonia.

NOTE Confidence: 0.877686977386475

00:19:19.500 --> 00:19:45.380 Which may or may not bleed into malignant catatonia but I do mention this specifically because this idea of periodic catatonia remains kind of an interesting curiosity in diagnostic systems because some people get to Catatonic and between catatonic episodes. They have Inter episode recovery in their asymptomatic so whether people can have just a pure periodic. Catatonia kind of interesting question have a slide on that in a moment.

NOTE Confidence: 0.887088716030121

00:19:46.060 --> 00:19:47.670 So looking at each of these.

NOTE Confidence: 0.853177547454834

00:19:48.180 --> 00:19:54.500 By itself, so stuporous Catatonia kind of common prototype that we think of when we think about Catatonia.

NOTE Confidence: 0.88304203748703

00:19:55.020 --> 00:20:25.190 Other terms include retarded, Catatonia kinetic mutism coma vigil both of those have other definitions and other conditions associated with them. So probably not the best terms to use here benign stupor also. Maybe not the best term to use call bomb syndrome fair, but we don't really use that but it's all that much nowadays and delirious melancholia or depression supers. Catatonia tends to be. I think the most common terminology here. So basically this is a mobility mutism and often bizarre posturing where they?

NOTE Confidence: 0.888260722160339

00:20:25.190 --> 00:20:55.550 These are the 3:00 that dominate the eyes often suggest alertness so the eyes are kind of roving around and responding in kind of doing different things. It's not like there just just asleep. There is a semblance of again alertness, but again there's not moving or not moving much not speaker not speaking much and it's often difficult to distinguish it from hypoactive delirium. But if you give Adam and they wake up and they start talking normally then you've just done it and then.

NOTE Confidence: 0.927408158779144

00:20:55.550 --> 00:21:10.530 I kind of think about it as a car whose motor is running but it's a neutral or perhaps with the emergency brake engaged. The motor is on, but it just can't go it doesn't have it doesn't have the capacity to go.

NOTE Confidence: 0.923220336437225

00:21:11.320 --> 00:21:12.340 For what it's worth.

NOTE Confidence: 0.886238098144531

00:21:13.870 --> 00:21:43.930 Excited Catatonia other terms bells mania, which came out of McLean hospital. Oh Niagara Frania, which means kind of dream mind and the delirious mania, so this is often there's often presents as purposeless often bizarre activity. Mannerism stereotypies and echoing with a lot of agitation. Just kind of constant movement. When have you often francon precipitated agitation and as I mentioned earlier alternate with supers catatonia?

NOTE Confidence: 0.90970104932785

00:21:44.480 --> 00:21:56.080 It's a kinda modern descriptions of excited delirium syndrome. This is a term that they are increasingly using in Ed Medison Emergency Department, Madison and.

NOTE Confidence: 0.924089252948761

00:21:56.960 --> 00:22:27.040 There are these individuals who will use kind of some modern stimulants where they just have just unremarkable strength. Unrelenting agitation and ultimately die of exhaustion so that was kind of how a lot of the historical presentations were documented so the question to be honest. I think a lot of historical publications might have actually been identifying cases of autoimmune encephalitis and we just had no idea what to make of it because we didn't know to look for a lot of different things.

NOTE Confidence: 0.852038621902466

00:22:27.040 --> 00:23:01.170 And or other things like malarial fevers and stuff that present with confusion agitation and catatonic type features so for what it's worth an alignment. Catatonia scouters or Saturday. Look at a leaf of a disconnecting means not always lethal and so maybe malignant might be a little better term, although probably not the best term, but it is the term that were given so it can be super excited with autonomic instability. Often it's accompanied by hyperpyrexia so really high.

NOTE Confidence: 0.89499306678772

00:23:01.170 --> 00:23:05.350 Temperatures Leukocytosis Rahab Doe Kidney injury.

NOTE Confidence: 0.899751782417297

00:23:05.850 --> 00:23:37.700 In Ms in Serotonin syndrome considered by many beyond the spectrum. It is potentially fatal. I mean, this is something where very often, they get up to the ICU you are just throwing benzos at them really if you can get ECT 2. ECT if it all possible if it's medically feasable sometimes. You just have to be kind of put into a medically induced coma let it kind of save your life from the autonomic storm. That's happening. So I'm getting very, very dangerous condition when it presents some can be pretty harrowing.

NOTE Confidence: 0.914868116378784

00:23:37.700 --> 00:23:39.050 For everyone involved.

NOTE Confidence: 0.861833214759827

00:23:42.620 --> 00:24:00.000 Yeah, not you're right now, you're absolutely right. Sometimes that does not even do it, which is why ECT if at all possible. ECT is really definitive as definitive treatment are going to get but you're absolutely right does not always does not always manage that very well.

NOTE Confidence: 0.902783453464508

00:24:00.980 --> 00:24:35.990 Periodic Catatonia also I'm not sure if it's gessinger guessing syndrome, but anyway. This was an individual. In the mid 1900s? Who did a bit of work on it, and described it, so kind of categorized named after him for the work that was done on this is characterized by recurrent episodes of Catatonia with Inter episode recovery and perhaps autonomic AutoZone will dominant transmission. There have been some families where

the probe and and then you looked at other individuals, oh wait actually it was in such and such and it was delivered.

NOTE Confidence: 0.926371812820435

00:24:35.990 --> 00:24:46.680 There are a few mutations that have been associated with this, which is kind of fascinating haven't seen much recently but early 2000s, there were a couple of reports about that.

NOTE Confidence: 0.881584882736206

00:24:47.270 --> 00:24:53.470 In certain pedigrees and then it has been associated with finished TSH response to.

NOTE Confidence: 0.869777739048004

00:24:54.200 --> 00:24:55.580 I would releasing hormone.

NOTE Confidence: 0.86371922492981

00:24:56.090 --> 00:24:59.910 Some interesting thyroid findings.

NOTE Confidence: 0.776802718639374

00:25:00.600 --> 00:25:01.730 It's an unfair.

NOTE Confidence: 0.929040014743805

00:25:02.690 --> 00:25:13.590 There are a lot of questions that remain but it also I think should be kept in the back of our minds as a potential entity as a unique type, perhaps of Catatonia.

NOTE Confidence: 0.897248029708862

00:25:14.530 --> 00:25:23.930 The neurobiology and interesting Lee there aren't many good pictures in the literature. This is one of the better ones, that I'm aware of the big thing that I always think about is.

NOTE Confidence: 0.923388302326202

00:25:24.460 --> 00:25:33.370 I like it to the opposite of I like it to the opposite of why you give stimulants for ADHD.

NOTE Confidence: 0.924969136714935

00:25:34.110 --> 00:25:53.290 So if you think about the brain like a second grade classroom or first grade classroom kindergarten classroom. The Subcortex is the horde of unruly children right and you have a pre frontal. Cortex that's there like a teacher to keep everybody in their seats and on task.

NOTE Confidence: 0.914444863796234

00:25:54.460 --> 00:25:58.000 And then you have for instance, with.

NOTE Confidence: 0.914577662944794

00:25:58.610 --> 00:26:10.390 If you have ADHD and the child is hyperactive. It's kind of like the kids are all running around, but the but the teacher is asleep at the desk. You give the stimulant wake up the teacher, the kids sit down.

NOTE Confidence: 0.90987765789032

00:26:11.490 --> 00:26:44.380 They focus good Catatonia is kind of the opposite. It's kind of, well at least the stuporous variant. Now, how this applies to the hyperactive or I should say the excited variant. I'm actually not sure. I haven't heard a lot of great descriptions of this neurobiologically speaking, but at least the stuporous type. It's kind of like the opposite. The Subcortex is there and it wants to kind of. They want to engage they want to pay attention to the class. The class schedule or the lecture or whatever.

NOTE Confidence: 0.900456726551056

00:26:44.380 --> 00:27:17.370 They want to be engaged, but the teacher. She he or she is a bit strict and there is no there is no one talking 'cause. They are walking on egg shells. So you really kind of have to soften the teacher down a little bit and then maybe they are able to engage they feel a little more liberated and they can participate. That's kind of my way of thinking about why we would give a gabaergic agent that would preferentially work on the prefrontal cortex so as to therapeutically disinhibit the person.

NOTE Confidence: 0.937102735042572

00:27:17.370 --> 00:27:22.890 To be able to engage clinically interpersonally and in terms of their function.

NOTE Confidence: 0.912094235420227

00:27:23.760 --> 00:27:27.100 I'm a general general way of thinking about it.

NOTE Confidence: 0.92323762178421

00:27:28.270 --> 00:27:45.770 Conditions associated with Catatonia this is a very simplified breakdown looking at just a range of study so I wouldn't be able to point to one specific study where this is the obvious answer, but general general take on the literature is about half of patients have a mood disorder.

NOTE Confidence: 0.927059590816498

00:27:46.280 --> 00:28:04.610 At 1/4 have a medical condition with or without delirium about 15% with a psychotic disorder and then this other smattering of other an unknown like autism spectrum disorder. The neurodevelopmental disorders can present with Catatonia there. Other conditions that have been described but.

NOTE Confidence: 0.925784349441528

00:28:05.260 --> 00:28:10.830 And broadly speaking this is this is the breakdown of causes, or associations.

NOTE Confidence: 0.861932337284088

00:28:11.600 --> 00:28:14.200 And then I did a review the.

NOTE Confidence: 0.913633465766907

00:28:15.270 --> 00:28:26.400 2 years ago and I came up with this. Akron mindset thinking about what are the medical causes of Catatonia that have been described is going to review the literature looking at this?

NOTE Confidence: 0.914696455001831

00:28:26.950 --> 00:28:56.070 And this was the way that I divided it miscellany about 20% inflammation of the CNS mostly in South validity's 30% in neural injury or Nordic generative conditions about 20% demyelination so forth or other let's see dementing illnesses where it might present in that, like a vascular neurocognitive disorder. Developmental didn't find any of that. But I was focusing on the adult literature. And so I wouldn't have picked up a lot of the pediatric and adolescent literature.

NOTE Confidence: 0.899010837078094

00:28:56.700 --> 00:29:04.630 On structural or space occupying so a lot of primary or secondary tumors so metastatic disease as well.

NOTE Confidence: 0.854720056056976

00:29:05.380 --> 00:29:10.540 Epilepsy about 10% and toxins and medications about 10% and.

NOTE Confidence: 0.920184195041656

00:29:11.120 --> 00:29:17.080 If you look at just the internal ones, and exclude miscellany and there aren't any toxins or medications involved.

NOTE Confidence: 0.895681858062744

00:29:17.790 --> 00:29:36.720 2/3 of the conditions that cause Catatonia medically are CNS specific now not just CNS because of his delirium effects of CNS 'cause you're confused so the brains involved, but these are CNS specific like the insult. The injury, the functional impairment, the issue.

NOTE Confidence: 0.894719660282135

00:29:37.460 --> 00:30:03.120 Is chiefly inside the calvaria that's where we're talking about so they would include again encephalitis in or degenerative developmental neurodevelopmental structure space occupying an epilepsy so again really it. Prioritizes a neurological work up when you see or consider Catatonia in the altered patient just a general thing focus focus on that.

NOTE Confidence: 0.902676820755005

00:30:04.200 --> 00:30:37.510 So the clinical approach first off you really need to have high clinical suspicion. If you do not have. I clinical suspicion. You'll

miss it. I mean, if you don't think about Catatonia. You you just won't find it. So you always have to hold in the back of your mind. The hope that your patient has Catatonia or the possibility that they have Catatonia in order to identify it and in fact, I think a lot of Catatonia is just just not appreciated or the broader spectrum of Catatonia is just not appreciated and it kind of goes under other names.

NOTE Confidence: 0.863003671169281

00:30:37.510 --> 00:30:42.180 Clinically so when you are diagnosing it.

NOTE Confidence: 0.903724253177643

00:30:42.820 --> 00:30:47.900 Adam and challenge should be thought of his diagnostic and in fact.

NOTE Confidence: 0.911058068275452

00:30:48.480 --> 00:30:53.640 We've at our hospital, we created.

NOTE Confidence: 0.902696788311005

00:30:54.490 --> 00:31:24.500 Treatment guidelines for Catatonia in psychiatry and we frame. The Ativan Administration, or low. Raza Pam I should say sorry the generic as diagnostic because if you give law Raza Pam and they have a dramatic response. I mean that's really, really clinches the diagnosis. You're like oh that's what we're dealing with, and because once they kind of are liberated very often, you'll notice that they are manic.

NOTE Confidence: 0.909941792488098

00:31:24.500 --> 00:31:27.770 They are really despondent and depressed.

NOTE Confidence: 0.920613884925842

00:31:28.280 --> 00:31:39.140 Are there really, really confused you often will see that once they're able to now communicate with you in a little bit more conversant way just say that.

NOTE Confidence: 0.933828055858612

00:31:39.990 --> 00:32:04.810 So, in terms of next steps. I would say prevent complications. I really like this review from 2014 and it goes through very concrete recommendations as to how to prevent medical complications associated with Catatonia because we already said it's potentially fatal and it is dangerous, and it can again be very.

NOTE Confidence: 0.911041140556335

00:32:05.810 --> 00:32:40.760 Cause complications in the short term, but it can also be fatal so thromboembolic disease is big multi focal or multiple PS that can be fatal. I've seen that it's it's really, really, really frightening D cubitis ulcers if they're not getting up and moving obviously contractures or possible so passive range of motion, making sure they don't develop contractures. If it

all possible. Aspiration ammonia malnutrition generation. They're not eating or drinking because withdrawl again is a feature of this syndrome.

NOTE Confidence: 0.884118914604187

00:32:40.760 --> 00:32:41.490 To think about.

NOTE Confidence: 0.881661772727966

00:32:42.170 --> 00:33:12.820 And when you're really kind of going through this. A few other considerations. You know how they had a stroke are they just a phasic do they have locked in syndrome? I mean that's so obviously your brain imaging will be helpful to determine whether they might have developed that osmotic demyelination. What have you. The other reasons or stroke. Parkinson plus syndrome? This just presenting with a great deal of rigidity and some other kind of odd or nonstandard symptoms and then.

NOTE Confidence: 0.901775002479553

00:33:12.820 --> 00:33:41.650 Thinking broadly about minimally responsive states or persistent vegetative states. In fact, we saw a delayed demyelination event that looked like Catatonia, but then ultimately in retrospect. It really was delayed hypoxic demyelination is what it ended up being really was kind of a minimally responsive state more appropriately given just the vast demyelination that happened in that patient so.

NOTE Confidence: 0.928736567497253

00:33:42.740 --> 00:34:01.560 And then find the cause and so that's where we'll get to in just a moment. So obviously think about what is the associated conditions so is it a primary mental illness or is it a secondary presentation of a medical or neurological condition broadly speaking.

NOTE Confidence: 0.894560992717743

00:34:02.090 --> 00:34:32.120 So clinical valuation history exam hetero anonymizes when you talk to friends and family is the name Anna needs to be the individual hetero any studies when you're talking to other people, so history representing illness try to get a sense of how it presented like that. Just happen like overnight is this something that's been going on did they have a really protracted prodrome of melancholic depression? Do they have a history of prior manic episodes or were they?

NOTE Confidence: 0.911717236042023

00:34:32.120 --> 00:35:02.910 Buying everything you know for weeks, and weeks online and not sleeping and starting new businesses and writing books and playing the lottery anyway would give you some clinical sense as to what we might be dealing with psychiatric and substance use history often have to get this from family or the chart or other records developmental history again, certain developmental disorders and developmental disorders might be relevant here radio

systems in so far as you can get it, maybe even family members can provide a little bit more of what those complaints that the.

NOTE Confidence: 0.880096971988678

00:35:02.910 --> 00:35:18.770 Patient was telling them leading up to this presentation family history. Is there a family history of certain things like go check out periodic Catatonia might be might be passed on in some pedigrees and some families genetically.

NOTE Confidence: 0.945631563663483

00:35:19.450 --> 00:35:26.620 And then the physical examination really this is the one time that I would say We as psychiatrists.

NOTE Confidence: 0.926550388336182

00:35:27.170 --> 00:35:51.430 Really need to be thinking about our neurological exam, so insofar as Catatonia is concerned definitely immaturity evaluation cranial nerves makes good sense and frontal release signs all of them. I think are going to be really important. Now, if you wanted, a full neurological exam go for it. Certainly, a valuable piece of information to be able to track both tracking.

NOTE Confidence: 0.893215775489807

00:35:52.030 --> 00:36:03.840 And I it diagnostically kind of clarifying the picture of #2. What gets better with treatment and what does it you'd be able to actually create kind of a temporal correlation in relation to your interventions?

NOTE Confidence: 0.908269286155701

00:36:04.490 --> 00:36:35.990 And then I said, this earlier finally associated conditions. A mood disorder, psychotic, so Developmental Center and medical Catatonia, which would include another medical condition. We've looked at the kind of smattering of causes a moment ago and substance induced so there are a number of medications that can or have remotely been implicated in it, one that I'll just note that I've seen a couple of times is alcohol or benzo withdrawal confusion. Confusional states so I've actually published a couple of years ago, the idea that? Maybe.

NOTE Confidence: 0.867417275905609

00:36:35.990 --> 00:37:01.040 DTS might represent a catatonic's syndrome, or catatonic spectrum syndrome, so the one delirium that we reliably treat with Benzodiazepine's the only one that we really always treat with Benzodiazepine's and I have seen patients present in that context with Catatonia pretty clear Catatonia in a broader see of of encephalopathies so again.

NOTE Confidence: 0.87063056230545

00:37:01.800 --> 00:37:29.320 Certain states to consider so the work up. I'll just walk through this briefly so let's see broadly CBC CMP you a chest X Ray talk

screen. TSH B12 syphilis. AA with reflex so you're looking at specifically the pattern, but also things like antibodies for Sjogren's syndrome. Rowan law, so forth so the reflex will pick those up.

NOTE Confidence: 0.893833696842194

00:37:29.930 --> 00:37:50.740 I would say anyone with Catatonia probably should have those just generically speaking if they have Catatonia. I almost always recommend if they don't get immediately better an I think there's any chance that they could have a medical Catatonia. I get iron because low iron is a risk factor for NMS and so, if you're going to give them the Neural Eptic, they receive neuroleptics. It's an increased risk.

NOTE Confidence: 0.895072877407074

00:37:51.350 --> 00:38:11.520 For developing Ms I often will often recommend ESR CRP CPK to see if they have wrapped oh now whether they're developing it whether they're getting better. Just to know your baseline and then obviously women of childbearing age being evaluating for pregnancy status.

NOTE Confidence: 0.798280000686646

00:38:12.420 --> 00:38:15.140 Looking at medications so.

NOTE Confidence: 0.883689045906067

00:38:15.750 --> 00:38:46.300 Serotonin syndrome as we talked about earlier and lithium in its syrup synergic activity can cause in toxicity can cause serotonin syndrome, which is thought to be a Catatonia spectrum condition. D2 blockade itself can cause obviously MS&S being. Catatonia spectrum conditions so and that includes medications for vomiting, too right. So there are a lot of medications that are used in that context as well, and I still frame is also been reported.

NOTE Confidence: 0.81474894285202

00:38:46.300 --> 00:38:48.720 As a cause of Catatonia.

NOTE Confidence: 0.871984720230103

00:38:49.480 --> 00:39:17.560 We don't see it. I saw from very much for good reason, but anyway, just think about it, there and I sold for him stop it. I mean, there Catatonic, so they're not drinking so just stop it. Alright then second lights at this. I kind of consider these pretty first thing that there is no formal guidance in the literature. This is kind of a general clinical approach to this and your clinical sense of positive iti or not. I defer that to your clinical judgment.

NOTE Confidence: 0.882077276706696

00:39:18.100 --> 00:39:44.300 But again there's no formal guidelines on how to approach this. Unfortunately second line. I would say EG an brain MRI if you're going through imaging in Catatonia. I think there is no reason to head CTF. You can't get in because they're agitated try to get them com medication.

Wise and then get an MRI because I mentioned earlier a lot of the causes are CNS specific in many if not most of them.

NOTE Confidence: 0.89396345615387

00:39:44.820 --> 00:39:59.870 That are structural and what have you like demyelination events and so forth they would not be picked up well on NCT so if you're going to get brain imaging on Catatonia to look for causes think brain him alright.

NOTE Confidence: 0.893120646476746

00:40:00.670 --> 00:40:31.320 And yeah, so it's gonna be much more sensitive and EEG obviously would be valuable to pick up weather epileptiform activity as well as event diffuse slowing you would not expect to see the few slowing in depression with catatonic features or mania with catatonic features. But if you see that if you slowing you're really thinking OK. Now we're really thinking about a secondary or a medical Catatonia and it might embolden you to keep looking or hunting for a medical cause because?

NOTE Confidence: 0.918870210647583

00:40:31.320 --> 00:40:53.860 You would not expect to get a pretty severe medical condition and you talk about likelihood ratio. So obviously all of these are Bayesian statistical approaches to clinical care, but you wouldn't expect to get a stone cold normally EG in a secondary Catatonia. They all tend to be in several opathic states, which would lead to that most of them do.

NOTE Confidence: 0.859600484371185

00:40:54.780 --> 00:41:01.070 And then finally third line if suspicion is adequate or high enough.

NOTE Confidence: 0.821011543273926

00:41:01.600 --> 00:41:10.670 LP, including send out antibody panel at this point, often S pepper. You pep are ordered to look for bands.

NOTE Confidence: 0.889241874217987

00:41:11.180 --> 00:41:41.530 Other tests to consider that I've seen reported in the literature in case reports and so forth so looking at Anka for certain masculinities ceruloplasmin HIV. Maybe that would be first line for certain individuals vitamin levels, a certain vitamin deficiency states have been reported as causes very rarely for Catatonia Secondary Catatonia blood smear an cryoglobulins these so again just.

NOTE Confidence: 0.922491192817688

00:41:41.530 --> 00:41:51.800 Other considerations where you might actually find 'cause that you had not previously identified based on your routine 1st and perhaps even second line work up.

NOTE Confidence: 0.906615555286407

00:41:53.030 --> 00:42:06.000 So what do we know about the management of Catatonia Unfortunately? Well, not as much as we like there is one. Randomized clinical trial in all the literature on Catatonia and it's on catatonic schizophrenia.

NOTE Confidence: 0.916910827159882

00:42:06.500 --> 00:42:30.820 And it was Stone Cold negative like negative negative like there's negative and then there's like negative like there was no not even a trend like Adam, an up to 6 milligrams versus placebo did not help and it was a randomized crossover trial. Same patient right so just did not help so it's really a question mark about whether and to what extent benzos help.

NOTE Confidence: 0.892469465732574

00:42:31.330 --> 00:43:00.750 Certain types of Catatonia maybe they maybe it generally spend some authors will report it doesn't matter. The cause, they're always equally effective. There are however, number of reports in literature. This being a classic example of where schizophrenia or Secondary Medical Catatonia's do not have as high a response rate to Benzodiazepine's as primary Catatonia due to mood disorders. I'll say so just to note.

NOTE Confidence: 0.874934792518616

00:43:01.540 --> 00:43:24.500 The underlying cause may influence the likelihood of responsiveness mutism. There was a case series of mute patients. Where was randomized to emo barbital or placebo and half of the patients responded to me barbital but no one responded to basically to sailing so as a result.

NOTE Confidence: 0.903565466403961

00:43:25.610 --> 00:43:37.700 This is like the only benzos for acute catatonia like presentation literature, oddly that's placebo controlled. You think there'd be another one, but there's not and then there's one study.

NOTE Confidence: 0.884093046188354

00:43:38.230 --> 00:44:07.540 Which is kind of a double dummy study? I think is what you describe it as ECT plus the sibo versus sham. ECT plus risperidone. So basically ECT versus risperidone. They both improved. But the ECT folks improves more and more rapidly. In general, so ECT does work, but again no not the literature in terms of RC TS not terribly robust. Unfortunately, however.

NOTE Confidence: 0.8973308801651

00:44:08.150 --> 00:44:26.280 There are dozens and this is a great review. Dozens of positive open label studies and quite frankly if someone's not talking. It hasn't been talking for like 2 and 3 days. Then you give them out of in and they start talking within like 20 minutes, it kind of have the answer so.

NOTE Confidence: 0.902271628379822

00:44:27.020 --> 00:44:39.120 Very interesting question about whether you really need an RCT. I think probably should but an example. You wouldn't need an RCT demonstrating that parachute saves lives.

NOTE Confidence: 0.896848201751709

00:44:39.900 --> 00:44:48.270 I mean, you don't need to do a RCT on that right so depending on the obviousness of the effect in the time course one might.

NOTE Confidence: 0.921136021614075

00:44:48.930 --> 00:44:53.530 One might come up with different scientific arguments for or against.

NOTE Confidence: 0.921971142292023

00:44:55.040 --> 00:45:26.270 So we'll end here at treatment and I'll make a few comments after that, but treatment. I liked this treatment approach flow chart that is in a review by Beach and colleagues in 2017. I think was General Hospital psychiatry. This is a review of all treatment studies and reports outside of benzodiazapines for Catatonia. So basically they looked at every single thing that has been reported for the management of Catatonia aside from benzos.

NOTE Confidence: 0.928675293922424

00:45:26.270 --> 00:45:29.900 And then they reviewed it in a large and impressive table.

NOTE Confidence: 0.911235272884369

00:45:30.430 --> 00:45:52.500 And based on that they offer this general approach to managing Catatonia. The syndrome so first off start with Ivy Raza. Pam typically it's a 2 milligram challenge called the Ativan Challenge. Yes, that's the brand name, but low Raza Pam Challenge Ivy push.

NOTE Confidence: 0.855387151241302

00:45:53.030 --> 00:45:59.860 If they can't, they don't have an Ivy or their agitated and photos and they can't get an Ivy you could do it, I am.

NOTE Confidence: 0.892336308956146

00:46:00.480 --> 00:46:10.520 You could do it P oh, but if they're not talking. The other problem to get it. You could do in G tube. I've seen that done a couple of times if for whatever reason, they do not have access and can't have it.

NOTE Confidence: 0.891162514686584

00:46:12.320 --> 00:46:40.400 So starting with Out of it, they they are old and or frail they off you can lower the first dose to .5 or one milligrams, not uncommonly lowered but then you can always repeat. You can always give more you can't

take out once it's given so you'd give that dose response is. By definition a positive. The Raza Pam Challenge is a reduction 50% reduction in the bush. Francis kind of a standard definition of a positive.

NOTE Confidence: 0.810420393943787

00:46:41.140 --> 00:46:44.220 Lorazapam challenge if they get.

NOTE Confidence: 0.907173693180084

00:46:44.720 --> 00:47:16.090 Better you typically will schedule it so 2 milligrams Q82 milligrams. Q 6 or whatever. The dose was that worked schedule at Q6 or Q8 around the clock if they don't get better or they only have a partial response very often, you give a little bit more to see if maybe that dose was inadequate and then if they get better with that dose. You might schedule it or if not, maybe you just schedule 2:00 and perhaps overtime. The effect I've seen people get better.

NOTE Confidence: 0.910728752613068

00:47:16.090 --> 00:47:24.130 After 24 hours of scheduled doses of Ativan, but didn't get a whole lot better. Initially it was kinda slow and kind of indolent improvement.

NOTE Confidence: 0.921862125396729

00:47:24.780 --> 00:47:29.440 And then if that doesn't work within about 24 hours by the way that.

NOTE Confidence: 0.912275612354279

00:47:30.080 --> 00:47:43.500 Case reports suggest you can give patients with Catatonia are remarkably resilient to the effects of benzos. You can crank it up very often. Be careful be cautious think about other medications and respiratory status.

NOTE Confidence: 0.747708082199097

00:47:44.110 --> 00:47:44.650 But.

NOTE Confidence: 0.917795419692993

00:47:45.520 --> 00:47:54.310 Case reports of 1820 milligrams or more in a day in somebody who is benzo, naive and they tolerate it. It's really remarkable.

NOTE Confidence: 0.901163458824158

00:47:54.900 --> 00:48:16.120 If that doesn't work, though when optimized dose doesn't work. I think about is open M, so there are case. Reports of soap in him. It is more selective for Alpha one containing Gaba, a receptors, which are topa graphically preferentially located in the prefrontal cortex.

NOTE Confidence: 0.836808800697327

00:48:16.640 --> 00:48:24.680 And so I've seen people respond as open him better. Some patients or some better does open him, then to low Raza Pam just throw it out there.

NOTE Confidence: 0.916456043720245

00:48:25.280 --> 00:48:27.020 And then you could schedule that as well.

NOTE Confidence: 0.95578396320343

00:48:27.780 --> 00:48:30.640 If you don't get a complete response.

NOTE Confidence: 0.940829515457153

00:48:31.490 --> 00:48:42.960 Or they are medically unstable would have you start the proceedings for ECT if at all possible? Get the ball rolling start having a conversation with the family members.

NOTE Confidence: 0.910374939441681

00:48:43.630 --> 00:49:06.240 Try to start to see if you can't medically just do an evaluation primary teams. They were thinking about this just to let you know, sometimes it takes a little while to get to ECT some sites or easier to get to than others, but really ECT should really be thought about pretty early on if not getting better or if they're medically unstable or autonomic instability supervenes surface is.

NOTE Confidence: 0.852772951126099

00:49:06.840 --> 00:49:15.200 As you're doing this, you're undisciplined first step will go into further steps in a moment 'cause. This will kind of dovetail with it.

NOTE Confidence: 0.910454750061035

00:49:15.770 --> 00:49:40.160 You're also thinking about managing the underlying conditions so to whatever extent you have a sense what you're dealing with treat that as well. So if it's a severe depression and have a history of Catatonic Depression and they've not been anti depressants recently started anti depressant with this because sure you might treat this syndrome with Ativan and might get a reasonable response.

NOTE Confidence: 0.934233427047729

00:49:40.690 --> 00:49:59.520 But there's still an engine underneath driving this thing right there. Still, the underlying contributing factor or if they have an autoimmune encephalitis start, giving steroids or IVIG or whatever the intervention might be that's appropriate for that condition.

NOTE Confidence: 0.882461369037628

00:50:00.830 --> 00:50:17.620 And glutamate antagonists there a number of authors that suggest Amantadine or man team trials for this. Some authors

have reported good response is. There some case reports and series out there, so certainly worth the try.

NOTE Confidence: 0.909797132015228

00:50:18.300 --> 00:50:45.010 And then the anti epileptic drug. I think of these and people, especially who have a manic disorder bipolar disorder history. Or maybe I think their manic and in particular or if they have epileptiform activity. Obviously is the underlying condition that might be presenting as Catatonia so that really gets into both treating the disease or disorder. The associated condition and also the phenotype so there's kind of a link there.

NOTE Confidence: 0.838329374790192

00:50:45.720 --> 00:50:46.650 And then

NOTE Confidence: 0.938384532928467

00:50:47.460 --> 00:50:51.180 Also kind of at the bottom of this is atypical antipsychotics.

NOTE Confidence: 0.9073805809021

00:50:51.800 --> 00:50:55.800 Typically given with law Raza Pam to prevent the risk of NMS.

NOTE Confidence: 0.899661183357239

00:50:56.330 --> 00:51:11.010 Literature on a typical suggest that they might be a little bit less risky in terms of possibilities. In a mess. But even still it could happen. Check iron and by giving Ativan with it, you're kind of also treating the possibility for NMS.

NOTE Confidence: 0.856405735015869

00:51:11.520 --> 00:51:12.760 As well so.

NOTE Confidence: 0.896764039993286

00:51:13.480 --> 00:51:44.220 In general and the physiological approach you really should be thinking about managing the dysautonomia, reducing inflammation. If there's evidence of inflammation often will do things. If someone has significant instability. Maybe not Clonidine or something like that again just mechanistically thinking about that. Not that there's any profound data in support of it, but kind of rational psychopharmacology or beta blocker or something if there's reason to think about that in managing this.

NOTE Confidence: 0.906147241592407

00:51:45.090 --> 00:52:15.460 Now, as should be obvious with this. This is all acute management. The data on Lanja Tude Inal Management is virtually nil. I mean, we just do not know how long to continue the benzo or when did consider tapering the benzo or when we just don't know there are so many unanswered

questions about the Natural History of Catatonia that admittedly you will find this and invariably I could ask questions about that.

NOTE Confidence: 0.88716048002243

00:52:15.460 --> 00:52:45.950 I just don't know I've seen all sorts. I've seen Catatonia resolve and then to the best of my knowledge remained resolved for an extended period of time. I've seen it recur. I've seen relapsing remitting if it relapses room its remits in the relapses, then I think about are we talking about some neurological condition that was just not diagnose previously so polyphasic illness with demyelination syndromes like Ms or

NOTE Confidence: 0.90149313211441

00:52:47.370 --> 00:53:10.640 Conditions like again automated Sufal Ritis, another immune related encephalopathies polyphasic illness has been reported with Polyphasic Catatonic presentations. So I've seen. I've seen a couple of cases like that, so again. It's very difficult to know and there is much work to be done about next steps in managing Catatonia, but anyway, keep it on the differential.

NOTE Confidence: 0.90327924489975

00:53:11.190 --> 00:53:20.690 Think about the cause and then treat this syndrome, while also considering what that mechanistic associated cause is.

NOTE Confidence: 0.918640792369843

00:53:22.220 --> 00:53:23.040 And I think that's it.

NOTE Confidence: 0.947977006435394

00:53:26.110 --> 00:53:27.400 Any questions.

NOTE Confidence: 0.82838362455368

00:53:29.720 --> 00:53:30.300 Yes.

NOTE Confidence: 0.836536228656769

00:53:36.620 --> 00:53:37.240 Yes.

NOTE Confidence: 0.830889165401459

00:53:41.780 --> 00:53:44.140 No, you're absolutely right. No, you're absolutely right so.

NOTE Confidence: 0.925366878509521

00:53:45.980 --> 00:53:52.670 You would need a clinical correlation, so Delta waves is never normal and anybody.

NOTE Confidence: 0.930234551429749

00:53:53.230 --> 00:53:57.410 So if you got down to a frequency of 6 hurts.

NOTE Confidence: 0.917830765247345

00:53:57.940 --> 00:54:28.350 5 hurts for Hertz, you probably need to be looking. There are invariably the bane of my one of the Banes of my existence are those equivocal results where you just don't know and in dementia. Many dimensions are associated with additional slowing on the EG. You're absolutely right. So you need to be thoughtful about that and there is a parallel body of literature without clear.

NOTE Confidence: 0.935808897018433

00:54:28.350 --> 00:54:43.980 Without a clear and conclusive answer about whether certain states of schizophrenia, especially when they are in acute psychotic decompensation might present with various.

NOTE Confidence: 0.928286015987396

00:54:44.950 --> 00:54:53.760 Changes on the EG the literature is old and I don't know a very clean an good and sophisticated analysis of that.

NOTE Confidence: 0.907151699066162

00:54:54.320 --> 00:55:15.190 But that also throws a wrench into the picture, but I don't know of them ever, causing Delta waves or if you saw extreme Delta brush. Your not going to call this schizophrenia. You would be like OK. We gotta find. We just start the steroids right now, so I would say that there are there are interesting possibilities there.

NOTE Confidence: 0.776085734367371

00:55:15.770 --> 00:55:16.380 Agreed.