WEBVTT

NOTE duration:"00:32:59.0570000"

NOTE language:en-us

NOTE Confidence: 0.77359676361084

00:00:00.000 --> 00:00:06.830 You're listening to the moon liners. The Yale

NOTE Confidence: 0.77359676361084

00:00:06.830 --> 00:00:11.010 Internal Medison podcast, talking with

NOTE Confidence: 0.77359676361084

00:00:11.010 --> 00:00:13.509 expert guests dropping

NOTE Confidence: 0.779919837202345

00:00:13.510 --> 00:00:18.067 expert knowledge. This is your morning report

NOTE Confidence: 0.782449066638947

00:00:18.070 --> 00:00:20.382 fix on the radio.

NOTE Confidence: 0.782449066638947

00:00:20.382 --> 00:00:23.718 Your daily dose of internal Medison.

NOTE Confidence: 0.782449066638947

00:00:23.718 --> 00:00:26.288 Welcome to the Moonlighters everybody.

NOTE Confidence: 0.782449066638947

00:00:26.290 --> 00:00:27.598 Thanks for listening.

NOTE Confidence: 0.782449066638947

00:00:27.598 --> 00:00:31.020 Today we have an excellent episode for you.

NOTE Confidence: 0.782449066638947

00:00:31.020 --> 00:00:34.030 We have actually a special guest here.

NOTE Confidence: 0.782449066638947

00:00:34.030 --> 00:00:36.574 One of our second year residents

NOTE Confidence: 0.782449066638947

00:00:36.574 --> 00:00:38.760 at Yale Doctor Keith Love.

NOTE Confidence: 0.782449066638947

00:00:38.760 --> 00:00:41.418 He has a special interest in

NOTE Confidence: 0.782449066638947

00:00:41.418 --> 00:00:43.676 Cardiology and he's going to

NOTE Confidence: 0.782449066638947

00:00:43.676 --> 00:00:46.070 kind of lead the episode today.

NOTE Confidence: 0.782449066638947

00:00:46.070 --> 00:00:48.220 We also have our famous

NOTE Confidence: 0.782449066638947

00:00:48.220 --> 00:00:49.510 cohost Gabriel Wilson,

NOTE Confidence: 0.782449066638947

00:00:49.510 --> 00:00:52.950 as well as usual will be here too.

NOTE Confidence: 0.782449066638947

00:00:52.950 --> 00:00:55.790 So thanks for coming, guys.

NOTE Confidence: 0.782449066638947

00:00:55.790 --> 00:00:56.080 Yeah,

NOTE Confidence: 0.904358983039856

00:00:56.080 --> 00:00:57.820 thanks so much for having us.

NOTE Confidence: 0.904358983039856

00:00:57.820 --> 00:00:59.850 So today's topic, we're going to go

NOTE Confidence: 0.904358983039856

00:00:59.850 --> 00:01:00.720 through Hypertrophic Cardiomyopathy

NOTE Confidence: 0.904358983039856

00:01:00.720 --> 00:01:03.040 and we have a special guest with us.

NOTE Confidence: 0.904358983039856

00:01:03.040 --> 00:01:04.832 Our very own doctor Daniel Jacobi of

NOTE Confidence: 0.904358983039856

00:01:04.832 --> 00:01:06.534 the all New Haven Hospital doctor

NOTE Confidence: 0.904358983039856

00:01:06.534 --> 00:01:08.585 Kobe received his MD here at Yale

NOTE Confidence: 0.904358983039856

00:01:08.644 --> 00:01:10.189 before completing his residency over

NOTE Confidence: 0.904358983039856

00:01:10.189 --> 00:01:12.320 at Mount Sinai in his fellowship in

NOTE Confidence: 0.904358983039856

00:01:12.320 --> 00:01:13.480 Cardiology at Columbia Presbyterian.

NOTE Confidence: 0.904358983039856

00:01:13.480 --> 00:01:16.090 He then found his way back to New Haven,

NOTE Confidence: 0.904358983039856

00:01:16.090 --> 00:01:17.626 where he now specializes in the

NOTE Confidence: 0.904358983039856

00:01:17.626 --> 00:01:19.058 diagnosis and treatment of heart

NOTE Confidence: 0.904358983039856

00:01:19.058 --> 00:01:20.150 failure and cardiomyopathy.

NOTE Confidence: 0.904358983039856

00:01:20.150 --> 00:01:21.914 He's the director of the comprehensive

NOTE Confidence: 0.904358983039856

00:01:21.914 --> 00:01:23.422 heart failure program and is

NOTE Confidence: 0.904358983039856

00:01:23.422 --> 00:01:25.102 the founder of the director of

NOTE Confidence: 0.904358983039856

00:01:25.102 --> 00:01:25.942 the cardiomyopathy program.

NOTE Confidence: 0.904358983039856

00:01:25.950 --> 00:01:27.444 He focuses on the diagnosis and

NOTE Confidence: 0.904358983039856

00:01:27.444 --> 00:01:28.440 the treatment of hypertrophic

NOTE Confidence: 0.904358983039856

00:01:28.488 --> 00:01:29.430 dilated arrhythmogenic,

NOTE Confidence: 0.904358983039856

00:01:29.430 --> 00:01:30.399 an restrictive cardiomyopathy.

NOTE Confidence: 0.904358983039856

00:01:30.399 --> 00:01:32.337 As well as the evaluation for

NOTE Confidence: 0.904358983039856

00:01:32.337 --> 00:01:33.480 causes of sudden death,

NOTE Confidence: 0.904358983039856

00:01:33.480 --> 00:01:35.657 and he also runs a pretty mean

NOTE Confidence: 0.790759205818176

00:01:35.660 --> 00:01:38.158 5K. He's got a lot going for now.

NOTE Confidence: 0.790759205818176

00:01:38.160 --> 00:01:39.408 Thanks for the boost.

NOTE Confidence: 0.790759205818176

00:01:39.410 --> 00:01:41.276 Build you up for the episode.

NOTE Confidence: 0.790759205818176

00:01:41.276 --> 00:01:42.524 It's good, it's good.

NOTE Confidence: 0.790759205818176

00:01:42.524 --> 00:01:44.744 I run a pretty good one, K.

NOTE Confidence: 0.790759205818176

00:01:44.744 --> 00:01:46.120 Run half of them,

NOTE Confidence: 0.790759205818176

00:01:46.120 --> 00:01:48.220 lock the other half but. All

NOTE Confidence: 0.927505671977997

00:01:48.220 --> 00:01:49.950 right, so we're talking about

NOTE Confidence: 0.927505671977997

00:01:49.950 --> 00:01:50.988 Hypertrophic Cardiomyopathy today.

NOTE Confidence: 0.927505671977997

00:01:50.990 --> 00:01:53.419 And why is this an important topic?

NOTE Confidence: 0.927505671977997

00:01:53.420 --> 00:01:55.502 So our focus will take us

NOTE Confidence: 0.927505671977997

00:01:55.502 --> 00:01:56.543 through common presentations,

NOTE Confidence: 0.927505671977997

00:01:56.550 --> 00:01:58.022 an manifestations of Hypertrophic

NOTE Confidence: 0.927505671977997

00:01:58.022 --> 00:02:00.230 Cardiomyopathy will have a chance to

NOTE Confidence: 0.927505671977997

00:02:00.283 --> 00:02:02.143 kind of tease apart the heterogeneous

NOTE Confidence: 0.927505671977997

00:02:02.143 --> 00:02:04.145 ideologies of what is likely an

NOTE Confidence: 0.927505671977997

00:02:04.145 --> 00:02:05.910 under recognized spectrum of disease,

NOTE Confidence: 0.927505671977997

00:02:05.910 --> 00:02:07.938 and talk about how the underlying

NOTE Confidence: 0.927505671977997

00:02:07.938 --> 00:02:09.290 pathophysiology should guide our

NOTE Confidence: 0.927505671977997

00:02:09.346 --> 00:02:10.961 initial and chronic management of

NOTE Confidence: 0.927505671977997

00:02:10.961 --> 00:02:12.997 the disease will also discuss how

NOTE Confidence: 0.927505671977997

00:02:12.997 --> 00:02:15.211 to counsel our patients about life

NOTE Confidence: 0.927505671977997

00:02:15.211 --> 00:02:16.318 with Hypertrophic Cardiomyopathy.

NOTE Confidence: 0.927505671977997

00:02:16.320 --> 00:02:18.749 So let's get started with the case.

NOTE Confidence: 0.902325689792633

00:02:18.770 --> 00:02:21.050 Great, so we're going to talk about Mr.

NOTE Confidence: 0.902325689792633

00:02:21.050 --> 00:02:23.100 H Mr age 37 year old man with no past

NOTE Confidence: 0.902325689792633

00:02:23.158 --> 00:02:25.054 medical history and the first comes

NOTE Confidence: 0.902325689792633

00:02:25.054 --> 00:02:27.319 into his primary care providers office.

NOTE Confidence: 0.902325689792633

00:02:27.320 --> 00:02:29.328 After passing out reports that one week ago

NOTE Confidence: 0.902325689792633

00:02:29.328 --> 00:02:31.307 he's playing pickup basketball an experience,

NOTE Confidence: 0.902325689792633

00:02:31.310 --> 00:02:32.735 sudden chest tightness, followed by

NOTE Confidence: 0.902325689792633

00:02:32.735 --> 00:02:34.160 Lightheadedness and loss of consciousness.

NOTE Confidence: 0.902325689792633

00:02:34.160 --> 00:02:35.590 He regained consciousness seconds later.

NOTE Confidence: 0.902325689792633

00:02:35.590 --> 00:02:37.578 All his friends were standing around him.

NOTE Confidence: 0.902325689792633

00:02:37.580 --> 00:02:39.449 He was asymptomatic at that point and

NOTE Confidence: 0.902325689792633

00:02:39.449 --> 00:02:41.289 then he denied any symptoms there.

NOTE Confidence: 0.902325689792633

00:02:41.290 --> 00:02:43.173 After he did said he felt normal

NOTE Confidence: 0.902325689792633

00:02:43.173 --> 00:02:44.709 before the game felt normal.

NOTE Confidence: 0.902325689792633

00:02:44.710 --> 00:02:46.878 After the game, he tells you this is

NOTE Confidence: 0.902325689792633

00:02:46.878 --> 00:02:49.020 the first time he's ever passed out.

NOTE Confidence: 0.902325689792633

00:02:49.020 --> 00:02:51.604 And he wonders if maybe he was just

NOTE Confidence: 0.902325689792633

00:02:51.604 --> 00:02:53.189 dehydrated today in the office.

NOTE Confidence: 0.902325689792633

00:02:53.190 --> 00:02:55.116 Again, he states that he's feeling

NOTE Confidence: 0.902325689792633

00:02:55.116 --> 00:02:56.402 quite well, Sasha, Kobe.

NOTE Confidence: 0.902325689792633

00:02:56.402 --> 00:02:58.007 So with this patient PCP,

NOTE Confidence: 0.902325689792633

00:02:58.010 --> 00:02:59.362 the primary care physician,

NOTE Confidence: 0.902325689792633

00:02:59.362 --> 00:03:01.052 what more history would you

NOTE Confidence: 0.902325689792633

00:03:01.052 --> 00:03:02.179 want right off the

NOTE Confidence: 0.899425864219666

00:03:02.180 --> 00:03:03.464 bat? Yeah, this is.

NOTE Confidence: 0.899425864219666

00:03:03.464 --> 00:03:05.710 I mean, this is a scary episode.

NOTE Confidence: 0.899425864219666

00:03:05.710 --> 00:03:07.315 37 year old healthy person

NOTE Confidence: 0.899425864219666

00:03:07.315 --> 00:03:08.599 should not pass out.

NOTE Confidence: 0.899425864219666

00:03:08.600 --> 00:03:10.574 I mean, in general I would guess

NOTE Confidence: 0.899425864219666

00:03:10.574 --> 00:03:12.573 that no one sitting in this

NOTE Confidence: 0.899425864219666

00:03:12.573 --> 00:03:14.378 room has passed out recently.

NOTE Confidence: 0.899425864219666

00:03:14.380 --> 00:03:16.291 It's a rare event for someone to

NOTE Confidence: 0.899425864219666

00:03:16.291 --> 00:03:18.990 pass out and for someone to pass out

NOTE Confidence: 0.899425864219666

00:03:18.990 --> 00:03:20.810 while they're doing sports activity.

NOTE Confidence: 0.899425864219666

00:03:20.810 --> 00:03:22.365 Is extremely rare and usually

NOTE Confidence: 0.899425864219666

00:03:22.365 --> 00:03:24.919 is a big red flag for bad stuff,

NOTE Confidence: 0.899425864219666

00:03:24.920 --> 00:03:26.495 so I'm already very worried

NOTE Confidence: 0.899425864219666

00:03:26.495 --> 00:03:27.755 as the persons PCP.

NOTE Confidence: 0.899425864219666

00:03:27.760 --> 00:03:29.965 First thing I'm saying to the guys.

NOTE Confidence: 0.899425864219666

00:03:29.970 --> 00:03:31.866 Good job coming in. Well done.

NOTE Confidence: 0.899425864219666

00:03:31.870 --> 00:03:34.075 I'm glad you didn't blow this off.

NOTE Confidence: 0.899425864219666

00:03:34.080 --> 00:03:36.096 I would want to really try in a

NOTE Confidence: 0.899425864219666

00:03:36.096 --> 00:03:38.533 little bit more into whether there was

NOTE Confidence: 0.899425864219666

00:03:38.533 --> 00:03:40.398 any prodrome associated with this.

NOTE Confidence: 0.899425864219666

00:03:40.400 --> 00:03:42.430 He mentions that he is a little

NOTE Confidence: 0.899425864219666

00:03:42.430 --> 00:03:43.718 bit of Lightheadedness before

NOTE Confidence: 0.899425864219666

00:03:43.718 --> 00:03:45.138 the loss of consciousness,

NOTE Confidence: 0.899425864219666

00:03:45.140 --> 00:03:46.904 and I think that could potentially

NOTE Confidence: 0.899425864219666

00:03:46.904 --> 00:03:48.930 be an important piece of information.

NOTE Confidence: 0.899425864219666

00:03:48.930 --> 00:03:51.458 He mentions that he thinks he was dehydrated.

NOTE Confidence: 0.899425864219666

00:03:51.460 --> 00:03:53.120 I'd like to dig in.

NOTE Confidence: 0.899425864219666

00:03:53.120 --> 00:03:55.649 And find out exactly what he means by that.

NOTE Confidence: 0.899425864219666

00:03:55.650 --> 00:03:57.434 Did he go out and was out till

NOTE Confidence: 0.899425864219666

00:03:57.434 --> 00:03:58.980 2:00 in the morning drinking

NOTE Confidence: 0.899425864219666

00:03:58.980 --> 00:04:00.705 the night before you know?

NOTE Confidence: 0.899425864219666

00:04:00.710 --> 00:04:01.272 Got up,

NOTE Confidence: 0.899425864219666

00:04:01.272 --> 00:04:03.520 skip breakfast and went to play his game?

NOTE Confidence: 0.899425864219666

00:04:03.520 --> 00:04:04.644 If that's the case,

NOTE Confidence: 0.899425864219666

00:04:04.644 --> 00:04:06.049 maybe it is dehydration of.

NOTE Confidence: 0.899425864219666

00:04:06.050 --> 00:04:07.420 I'd still be highly suspicious

NOTE Confidence: 0.899425864219666

00:04:07.420 --> 00:04:08.790 and then I automatically jump

NOTE Confidence: 0.899425864219666

00:04:08.837 --> 00:04:10.535 into whether there was any family

NOTE Confidence: 0.899425864219666

00:04:10.535 --> 00:04:11.667 history of similar episodes,

NOTE Confidence: 0.899425864219666

00:04:11.670 --> 00:04:14.014 because as a young person with no other

NOTE Confidence: 0.899425864219666

00:04:14.014 --> 00:04:16.157 problems that would be of interest to me,

NOTE Confidence: 0.899425864219666

00:04:16.160 --> 00:04:17.003 by the way,

NOTE Confidence: 0.899425864219666

00:04:17.003 --> 00:04:18.689 also want to know this guy,

NOTE Confidence: 0.899425864219666

00:04:18.690 --> 00:04:19.533 smoke, you know,

NOTE Confidence: 0.899425864219666

00:04:19.533 --> 00:04:21.500 we would already know as he'll be,

NOTE Confidence: 0.899425864219666

00:04:21.500 --> 00:04:24.690 so it's his BMI we want to kind of lay the.

NOTE Confidence: 0.899425864219666

00:04:24.690 --> 00:04:26.705 Lay the groundwork of understanding

NOTE Confidence: 0.899425864219666

00:04:26.705 --> 00:04:28.720 what are his cardiovascular risk

NOTE Confidence: 0.899425864219666

00:04:28.782 --> 00:04:30.390 factors for Atheros sclerosis

NOTE Confidence: 0.899425864219666

00:04:30.390 --> 00:04:32.400 because all things being equal,

NOTE Confidence: 0.899425864219666

00:04:32.400 --> 00:04:33.756 even though he's young,

NOTE Confidence: 0.899425864219666

00:04:33.756 --> 00:04:35.451 what's the most common cause

NOTE Confidence: 0.899425864219666

00:04:35.451 --> 00:04:37.279 of cardiovascular disease?

NOTE Confidence: 0.899425864219666

00:04:37.280 --> 00:04:39.140 It's Atheros sclerosis.

NOTE Confidence: 0.899425864219666

00:04:39.140 --> 00:04:41.388 Sensor ties in a little bit with

NOTE Confidence: 0.892772734165192

00:04:41.390 --> 00:04:43.472 what immediately hops up sword are

NOTE Confidence: 0.892772734165192

00:04:43.472 --> 00:04:44.860 differential diagnosis and you

NOTE Confidence: 0.892772734165192

00:04:44.920 --> 00:04:46.648 alluded to some scary things and

NOTE Confidence: 0.892772734165192

00:04:46.648 --> 00:04:48.450 some common things at this point,

NOTE Confidence: 0.892772734165192

00:04:48.450 --> 00:04:50.676 what would you say are your top

NOTE Confidence: 0.892772734165192

00:04:50.676 --> 00:04:52.329 three things that you're thinking

NOTE Confidence: 0.892772734165192

00:04:52.329 --> 00:04:54.548 for this guy and what do you

NOTE Confidence: 0.892772734165192

00:04:54.550 --> 00:04:56.470 have so far to support those?

NOTE Confidence: 0.892772734165192

00:04:56.470 --> 00:04:58.870 OK, so I once got made fun of

NOTE Confidence: 0.892772734165192

00:04:58.870 --> 00:05:00.970 mercilessly as a resident just once,

NOTE Confidence: 0.892772734165192

00:05:00.970 --> 00:05:02.806 because it was only happened to

NOTE Confidence: 0.892772734165192

00:05:02.806 --> 00:05:05.138 me one time all the other times,

NOTE Confidence: 0.892772734165192

00:05:05.140 --> 00:05:06.429 people will totally laudatory,

NOTE Confidence: 0.892772734165192

00:05:06.430 --> 00:05:08.428 but this one totally unusual time

NOTE Confidence: 0.892772734165192

00:05:08.428 --> 00:05:10.583 someone came up to me was, like,

NOTE Confidence: 0.892772734165192

00:05:10.583 --> 00:05:12.704 you know, it has so many differential

NOTE Confidence: 0.892772734165192

00:05:12.704 --> 00:05:14.150 diagnosis that it's hilarious.

NOTE Confidence: 0.892772734165192

00:05:14.150 --> 00:05:16.206 It's so obvious that guy has a UTI.

NOTE Confidence: 0.892772734165192

00:05:16.210 --> 00:05:17.746 Why do you have this long

NOTE Confidence: 0.892772734165192

00:05:17.746 --> 00:05:18.258 differential diagnosis?

NOTE Confidence: 0.892772734165192

00:05:18.260 --> 00:05:19.964 But I've always been someone to kind of

NOTE Confidence: 0.892772734165192

00:05:19.964 --> 00:05:21.858 play out all the different possibilities,

NOTE Confidence: 0.892772734165192

00:05:21.860 --> 00:05:22.780 because if you don't,

NOTE Confidence: 0.892772734165192

00:05:22.780 --> 00:05:24.502 and this is kind of something that

NOTE Confidence: 0.892772734165192

00:05:24.502 --> 00:05:25.967 I'm sure everybody's heard before.

NOTE Confidence: 0.892772734165192

00:05:25.970 --> 00:05:27.452 But if you don't think about

NOTE Confidence: 0.892772734165192

00:05:27.452 --> 00:05:28.800 it out of the gate,

NOTE Confidence: 0.892772734165192

00:05:28.800 --> 00:05:30.856 you're probably not going to think about it.

NOTE Confidence: 0.892772734165192

00:05:30.860 --> 00:05:33.353 It's whatever you put into the basket in the

NOTE Confidence: 0.892772734165192

00:05:33.353 --> 00:05:35.475 beginning is what you pick out of the basket.

NOTE Confidence: 0.892772734165192

00:05:35.480 --> 00:05:37.847 You pick something out of the basket at the

NOTE Confidence: 0.892772734165192

00:05:37.847 --> 00:05:40.359 end so I would be a really broad with this.

NOTE Confidence: 0.892772734165192

00:05:40.360 --> 00:05:41.388 I'd be thinking about

NOTE Confidence: 0.892772734165192

00:05:41.388 --> 00:05:42.159 Cornering Atheros sclerosis.

NOTE Confidence: 0.892772734165192

00:05:42.160 --> 00:05:44.320 I'd be thinking about all the billions of

NOTE Confidence: 0.892772734165192

00:05:44.320 --> 00:05:46.047 different kinds of sudden cardiac death.

NOTE Confidence: 0.892772734165192

00:05:46.050 --> 00:05:47.885 Associated syndromes I'd be thinking

NOTE Confidence: 0.892772734165192

00:05:47.885 --> 00:05:48.986 about autonomic dysfunction.

NOTE Confidence: 0.892772734165192

00:05:48.990 --> 00:05:50.088 Everything about drugs,

NOTE Confidence: 0.892772734165192

00:05:50.088 --> 00:05:51.918 alcohol in Alpha listed substances,

NOTE Confidence: 0.892772734165192

00:05:51.920 --> 00:05:52.910 behavior, lifestyle items.

NOTE Confidence: 0.892772734165192

00:05:52.910 --> 00:05:54.890 Afraid to say you got to

NOTE Confidence: 0.892772734165192

00:05:54.890 --> 00:05:56.330 think about malingering.

NOTE Confidence: 0.892772734165192

00:05:56.330 --> 00:05:57.010 I mean,

NOTE Confidence: 0.892772734165192

00:05:57.010 --> 00:05:59.050 I don't think about that all

NOTE Confidence: 0.892772734165192

00:05:59.050 --> 00:06:01.100 the time with my patients,

NOTE Confidence: 0.892772734165192

00:06:01.100 --> 00:06:04.394 but if you don't have it in the basket,

NOTE Confidence: 0.892772734165192

00:06:04.400 --> 00:06:05.868 you know Munchausen's type

NOTE Confidence: 0.892772734165192

00:06:05.868 --> 00:06:06.969 behavior and lingering.

NOTE Confidence: 0.892772734165192

00:06:06.970 --> 00:06:10.099 You're never going to pick it up.

NOTE Confidence: 0.892772734165192

00:06:10.100 --> 00:06:12.182 So there's a big broad differential

NOTE Confidence: 0.892772734165192

00:06:12.182 --> 00:06:14.917 for this kind of thing at the very

NOTE Confidence: 0.892772734165192

00:06:14.917 --> 00:06:16.837 top of it is Athero Sclerosis.

NOTE Confidence: 0.892772734165192

00:06:16.840 --> 00:06:17.514 An inherited,

NOTE Confidence: 0.892772734165192

00:06:17.514 --> 00:06:19.199 sudden death and coronary anomalies.

NOTE Confidence: 0.892772734165192

00:06:19.200 --> 00:06:21.072 So when you see someone who's

NOTE Confidence: 0.892772734165192

00:06:21.072 --> 00:06:22.728 Young was exercising the anomalous

NOTE Confidence: 0.892772734165192

00:06:22.728 --> 00:06:25.157 coronary artery has to be one of

NOTE Confidence: 0.892772734165192

00:06:25.157 --> 00:06:26.950 your differential diagnosis as well.

NOTE Confidence: 0.88308310508728

00:06:27.780 --> 00:06:29.410 Yeah, so this is yeah,

NOTE Confidence: 0.88308310508728

00:06:29.410 --> 00:06:31.040 this is pretty interesting case.

NOTE Confidence: 0.88308310508728

00:06:31.040 --> 00:06:33.648 We created it so of course it's interesting,

NOTE Confidence: 0.88308310508728

00:06:33.650 --> 00:06:34.628 but it's perfect.

NOTE Confidence: 0.88308310508728

00:06:34.628 --> 00:06:35.932 Essentially syncope, you know,

NOTE Confidence: 0.88308310508728

00:06:35.932 --> 00:06:37.560 and I always think syncope

NOTE Confidence: 0.88308310508728

00:06:37.560 --> 00:06:39.190 is like a great case.

NOTE Confidence: 0.88308310508728

00:06:39.190 --> 00:06:40.800 This white differential and wanted

NOTE Confidence: 0.88308310508728

00:06:40.800 --> 00:06:43.093 to kind of get your opinion on

NOTE Confidence: 0.88308310508728

00:06:43.093 --> 00:06:44.953 the pro drum like water keywords

NOTE Confidence: 0.88308310508728

00:06:44.953 --> 00:06:47.009 that you hear where you're like.

NOTE Confidence: 0.88308310508728

00:06:47.010 --> 00:06:48.858 Red flags are going off in

NOTE Confidence: 0.88308310508728

00:06:48.858 --> 00:06:50.930 your like oh this is serious.

NOTE Confidence: 0.88308310508728

00:06:50.930 --> 00:06:52.880 You know this isn't a vasovagal.

NOTE Confidence: 0.88308310508728

00:06:52.880 --> 00:06:54.836 This is, you know something else.

NOTE Confidence: 0.88308310508728

00:06:54.840 --> 00:06:55.490 Well, we

NOTE Confidence: 0.88308310508728

00:06:55.490 --> 00:06:57.527 said one of them which is exercise

NOTE Confidence: 0.88308310508728

00:06:57.527 --> 00:06:59.236 so people don't have vasovagal

NOTE Confidence: 0.88308310508728

00:06:59.236 --> 00:07:01.522 episodes in the exercise. I mean,

NOTE Confidence: 0.88308310508728

00:07:01.522 --> 00:07:03.718 it's very unlikely immediately post exercise.

NOTE Confidence: 0.88308310508728

00:07:03.720 --> 00:07:06.648 You do see it. You can see someone,

NOTE Confidence: 0.88308310508728

00:07:06.650 --> 00:07:09.938 but in the middle of exercise, not as much.

NOTE Confidence: 0.88308310508728

00:07:09.938 --> 00:07:12.134 So exercise is a red flag.

NOTE Confidence: 0.88308310508728

00:07:12.140 --> 00:07:14.499 This guy reports a little bit of

NOTE Confidence: 0.88308310508728

00:07:14.499 --> 00:07:16.160 Lightheadedness and chest tightness,

NOTE Confidence: 0.88308310508728

00:07:16.160 --> 00:07:19.232 which is a program that makes you think

NOTE Confidence: 0.88308310508728

00:07:19.232 --> 00:07:22.229 that there could be a cardiac etiology.

NOTE Confidence: 0.88308310508728

00:07:22.230 --> 00:07:23.490 The light headedness alone.

NOTE Confidence: 0.88308310508728

00:07:23.490 --> 00:07:25.380 If you just have someone say

NOTE Confidence: 0.88308310508728

00:07:25.443 --> 00:07:27.189 Well and is not rocket science,

NOTE Confidence: 0.88308310508728

00:07:27.190 --> 00:07:28.740 we just have someone say,

NOTE Confidence: 0.88308310508728

00:07:28.740 --> 00:07:30.600 well I sort of got lightheaded.

NOTE Confidence: 0.88308310508728

00:07:30.600 --> 00:07:32.770 Everything started spinning and I went down.

NOTE Confidence: 0.88308310508728

00:07:32.770 --> 00:07:33.918 That could be vasovagal,

NOTE Confidence: 0.88308310508728

00:07:33.918 --> 00:07:36.180 but usually the prodrome is pretty extensive.

NOTE Confidence: 0.88308310508728

00:07:36.180 --> 00:07:37.420 People feel not well,

NOTE Confidence: 0.88308310508728

00:07:37.420 --> 00:07:39.280 they start to sweat, you know,

NOTE Confidence: 0.88308310508728

00:07:39.280 --> 00:07:40.520 they realize that things

NOTE Confidence: 0.88308310508728

00:07:40.520 --> 00:07:41.760 aren't going well frequently.

NOTE Confidence: 0.88308310508728

00:07:41.760 --> 00:07:43.310 There's an opportunity to sit

NOTE Confidence: 0.88308310508728

00:07:43.310 --> 00:07:44.860 down that they don't take.

NOTE Confidence: 0.88308310508728

00:07:44.860 --> 00:07:45.480 That's common,

NOTE Confidence: 0.88308310508728

00:07:45.480 --> 00:07:48.300 but I have had patients who have what in the

NOTE Confidence: 0.88308310508728

00:07:48.300 --> 00:07:50.748 end turns out to be autonomic dysfunction,

NOTE Confidence: 0.88308310508728

00:07:50.750 --> 00:07:51.386 vasovagal syncope,

NOTE Confidence: 0.88308310508728

00:07:51.386 --> 00:07:52.340 nonagram, genic syncope.

NOTE Confidence: 0.88308310508728

00:07:52.340 --> 00:07:54.231 That happens really, really fast,

NOTE Confidence: 0.88308310508728

00:07:54.231 --> 00:07:56.878 so it's not a total rule out,

NOTE Confidence: 0.88308310508728

00:07:56.880 --> 00:07:59.136 and this guy, the chest pressure,

NOTE Confidence: 0.88308310508728

00:07:59.140 --> 00:07:59.892 the Lightheadedness,

NOTE Confidence: 0.88308310508728

00:07:59.892 --> 00:08:02.524 and then what I interpret as probably

NOTE Confidence: 0.88308310508728

00:08:02.524 --> 00:08:04.810 very rapid loss of consciousness is,

NOTE Confidence: 0.88308310508728

00:08:04.810 --> 00:08:05.498 I think,

NOTE Confidence: 0.88308310508728

00:08:05.498 --> 00:08:07.562 end during exercise are all red

NOTE Confidence: 0.88308310508728

00:08:07.562 --> 00:08:10.108 flags for non vasovagal syncope for,

NOTE Confidence: 0.88308310508728

00:08:10.110 --> 00:08:12.900 or what we would batch as

NOTE Confidence: 0.88308310508728

00:08:12.900 --> 00:08:14.295 cardiovascular cardiac syncope.

NOTE Confidence: 0.88308310508728

00:08:14.300 --> 00:08:14.620 Alright,

NOTE Confidence: 0.928680062294006

00:08:14.620 --> 00:08:16.504 so on further discussion he reports

NOTE Confidence: 0.928680062294006

00:08:16.504 --> 00:08:18.122 mild worsening of exercise tolerance

NOTE Confidence: 0.928680062294006

00:08:18.122 --> 00:08:19.976 over the last year in discussing

NOTE Confidence: 0.928680062294006

00:08:19.976 --> 00:08:21.360 his family history reports,

NOTE Confidence: 0.928680062294006

00:08:21.360 --> 00:08:23.358 his father died in a drowning

NOTE Confidence: 0.928680062294006

00:08:23.358 --> 00:08:25.363 accident and a paternal uncle died

NOTE Confidence: 0.928680062294006

00:08:25.363 --> 00:08:27.779 suddenly of a heart attack at age 45.

NOTE Confidence: 0.928680062294006

00:08:27.780 --> 00:08:29.385 Otherwise, he has two children

NOTE Confidence: 0.928680062294006

00:08:29.385 --> 00:08:30.990 who are in good health.

NOTE Confidence: 0.928680062294006

00:08:30.990 --> 00:08:32.916 So what is sudden cardiac death?

NOTE Confidence: 0.928680062294006

00:08:32.920 --> 00:08:35.809 An how do you kind of confirm or refute

NOTE Confidence: 0.904451807339986

00:08:35.810 --> 00:08:38.390 this? Well, this is very

NOTE Confidence: 0.904451807339986

00:08:38.390 --> 00:08:40.090 interesting piece of information.

NOTE Confidence: 0.904451807339986

00:08:40.090 --> 00:08:43.310 Do you ask your patients about drowning?

NOTE Confidence: 0.904451807339986

00:08:43.310 --> 00:08:48.610 Not know. Unexplained deaths I always

NOTE Confidence: 0.904451807339986

00:08:48.610 --> 00:08:51.170 ask my patients about this because when I

NOTE Confidence: 0.904451807339986

00:08:51.240 --> 00:08:53.736 first started practicing in this field.

NOTE Confidence: 0.904451807339986

00:08:53.740 --> 00:08:55.910 The guy who I was working with,

NOTE Confidence: 0.904451807339986

00:08:55.910 --> 00:08:57.460 this Ganim Professor William McKenna,

NOTE Confidence: 0.904451807339986

00:08:57.460 --> 00:09:00.250 who was a big huge figure in this field,

NOTE Confidence: 0.904451807339986

00:09:00.250 --> 00:09:03.103 would see all these patients with me and when

NOTE Confidence: 0.904451807339986

00:09:03.103 --> 00:09:05.514 patient would say the usual thing of yeah,

NOTE Confidence: 0.904451807339986

00:09:05.520 --> 00:09:06.808 well my uncle died.

NOTE Confidence: 0.904451807339986

00:09:06.808 --> 00:09:09.858 You know he would say well how did he die?

NOTE Confidence: 0.904451807339986

00:09:09.860 --> 00:09:12.030 So we had a heart attack while

NOTE Confidence: 0.904451807339986

00:09:12.030 --> 00:09:12.960 describing what happened.

NOTE Confidence: 0.904451807339986

00:09:12.960 --> 00:09:14.132 Hardtack, well, he drowned.

NOTE Confidence: 0.904451807339986

00:09:14.132 --> 00:09:16.275 The doctor said he had a heart

NOTE Confidence: 0.904451807339986

00:09:16.275 --> 00:09:17.915 attack while he was swimming,

NOTE Confidence: 0.904451807339986

00:09:17.920 --> 00:09:19.470 and then the following question

NOTE Confidence: 0.904451807339986

00:09:19.470 --> 00:09:21.020 was he a good swimmer?

NOTE Confidence: 0.904451807339986

00:09:21.020 --> 00:09:22.260 Where was he swimming?

NOTE Confidence: 0.904451807339986

00:09:22.260 --> 00:09:24.120 Was swimming in the swimming pool?

NOTE Confidence: 0.904451807339986

00:09:24.120 --> 00:09:26.346 Was he in huge waves at Misquamicut?

NOTE Confidence: 0.904451807339986

00:09:26.350 --> 00:09:26.976 You know,

NOTE Confidence: 0.904451807339986

00:09:26.976 --> 00:09:29.901 is he surfing 30 foot waves or was he

NOTE Confidence: 0.904451807339986

00:09:29.901 --> 00:09:32.330 just like paddling around in a Lake?

NOTE Confidence: 0.904451807339986

00:09:32.330 --> 00:09:34.100 Because also drowning for adults

NOTE Confidence: 0.904451807339986

00:09:34.100 --> 00:09:37.219 who know how to swim who are not in

NOTE Confidence: 0.904451807339986

00:09:37.219 --> 00:09:39.139 a bad situation is extremely rare

NOTE Confidence: 0.904451807339986

00:09:39.214 --> 00:09:41.614 and you get pulled out by a riptide.

NOTE Confidence: 0.904451807339986

00:09:41.620 --> 00:09:43.280 OK you're surfing whatever you're

NOTE Confidence: 0.904451807339986

00:09:43.280 --> 00:09:44.608 trying to save somebody.

NOTE Confidence: 0.904451807339986

00:09:44.610 --> 00:09:44.909 Yes,

NOTE Confidence: 0.904451807339986

00:09:44.909 --> 00:09:47.002 you hear about those cases but for

NOTE Confidence: 0.904451807339986

00:09:47.002 --> 00:09:49.124 kids sadly or for people wearing

NOTE Confidence: 0.904451807339986

00:09:49.124 --> 00:09:50.588 driving alcohol it happens,

NOTE Confidence: 0.904451807339986

00:09:50.590 --> 00:09:52.990 but for grownups who know how to swim

NOTE Confidence: 0.904451807339986

00:09:52.990 --> 00:09:55.769 is a rare event to drown because you

NOTE Confidence: 0.904451807339986

00:09:55.769 --> 00:09:58.609 kind of know your limits and you get.

NOTE Confidence: 0.904451807339986

00:09:58.610 --> 00:10:00.926 You don't get into that situation,

NOTE Confidence: 0.904451807339986

00:10:00.930 --> 00:10:03.240 so the fact that his father

NOTE Confidence: 0.904451807339986

00:10:03.240 --> 00:10:05.015 died drowning is odd.

NOTE Confidence: 0.904451807339986

00:10:05.015 --> 00:10:07.070 That jumps that jumps out immediately,

NOTE Confidence: 0.904451807339986

00:10:07.070 --> 00:10:09.051 and there are certain sudden death syndrome

NOTE Confidence: 0.904451807339986

00:10:09.051 --> 00:10:10.809 that are associated with swimming fact.

NOTE Confidence: 0.904451807339986

00:10:10.810 --> 00:10:12.436 One of the long cuties I'm

NOTE Confidence: 0.904451807339986

00:10:12.436 --> 00:10:13.980 going to get it wrong.

NOTE Confidence: 0.904451807339986

00:10:13.980 --> 00:10:14.554 Which one?

NOTE Confidence: 0.904451807339986

00:10:14.554 --> 00:10:16.276 I don't know if it's 1,

NOTE Confidence: 0.904451807339986

00:10:16.280 --> 00:10:18.266 two or three is actually associated

NOTE Confidence: 0.904451807339986

00:10:18.266 --> 00:10:20.150 with sudden death during swimming.

NOTE Confidence: 0.904451807339986

00:10:20.150 --> 00:10:21.770 And so when you hear about

NOTE Confidence: 0.904451807339986

00:10:21.770 --> 00:10:23.410 sudden death with with drowning,

NOTE Confidence: 0.904451807339986

00:10:23.410 --> 00:10:25.471 it sets off a red flag and then the

NOTE Confidence: 0.904451807339986

00:10:25.471 --> 00:10:27.541 other thing that happens is paternal

NOTE Confidence: 0.904451807339986

00:10:27.541 --> 00:10:29.326 uncle died suddenly heart attack.

NOTE Confidence: 0.904451807339986

00:10:29.330 --> 00:10:31.690 We get this all the time because people,

NOTE Confidence: 0.904451807339986

00:10:31.690 --> 00:10:32.226 doctors, pathologist,

NOTE Confidence: 0.904451807339986

00:10:32.226 --> 00:10:34.102 so we have to give an answer

NOTE Confidence: 0.904451807339986

00:10:34.102 --> 00:10:35.539 to the struggling family.

NOTE Confidence: 0.904451807339986

00:10:35.540 --> 00:10:37.045 And historically you either tell

NOTE Confidence: 0.904451807339986

00:10:37.045 --> 00:10:39.175 the person it was a stroke you

NOTE Confidence: 0.904451807339986

00:10:39.175 --> 00:10:40.867 tell him was a heart attack.

NOTE Confidence: 0.904451807339986

00:10:40.870 --> 00:10:42.616 So I always have the follow-up

NOTE Confidence: 0.904451807339986

00:10:42.616 --> 00:10:44.130 question what do you mean?

NOTE Confidence: 0.904451807339986

00:10:44.130 --> 00:10:45.610 What happened? Were you there?

NOTE Confidence: 0.904451807339986

00:10:45.610 --> 00:10:47.090 Do you know the details?

NOTE Confidence: 0.904451807339986

00:10:47.090 --> 00:10:49.426 Did he grab his chest with you have

NOTE Confidence: 0.904451807339986

00:10:49.426 --> 00:10:50.789 known atherosclerotic heart disease?

NOTE Confidence: 0.904451807339986

00:10:50.790 --> 00:10:52.090 Do you have an autopsy?

NOTE Confidence: 0.904451807339986

00:10:52.090 --> 00:10:53.710 Did he just die suddenly standing

NOTE Confidence: 0.904451807339986

00:10:53.710 --> 00:10:55.728 at the bus stop in the Doc said,

NOTE Confidence: 0.904451807339986

00:10:55.730 --> 00:10:57.030 well, this is, you know,

NOTE Confidence: 0.904451807339986

00:10:57.030 --> 00:10:58.464 the heart attack because you don't

NOTE Confidence: 0.904451807339986

00:10:58.464 --> 00:10:59.890 have any other explanation frequently.

NOTE Confidence: 0.904451807339986

00:10:59.890 --> 00:11:01.786 Also what you see is not to get

NOTE Confidence: 0.904451807339986

00:11:01.786 --> 00:11:03.654 too long winded about it, but.

NOTE Confidence: 0.904451807339986

00:11:03.654 --> 00:11:05.958 There is a very strong belief,

NOTE Confidence: 0.904451807339986

00:11:05.960 --> 00:11:08.336 probably by all of us in this room,

NOTE Confidence: 0.904451807339986

00:11:08.340 --> 00:11:10.308 even though we don't really probably

NOTE Confidence: 0.904451807339986

00:11:10.308 --> 00:11:12.232 obviously admit to it that somehow

NOTE Confidence: 0.904451807339986

00:11:12.232 --> 00:11:13.894 illness is a moral failure and

NOTE Confidence: 0.904451807339986

00:11:13.894 --> 00:11:16.169 we in the old days 2000 years ago

NOTE Confidence: 0.904451807339986

00:11:16.169 --> 00:11:17.876 illness was totally a moral failure.

NOTE Confidence: 0.904451807339986

00:11:17.876 --> 00:11:19.068 If you got leprosy,

NOTE Confidence: 0.901687383651733

00:11:19.070 --> 00:11:20.858 it's 'cause you did something wrong.

NOTE Confidence: 0.901687383651733

00:11:20.860 --> 00:11:23.236 Now we've kind of gotten away from that,

NOTE Confidence: 0.901687383651733

00:11:23.240 --> 00:11:24.432 but not completely particularly

NOTE Confidence: 0.901687383651733

00:11:24.432 --> 00:11:25.605 important vascular disease, right?

NOTE Confidence: 0.901687383651733

00:11:25.605 --> 00:11:27.255 Are you a smoker You diabetic

NOTE Confidence: 0.901687383651733

00:11:27.255 --> 00:11:28.899 or you fat the exercise?

NOTE Confidence: 0.901687383651733

00:11:28.900 --> 00:11:29.791 You not exercise.

NOTE Confidence: 0.901687383651733

00:11:29.791 --> 00:11:31.573 There's this perception that if you

NOTE Confidence: 0.901687383651733

00:11:31.573 --> 00:11:33.384 do the right stuff, you shouldn't

NOTE Confidence: 0.901687383651733

00:11:33.384 --> 00:11:35.498 get something bad could happen to you.

NOTE Confidence: 0.901687383651733

00:11:35.500 --> 00:11:36.445 So very frequently,

NOTE Confidence: 0.901687383651733

00:11:36.445 --> 00:11:38.335 family will say my uncle died,

NOTE Confidence: 0.901687383651733

00:11:38.340 --> 00:11:39.910 but he was a drinker.

NOTE Confidence: 0.901687383651733

00:11:39.910 --> 00:11:41.800 I didn't take care of himself,

NOTE Confidence: 0.901687383651733

00:11:41.800 --> 00:11:43.823 but I take care of myself so

NOTE Confidence: 0.901687383651733

00:11:43.823 --> 00:11:45.900 you get that in families too.

NOTE Confidence: 0.901687383651733

00:11:45.900 --> 00:11:48.330 But you gotta sort of push that out to the

NOTE Confidence: 0.901687383651733

00:11:48.391 --> 00:11:50.935 side because everybody needs an explanation.

NOTE Confidence: 0.901687383651733

00:11:50.940 --> 00:11:52.510 So this history of two

NOTE Confidence: 0.901687383651733

00:11:52.510 --> 00:11:53.766 people with sudden death,

NOTE Confidence: 0.901687383651733

00:11:53.770 --> 00:11:55.050 presumably before age 50,

NOTE Confidence: 0.901687383651733

00:11:55.050 --> 00:11:57.549 we didn't get the age of the dad,

NOTE Confidence: 0.901687383651733

00:11:57.550 --> 00:11:59.806 but let's just say two people will send

NOTE Confidence: 0.901687383651733

00:11:59.806 --> 00:12:02.204 at a relatively young age is already

NOTE Confidence: 0.901687383651733

00:12:02.204 --> 00:12:04.740 jumping off the page as concerning.

NOTE Confidence: 0.901687383651733

00:12:04.740 --> 00:12:05.844 What is Sunday's son?

NOTE Confidence: 0.901687383651733

00:12:05.844 --> 00:12:08.209 Death is death within an hour of symptoms.

NOTE Confidence: 0.901687383651733

00:12:08.210 --> 00:12:10.226 Technically for like for like a trial,

NOTE Confidence: 0.901687383651733

00:12:10.230 --> 00:12:12.225 or you know that would be sudden

NOTE Confidence: 0.901687383651733

00:12:12.225 --> 00:12:14.279 death from within an hour of symptoms.

NOTE Confidence: 0.901687383651733

00:12:14.280 --> 00:12:16.008 But like you got your chest,

NOTE Confidence: 0.901687383651733

00:12:16.010 --> 00:12:18.026 your chest pain dead within an hour,

NOTE Confidence: 0.901687383651733

00:12:18.030 --> 00:12:19.770 that's pretty much like sudden death.

NOTE Confidence: 0.901687383651733

00:12:19.770 --> 00:12:22.675 But when we think of sudden death?

NOTE Confidence: 0.901687383651733

00:12:22.680 --> 00:12:24.633 We think of it as like immediate

NOTE Confidence: 0.901687383651733

00:12:24.633 --> 00:12:26.499 like I'm talking to you right now.

NOTE Confidence: 0.901687383651733

00:12:26.500 --> 00:12:28.413 Head goes down on the table, dead,

NOTE Confidence: 0.901687383651733

00:12:28.413 --> 00:12:30.870 and that's what we see in the hospital too.

NOTE Confidence: 0.901687383651733

00:12:30.870 --> 00:12:32.235 When patient codes you know

NOTE Confidence: 0.901687383651733

00:12:32.235 --> 00:12:33.327 they're talking to you,

NOTE Confidence: 0.901687383651733

00:12:33.330 --> 00:12:35.234 and then they're not talking to you.

NOTE Confidence: 0.901687383651733

00:12:35.240 --> 00:12:36.316 So that sudden death.

NOTE Confidence: 0.901687383651733

00:12:36.316 --> 00:12:38.509 It's really hard to confirm or refute it.

NOTE Confidence: 0.901687383651733

00:12:38.510 --> 00:12:39.820 I've got an autopsy papers

NOTE Confidence: 0.901687383651733

00:12:39.820 --> 00:12:41.520 from people a lot of times.

NOTE Confidence: 0.901687383651733

00:12:41.520 --> 00:12:43.152 Families do keep autopsies from their

NOTE Confidence: 0.901687383651733

00:12:43.152 --> 00:12:45.606 relatives, and you can get those sent to you.

NOTE Confidence: 0.901687383651733

00:12:45.610 --> 00:12:47.260 So it just depends how hard

NOTE Confidence: 0.901687383651733

00:12:47.260 --> 00:12:48.620 you want to dig in.

NOTE Confidence: 0.901687383651733

00:12:48.620 --> 00:12:50.517 I would go full blast on this

NOTE Confidence: 0.901687383651733

00:12:50.517 --> 00:12:52.158 guy because he's got two kids.

NOTE Confidence: 0.901687383651733

00:12:52.160 --> 00:12:52.656 He's alive.

NOTE Confidence: 0.901687383651733

00:12:52.656 --> 00:12:55.001 Either tried to diet or just had a vasovagal

NOTE Confidence: 0.901687383651733

00:12:55.001 --> 00:12:57.674 'cause he drank too much in there before but.

NOTE Confidence: 0.901687383651733

00:12:57.680 --> 00:12:58.910 You don't care about that.

NOTE Confidence: 0.901687383651733

00:12:58.910 --> 00:13:00.130 If that happened, who cares?

NOTE Confidence: 0.901687383651733

00:13:00.130 --> 00:13:01.066 You care that he,

NOTE Confidence: 0.901687383651733

00:13:01.066 --> 00:13:02.236 you know someone who has

NOTE Confidence: 0.901687383651733

00:13:02.236 --> 00:13:03.318 this happened to him,

NOTE Confidence: 0.901687383651733

00:13:03.320 --> 00:13:04.790 is at risk of dropping dead.

NOTE Confidence: 0.901687383651733

00:13:04.790 --> 00:13:06.678 So either and he's got two kids and

NOTE Confidence: 0.901687383651733

00:13:06.678 --> 00:13:08.459 they're going to be potentially at risk.

NOTE Confidence: 0.901687383651733

00:13:08.460 --> 00:13:09.690 If there's a genetic problem.

NOTE Confidence: 0.901687383651733

00:13:09.690 --> 00:13:10.915 So you're going to really

NOTE Confidence: 0.901687383651733

00:13:10.915 --> 00:13:12.140 dig into this family history.

NOTE Confidence: 0.901687383651733

00:13:12.140 --> 00:13:14.770 I'll keep my next answer shorter.

NOTE Confidence: 0.579621076583862

00:13:14.770 --> 00:13:18.121 I mean, I say from steam. Proof.

NOTE Confidence: 0.579621076583862

00:13:18.121 --> 00:13:21.547 That was full of awesome information.

NOTE Confidence: 0.579621076583862

00:13:21.550 --> 00:13:24.259 I feel like we can end the episode there.

NOTE Confidence: 0.579621076583862

00:13:24.260 --> 00:13:26.060 No, I never thought it was.

NOTE Confidence: 0.579621076583862

00:13:26.060 --> 00:13:28.470 My wife is calling on the other line.

NOTE Confidence: 0.91196072101593

00:13:29.390 --> 00:13:31.250 Alright, so on physical exam his

NOTE Confidence: 0.91196072101593

00:13:31.250 --> 00:13:33.200 PCP notices a systolic murmur along

NOTE Confidence: 0.91196072101593

00:13:33.200 --> 00:13:35.144 the left sternal border and Apex,

NOTE Confidence: 0.91196072101593

00:13:35.150 --> 00:13:37.070 which becomes louder with Valsalva maneuver.

NOTE Confidence: 0.91196072101593

00:13:37.070 --> 00:13:39.630 The murmur does not radiate to the Carotids,

NOTE Confidence: 0.91196072101593

00:13:39.630 --> 00:13:41.550 though there is a soft radiation

NOTE Confidence: 0.91196072101593

00:13:41.550 --> 00:13:43.782 to the excella. So doctor to Kobe.

NOTE Confidence: 0.91196072101593

00:13:43.782 --> 00:13:46.030 When you're approaching a patient like this,

NOTE Confidence: 0.91196072101593

00:13:46.030 --> 00:13:47.794 do you think you could take

NOTE Confidence: 0.91196072101593

00:13:47.794 --> 00:13:49.550 us through just in general?

NOTE Confidence: 0.91196072101593

00:13:49.550 --> 00:13:51.974 I guess how you approach the physical exam

NOTE Confidence: 0.91196072101593

00:13:51.974 --> 00:13:54.668 and then specifically if you hear a murmur,

NOTE Confidence: 0.91196072101593

00:13:54.670 --> 00:13:56.830 how you practically go through these

NOTE Confidence: 0.91196072101593

00:13:56.830 --> 00:13:58.875 different maneuvers to try and figure

NOTE Confidence: 0.91196072101593

00:13:58.875 --> 00:14:01.067 out what the source of the murmur is.

NOTE Confidence: 0.890502452850342

00:14:01.100 --> 00:14:03.782 Oh yeah, Well, you know when you tell your

NOTE Confidence: 0.890502452850342

00:14:03.782 --> 00:14:05.929 patient that they have a heart murmur.

NOTE Confidence: 0.890502452850342

00:14:05.930 --> 00:14:07.194 They get very worried.

NOTE Confidence: 0.890502452850342

00:14:07.194 --> 00:14:09.859 Do you ever go through that you say Oh,

NOTE Confidence: 0.890502452850342

00:14:09.860 --> 00:14:12.092 I hear a little more than what remember

NOTE Confidence: 0.890502452850342

00:14:12.092 --> 00:14:14.347 what what is that so you know the

NOTE Confidence: 0.890502452850342

00:14:14.347 --> 00:14:16.183 problem with murmurs are that we

NOTE Confidence: 0.890502452850342

00:14:16.183 --> 00:14:17.888 now have echocardiography and the

NOTE Confidence: 0.890502452850342

00:14:17.888 --> 00:14:19.901 stethoscope is 100 year old technology.

NOTE Confidence: 0.890502452850342

00:14:19.901 --> 00:14:22.544 So I'm not trying to say that's not

NOTE Confidence: 0.890502452850342

00:14:22.544 --> 00:14:24.567 important and I'm going to tell you

NOTE Confidence: 0.890502452850342

00:14:24.567 --> 00:14:27.144 what I think about it but I just my

NOTE Confidence: 0.890502452850342

00:14:27.144 --> 00:14:29.196 minute for like plugging point of care,

NOTE Confidence: 0.890502452850342

00:14:29.196 --> 00:14:30.412 echo an advancing technology

NOTE Confidence: 0.890502452850342

00:14:30.412 --> 00:14:31.310 of physical exam.

NOTE Confidence: 0.890502452850342

00:14:31.310 --> 00:14:33.785 And I think you know the day I teach

NOTE Confidence: 0.890502452850342

00:14:33.785 --> 00:14:35.627 cardiac physical exam to the PS.

NOTE Confidence: 0.890502452850342

00:14:35.630 --> 00:14:37.632 I used to teach the medical students

NOTE Confidence: 0.890502452850342

00:14:37.632 --> 00:14:40.096 for many years and so I'm I'm in favor

NOTE Confidence: 0.890502452850342

00:14:40.096 --> 00:14:41.969 of knowing the cardiac physical exam.

NOTE Confidence: 0.890502452850342

00:14:41.970 --> 00:14:43.930 But I think we have to recognize that

NOTE Confidence: 0.890502452850342

00:14:43.930 --> 00:14:45.733 there are some significant limitations to

NOTE Confidence: 0.890502452850342

00:14:45.733 --> 00:14:48.300 it that can be resolved with very simple,

NOTE Confidence: 0.890502452850342

00:14:48.300 --> 00:14:49.468 readily available technology that

NOTE Confidence: 0.890502452850342

00:14:49.468 --> 00:14:51.759 you can get in your iPhone right now.

NOTE Confidence: 0.890502452850342

00:14:51.760 --> 00:14:52.908 So That being said,

NOTE Confidence: 0.890502452850342

00:14:52.908 --> 00:14:54.056 there's the overall gestalt.

NOTE Confidence: 0.890502452850342

00:14:54.060 --> 00:14:56.388 So you got to look at the patient

NOTE Confidence: 0.890502452850342

00:14:56.388 --> 00:14:57.519 from head to toe.

NOTE Confidence: 0.890502452850342

00:14:57.520 --> 00:14:59.529 How do the years lock hasnat Clock?

NOTE Confidence: 0.890502452850342

00:14:59.530 --> 00:15:01.616 Is there a shock of white hair?

NOTE Confidence: 0.890502452850342

00:15:01.620 --> 00:15:03.085 There are certain things that

NOTE Confidence: 0.890502452850342

00:15:03.085 --> 00:15:04.257 can trigger you're thinking.

NOTE Confidence: 0.890502452850342

00:15:04.260 --> 00:15:06.304 Oh, maybe this is a syndromic episode.

NOTE Confidence: 0.890502452850342

00:15:06.310 --> 00:15:08.068 I'm always looking to see whether

NOTE Confidence: 0.890502452850342

00:15:08.068 --> 00:15:08.947 there's underlying myopathy.

NOTE Confidence: 0.890502452850342

00:15:08.950 --> 00:15:11.036 What's a muscle strength like as a

NOTE Confidence: 0.890502452850342

00:15:11.036 --> 00:15:13.339 person able to get up from the Chair,

NOTE Confidence: 0.890502452850342

00:15:13.340 --> 00:15:13.634 Easilly?

NOTE Confidence: 0.890502452850342

00:15:13.634 --> 00:15:14.810 They have hypertrophied calves,

NOTE Confidence: 0.890502452850342

00:15:14.810 --> 00:15:16.270 is there in muscular dystrophy

NOTE Confidence: 0.890502452850342

00:15:16.270 --> 00:15:17.438 there that's been missed,

NOTE Confidence: 0.890502452850342

00:15:17.440 --> 00:15:19.198 that they have normal grip strength?

NOTE Confidence: 0.890502452850342

00:15:19.200 --> 00:15:20.007 They have neuropathy,

NOTE Confidence: 0.890502452850342

00:15:20.007 --> 00:15:21.621 I don't have a needle to

NOTE Confidence: 0.890502452850342

00:15:21.621 --> 00:15:22.720 prick for neuropathy,

NOTE Confidence: 0.890502452850342

00:15:22.720 --> 00:15:24.370 but usually they will tell

NOTE Confidence: 0.890502452850342

00:15:24.370 --> 00:15:26.520 you if they can feel stuff.

NOTE Confidence: 0.890502452850342

00:15:26.520 --> 00:15:28.100 And then for the cardiac

NOTE Confidence: 0.890502452850342

00:15:28.100 --> 00:15:29.048 specific physical exam,

NOTE Confidence: 0.890502452850342

00:15:29.050 --> 00:15:31.534 the right way to do it is to really

NOTE Confidence: 0.890502452850342

00:15:31.534 --> 00:15:33.470 have the patient lying down.

NOTE Confidence: 0.890502452850342

00:15:33.470 --> 00:15:35.366 Listen to them when they're free,

NOTE Confidence: 0.890502452850342

00:15:35.370 --> 00:15:37.260 breathing in all the usual places,

NOTE Confidence: 0.890502452850342

00:15:37.260 --> 00:15:39.156 and then really take a careful

NOTE Confidence: 0.890502452850342

00:15:39.156 --> 00:15:40.104 listen during expiration.

NOTE Confidence: 0.890502452850342

00:15:40.110 --> 00:15:41.695 You're listening really hard for

NOTE Confidence: 0.890502452850342

00:15:41.695 --> 00:15:43.645 any kind of murmurs over this

NOTE Confidence: 0.890502452850342

00:15:43.645 --> 00:15:44.849 sort of aortic region,

NOTE Confidence: 0.890502452850342

00:15:44.850 --> 00:15:46.746 because you want to know whether

NOTE Confidence: 0.890502452850342

00:15:46.746 --> 00:15:48.010 there's any outflow obstruction.

NOTE Confidence: 0.890502452850342

00:15:48.010 --> 00:15:49.438 I think because one of the

NOTE Confidence: 0.890502452850342

00:15:49.438 --> 00:15:50.944 things that leads to syncope

NOTE Confidence: 0.890502452850342

00:15:50.944 --> 00:15:52.429 is hypertrophic cardiomyopathy,

NOTE Confidence: 0.890502452850342

00:15:52.430 --> 00:15:54.010 with left ventricular outflow obstruction,

NOTE Confidence: 0.890502452850342

00:15:54.010 --> 00:15:56.586 and this is pretty typical murmur for that.

NOTE Confidence: 0.890502452850342

00:15:56.590 --> 00:15:58.798 And it sounds a heck of a lot

NOTE Confidence: 0.890502452850342

00:15:58.798 --> 00:16:00.030 like aortic stenosis.

NOTE Confidence: 0.890502452850342

00:16:00.030 --> 00:16:01.824 The difference between this murmur in

NOTE Confidence: 0.890502452850342

00:16:01.824 --> 00:16:04.043 aortic stenosis is that you can really

NOTE Confidence: 0.890502452850342

00:16:04.043 --> 00:16:05.663 provoke an outflow obstruction murmur.

NOTE Confidence: 0.890502452850342

00:16:05.670 --> 00:16:07.464 There can be almost no outflow

NOTE Confidence: 0.890502452850342

00:16:07.464 --> 00:16:09.044 obstruction murmur when the person

NOTE Confidence: 0.890502452850342

00:16:09.044 --> 00:16:10.679 is just lying comfortably free,

NOTE Confidence: 0.890502452850342

00:16:10.680 --> 00:16:11.577 breathing at rest.

NOTE Confidence: 0.890502452850342

00:16:11.577 --> 00:16:14.062 But if you set them up and have

NOTE Confidence: 0.890502452850342

00:16:14.062 --> 00:16:16.000 them do a big chess valsalva,

NOTE Confidence: 0.890502452850342

00:16:16.000 --> 00:16:17.946 you can almost always hear a murmur

NOTE Confidence: 0.890502452850342

00:16:17.946 --> 00:16:19.499 come up immediately after they've

NOTE Confidence: 0.890502452850342

00:16:19.499 --> 00:16:21.164 released their breath and start

NOTE Confidence: 0.890502452850342

00:16:21.164 --> 00:16:22.880 breathing again with the Valsalva.

NOTE Confidence: 0.890502452850342

00:16:22.880 --> 00:16:25.697 An if you hear that kind of provokes murmur,

NOTE Confidence: 0.890502452850342

00:16:25.700 --> 00:16:27.746 it's really a hallmark of hypertrophic

NOTE Confidence: 0.890502452850342

00:16:27.746 --> 00:16:28.428 obstructive cardiomyopathy.

NOTE Confidence: 0.890502452850342

00:16:28.430 --> 00:16:30.326 And that can lead to syncope.

NOTE Confidence: 0.890502452850342

00:16:30.330 --> 00:16:32.535 My drug rotation doesn't lead to syncope.

NOTE Confidence: 0.890502452850342

00:16:32.540 --> 00:16:33.716 Aortic stenosis, of course.

NOTE Confidence: 0.890502452850342

00:16:33.716 --> 00:16:35.480 We all know can lead to

NOTE Confidence: 0.88526177406311

00:16:35.547 --> 00:16:37.798 syncope, but it shouldn't be provoke Obel

NOTE Confidence: 0.88526177406311

00:16:37.798 --> 00:16:39.810 in that particular way with Valsalva.

NOTE Confidence: 0.88526177406311

00:16:39.810 --> 00:16:42.022 In fact, if you sort of reduce

NOTE Confidence: 0.88526177406311

00:16:42.022 --> 00:16:42.970 the ventricular filling,

NOTE Confidence: 0.88526177406311

00:16:42.970 --> 00:16:45.490 the aortic murmur can go down without Salve,

NOTE Confidence: 0.88526177406311

00:16:45.490 --> 00:16:47.386 as opposed to up with obstructive

NOTE Confidence: 0.88526177406311

00:16:47.386 --> 00:16:48.018 hypertrophic cardiomyopathy.

NOTE Confidence: 0.88526177406311

00:16:48.020 --> 00:16:49.600 So you can go through

NOTE Confidence: 0.88526177406311

00:16:49.600 --> 00:16:50.548 these various maneuvers.

NOTE Confidence: 0.88526177406311

00:16:50.550 --> 00:16:52.356 SWAT stand Valsalva and see whether

NOTE Confidence: 0.88526177406311

00:16:52.356 --> 00:16:54.161 you can provoke any kind of

NOTE Confidence: 0.88526177406311

00:16:54.161 --> 00:16:55.799 member that would make you think

NOTE Confidence: 0.88526177406311

00:16:55.799 --> 00:16:57.500 this left ventricular outflow.

NOTE Confidence: 0.88526177406311

00:16:57.500 --> 00:16:59.438 Tract obstruction radiation to the Carotids.

NOTE Confidence: 0.88526177406311

00:16:59.440 --> 00:17:01.024 Is any member that occurs near

NOTE Confidence: 0.88526177406311

00:17:01.024 --> 00:17:02.080 at the aortic valve,

NOTE Confidence: 0.88526177406311

00:17:02.080 --> 00:17:03.606 I would assume would be something will

NOTE Confidence: 0.88526177406311

00:17:03.606 --> 00:17:05.510 be hard to differentiate by radiation.

NOTE Confidence: 0.88526177406311

00:17:05.510 --> 00:17:07.100 The crowd is and I'll be.

NOTE Confidence: 0.88526177406311

00:17:07.100 --> 00:17:08.892 Honestly, I don't use that as a

NOTE Confidence: 0.88526177406311

00:17:08.892 --> 00:17:10.528 significant factor in my physical exam,

NOTE Confidence: 0.88526177406311

00:17:10.530 --> 00:17:12.080 although historically I guess there

NOTE Confidence: 0.88526177406311

00:17:12.080 --> 00:17:14.075 are certain things you can do and

NOTE Confidence: 0.88526177406311

00:17:14.075 --> 00:17:15.635 then I don't know if you can see

NOTE Confidence: 0.88526177406311

00:17:15.688 --> 00:17:17.386 this part of the physical example.

NOTE Confidence: 0.88526177406311

00:17:17.390 --> 00:17:19.520 You should always do ortho statics.

NOTE Confidence: 0.88526177406311

00:17:19.520 --> 00:17:22.828 Which is a real pain, but you got it.

NOTE Confidence: 0.84225982427597

00:17:22.840 --> 00:17:24.796 You can't build for that actually.

NOTE Confidence: 0.84225982427597

00:17:24.800 --> 00:17:26.435 Order it in the hospital

NOTE Confidence: 0.84225982427597

00:17:26.435 --> 00:17:28.070 and then never done it.

NOTE Confidence: 0.84225982427597

00:17:28.070 --> 00:17:30.686 After 2 liters of fluids you can start.

NOTE Confidence: 0.84225982427597

00:17:30.690 --> 00:17:33.307 You have to do it yourself exactly when

NOTE Confidence: 0.84225982427597

00:17:33.307 --> 00:17:35.590 we talk about this murmur that gets

NOTE Confidence: 0.84225982427597

00:17:35.590 --> 00:17:37.558 invoked by the Valsalva and you.

NOTE Confidence: 0.84225982427597

00:17:37.560 --> 00:17:39.360 Talk about doing this sort of

NOTE Confidence: 0.84225982427597

00:17:39.360 --> 00:17:41.150 sit forward big chest valsalva.

NOTE Confidence: 0.84225982427597

00:17:41.150 --> 00:17:42.785 What do you actually hearing

NOTE Confidence: 0.84225982427597

00:17:42.785 --> 00:17:44.748 there with the outflow tract that

NOTE Confidence: 0.84225982427597

00:17:44.750 --> 00:17:47.040 is coming up and more? Are you

NOTE Confidence: 0.84225982427597

00:17:47.040 --> 00:17:48.129 hearing that well?

NOTE Confidence: 0.84225982427597

00:17:48.129 --> 00:17:49.944 You've taken airplane flights before

NOTE Confidence: 0.84225982427597

00:17:49.944 --> 00:17:52.207 and the plane lifts off the runway

NOTE Confidence: 0.84225982427597

00:17:52.207 --> 00:17:54.260 for the same reason that you hear.

NOTE Confidence: 0.84225982427597

00:17:54.260 --> 00:17:56.260 A murmur during Valsalva with

NOTE Confidence: 0.84225982427597

00:17:56.260 --> 00:17:57.060 Hypertrophic Cardiomyopathy.

NOTE Confidence: 0.84225982427597

00:17:57.060 --> 00:17:58.260 Because there's something

NOTE Confidence: 0.84225982427597

00:17:58.260 --> 00:17:59.860 called the Bernoulli effect,

NOTE Confidence: 0.84225982427597

00:17:59.860 --> 00:18:02.452 an when a fluid or gas has to

NOTE Confidence: 0.84225982427597

00:18:02.452 --> 00:18:04.672 travel more rapidly next to

NOTE Confidence: 0.84225982427597

00:18:04.672 --> 00:18:06.660 one that's traveling slowly,

NOTE Confidence: 0.84225982427597

00:18:06.660 --> 00:18:09.257 the pressure is decreased in the area

NOTE Confidence: 0.84225982427597

00:18:09.257 --> 00:18:12.260 where the broad is traveling more rapidly.

NOTE Confidence: 0.84225982427597

00:18:12.260 --> 00:18:14.175 So what happens with Hypertrophic

NOTE Confidence: 0.84225982427597

00:18:14.175 --> 00:18:16.090 cardiomyopathy is that the anterior

NOTE Confidence: 0.84225982427597

00:18:16.149 --> 00:18:18.645 mitral leaflet or leaflet apparatus is

NOTE Confidence: 0.84225982427597

00:18:18.645 --> 00:18:20.309 relatively closely approximating the

NOTE Confidence: 0.84225982427597

00:18:20.371 --> 00:18:21.535 hypertrophied interventricular septum

NOTE Confidence: 0.84225982427597

00:18:21.535 --> 00:18:24.660 an as the hard squeezes the plug out.

NOTE Confidence: 0.84225982427597

00:18:24.660 --> 00:18:26.660 The blood has to accelerate.

NOTE Confidence: 0.84225982427597

00:18:26.660 --> 00:18:28.464 Around this convex hypertrophic

NOTE Confidence: 0.84225982427597

00:18:28.464 --> 00:18:30.719 overgrown piece of muscle that's

NOTE Confidence: 0.84225982427597

00:18:30.719 --> 00:18:33.441 close to the mitral valve and as the

NOTE Confidence: 0.84225982427597

00:18:33.441 --> 00:18:35.503 blood gets through there it decreases

NOTE Confidence: 0.84225982427597

00:18:35.503 --> 00:18:37.939 the pressure in that area and sucks

NOTE Confidence: 0.84225982427597

00:18:37.940 --> 00:18:40.180 the mitral leaflet apparatus over

NOTE Confidence: 0.84225982427597

00:18:40.180 --> 00:18:42.420 to touch the interventricular septum

NOTE Confidence: 0.84225982427597

00:18:42.489 --> 00:18:44.596 and just like rocks in a stream

NOTE Confidence: 0.84225982427597

00:18:44.596 --> 00:18:46.588 that caused the water to gurgle,

NOTE Confidence: 0.84225982427597

00:18:46.590 --> 00:18:49.030 if you distort the Lamb and or blood

NOTE Confidence: 0.84225982427597

00:18:49.030 --> 00:18:51.907 flow you hear a murmur and so you're

NOTE Confidence: 0.84225982427597

00:18:51.907 --> 00:18:53.929 actually hearing the blood squirting

NOTE Confidence: 0.84225982427597

00:18:53.929 --> 00:18:56.359 passed in this turbulent fashion.

NOTE Confidence: 0.84225982427597

00:18:56.360 --> 00:18:58.688 This obstruction between the mitral valve.

NOTE Confidence: 0.84225982427597

00:18:58.690 --> 00:19:00.294 And the interventricular septum.

NOTE Confidence: 0.84225982427597

00:19:00.294 --> 00:19:03.060 And we refer to that as Sam,

NOTE Confidence: 0.84225982427597

00:19:03.060 --> 00:19:04.648 Systolic anterior motion of

NOTE Confidence: 0.84225982427597

00:19:04.648 --> 00:19:05.839 the mitral leaflet.

NOTE Confidence: 0.84225982427597

00:19:05.840 --> 00:19:07.428 There's many factors that

NOTE Confidence: 0.84225982427597

00:19:07.428 --> 00:19:09.810 kind of feed into having that,

NOTE Confidence: 0.84225982427597

00:19:09.810 --> 00:19:12.197 but with Valsalva one of the things

NOTE Confidence: 0.84225982427597

00:19:12.197 --> 00:19:15.324 that you see that happens is that you

NOTE Confidence: 0.84225982427597

00:19:15.324 --> 00:19:18.140 temporarily under fill your left ventricle,

NOTE Confidence: 0.84225982427597

00:19:18.140 --> 00:19:20.130 and so there's less preload,

NOTE Confidence: 0.84225982427597

00:19:20.130 --> 00:19:22.476 and so you get this increased

NOTE Confidence: 0.84225982427597

00:19:22.476 --> 00:19:24.040 approximation of the hypertrophic

NOTE Confidence: 0.84225982427597

00:19:24.109 --> 00:19:25.686 segment with mitral leaflets.

NOTE Confidence: 0.84225982427597

00:19:25.686 --> 00:19:27.695 And so you can actually

NOTE Confidence: 0.84225982427597

00:19:27.695 --> 00:19:29.315 provoke more bernoulli effect.

NOTE Confidence: 0.84225982427597

00:19:29.320 --> 00:19:31.512 Or make them do in fact more affected

NOTE Confidence: 0.84225982427597

00:19:31.512 --> 00:19:33.493 by bringing those two things closer

NOTE Confidence: 0.84225982427597

00:19:33.493 --> 00:19:35.203 together by having less filling

NOTE Confidence: 0.894334316253662

00:19:35.210 --> 00:19:36.932 of the left ventricle. And can

NOTE Confidence: 0.894334316253662

00:19:36.932 --> 00:19:39.239 we use that to explain why we're

NOTE Confidence: 0.894334316253662

00:19:39.240 --> 00:19:40.790 seeing syncope in that patient

NOTE Confidence: 0.894334316253662

00:19:40.790 --> 00:19:42.340 population is a huge factor?

NOTE Confidence: 0.894334316253662

00:19:42.340 --> 00:19:44.510 I keep them. Glad you asked that,

NOTE Confidence: 0.894334316253662

00:19:44.510 --> 00:19:45.750 because there are many

NOTE Confidence: 0.894334316253662

00:19:45.750 --> 00:19:46.990 patients walking around today.

NOTE Confidence: 0.894334316253662

00:19:46.990 --> 00:19:48.326 Have defibrillators because they

NOTE Confidence: 0.894334316253662

00:19:48.326 --> 00:19:49.662 had hemodynamic syncope with

NOTE Confidence: 0.894334316253662

00:19:49.662 --> 00:19:50.710 hypertrophic cardiomyopathy for sure,

NOTE Confidence: 0.894334316253662

00:19:50.710 --> 00:19:53.294 because you can have syncope just from that

NOTE Confidence: 0.894334316253662

00:19:53.294 --> 00:19:55.666 phenomenon and we don't know in this patient.

NOTE Confidence: 0.894334316253662

00:19:55.670 --> 00:19:57.777 Now again, we have all this other

NOTE Confidence: 0.894334316253662

00:19:57.777 --> 00:19:59.971 stuff is dad died, his uncle died.

NOTE Confidence: 0.894334316253662

00:19:59.971 --> 00:20:01.159 He died very young.

NOTE Confidence: 0.894334316253662

00:20:01.160 --> 00:20:02.310 He passed out very quickly,

NOTE Confidence: 0.894334316253662

00:20:02.310 --> 00:20:05.064 so if this turns out to be the diagnosis.

NOTE Confidence: 0.894334316253662

00:20:05.070 --> 00:20:06.722 You know we would start to be

NOTE Confidence: 0.894334316253662

00:20:06.722 --> 00:20:08.030 very suspicious of arrhythmia,

NOTE Confidence: 0.894334316253662

00:20:08.030 --> 00:20:09.950 but People do pass out.

NOTE Confidence: 0.894334316253662

00:20:09.950 --> 00:20:11.644 I have patients who pass out all

NOTE Confidence: 0.894334316253662

00:20:11.644 --> 00:20:13.635 the time from this or get to near

NOTE Confidence: 0.894334316253662

00:20:13.635 --> 00:20:15.158 syncope from this and then they

NOTE Confidence: 0.894334316253662

00:20:15.158 --> 00:20:17.222 would get in my activity or not call

NOTE Confidence: 0.894334316253662

00:20:17.222 --> 00:20:18.735 blasian and they would feel better

NOTE Confidence: 0.894334316253662

00:20:18.735 --> 00:20:19.990 and they would stop happening.

NOTE Confidence: 0.894334316253662

00:20:19.990 --> 00:20:21.523 One of the things that you note

NOTE Confidence: 0.894334316253662

00:20:21.523 --> 00:20:22.657 about that though is there's

NOTE Confidence: 0.894334316253662

00:20:22.657 --> 00:20:24.155 almost always a lead in a program

NOTE Confidence: 0.894334316253662

00:20:24.155 --> 00:20:25.719 and it's almost always associated

NOTE Confidence: 0.894334316253662

00:20:25.719 --> 00:20:27.015 postural change or activity.

NOTE Confidence: 0.894334316253662

00:20:27.020 --> 00:20:28.280 So the classic is Doc.

NOTE Confidence: 0.894334316253662

00:20:28.280 --> 00:20:29.780 I drove my car to work,

NOTE Confidence: 0.894334316253662

00:20:29.780 --> 00:20:31.537 there's a very it's an hour drive.

NOTE Confidence: 0.894334316253662

00:20:31.540 --> 00:20:33.692 Is it very slight Hill up to the

NOTE Confidence: 0.894334316253662

00:20:33.692 --> 00:20:35.759 stairs that I have to take up to

NOTE Confidence: 0.894334316253662

00:20:35.759 --> 00:20:37.709 the front door when I get to the

NOTE Confidence: 0.894334316253662

00:20:37.709 --> 00:20:39.343 top of the stairs of the front

NOTE Confidence: 0.894334316253662

00:20:39.343 --> 00:20:41.254 door I always feel like I'm about

NOTE Confidence: 0.894334316253662

00:20:41.254 --> 00:20:43.200 to pass out and one time I did.

NOTE Confidence: 0.894334316253662

00:20:43.200 --> 00:20:45.000 Or I was I had a glass of

NOTE Confidence: 0.894334316253662

00:20:45.000 --> 00:20:45.870 wine Thanksgiving dinner.

NOTE Confidence: 0.894334316253662

00:20:45.870 --> 00:20:47.430 I sat and watched the football

NOTE Confidence: 0.894334316253662

00:20:47.430 --> 00:20:49.179 game for two hours and then I

NOTE Confidence: 0.894334316253662

00:20:49.179 --> 00:20:50.487 had to go to the bathroom.

NOTE Confidence: 0.894334316253662

00:20:50.490 --> 00:20:52.677 So I got up off the couch and boom,

NOTE Confidence: 0.894334316253662

00:20:52.680 --> 00:20:53.648 'cause you're always dilated.

NOTE Confidence: 0.894334316253662

00:20:53.648 --> 00:20:54.822 Glass of wine, big meal,

NOTE Confidence: 0.894334316253662

00:20:54.822 --> 00:20:56.590 but it's in your stomach to watch a

NOTE Confidence: 0.894334316253662

00:20:56.647 --> 00:20:58.743 football game and boom, you go down.

NOTE Confidence: 0.894334316253662

00:20:58.743 --> 00:21:00.669 So there are some environmental factors

NOTE Confidence: 0.894334316253662

00:21:00.669 --> 00:21:02.854 that can kind of tell you what it is.

NOTE Confidence: 0.894334316253662

00:21:02.860 --> 00:21:03.875 Uh.

NOTE Confidence: 0.894334316253662

00:21:03.875 --> 00:21:05.255 OK, excellent,

NOTE Confidence: 0.894334316253662

00:21:05.255 --> 00:21:07.439 so enough of that stethoscope nonsense,

NOTE Confidence: 0.875196158885956

00:21:07.440 --> 00:21:09.630 and we're going to complete garbage,

NOTE Confidence: 0.875196158885956

00:21:09.630 --> 00:21:11.812 not rubbish. It's a good decoration.

NOTE Confidence: 0.875196158885956

00:21:11.812 --> 00:21:14.360 Patients like it, but so we get

NOTE Confidence: 0.875196158885956

00:21:14.360 --> 00:21:17.264 an EKG on this guy in the office.

NOTE Confidence: 0.875196158885956

00:21:17.270 --> 00:21:19.090 It reveals increased record-eagle voltage

NOTE Confidence: 0.875196158885956

00:21:19.090 --> 00:21:20.546 with left ventricular hypertrophy,

NOTE Confidence: 0.875196158885956

00:21:20.550 --> 00:21:23.820 an prominent Q Waves in the inferior, and the

NOTE Confidence: 0.875196158885956

00:21:23.820 --> 00:21:26.369 lateral leads. We also get a little

NOTE Confidence: 0.875196158885956

00:21:26.370 --> 00:21:28.548 blood work right off the bat.

NOTE Confidence: 0.875196158885956

00:21:28.550 --> 00:21:30.664 It's notable for an elevated BNP two

NOTE Confidence: 0.875196158885956

00:21:30.664 --> 00:21:32.940 800 and his primary care provider

NOTE Confidence: 0.875196158885956

00:21:32.940 --> 00:21:35.105 then orders a transthoracic Echo.

NOTE Confidence: 0.875196158885956

00:21:35.110 --> 00:21:36.940 Anne refers to your office.

NOTE Confidence: 0.875196158885956

00:21:36.940 --> 00:21:39.442 So can we just unpack this a little bit

NOTE Confidence: 0.875196158885956

00:21:39.442 --> 00:21:41.815 will start off with the ECG an again,

NOTE Confidence: 0.875196158885956

00:21:41.820 --> 00:21:43.620 to reiterate that we're seeing LVMH

NOTE Confidence: 0.875196158885956

00:21:43.620 --> 00:21:44.820 or left ventricular hypertrophy

NOTE Confidence: 0.875196158885956

00:21:44.867 --> 00:21:46.343 prominent Q Waves in the inferior

NOTE Confidence: 0.875196158885956

00:21:46.343 --> 00:21:48.021 and lateral leads and then some

NOTE Confidence: 0.875196158885956

00:21:48.021 --> 00:21:48.987 increase recorded voltage.

NOTE Confidence: 0.893079400062561

00:21:49.670 --> 00:21:51.446 Yeah, Well you spelled it out.

NOTE Confidence: 0.893079400062561

00:21:51.450 --> 00:21:53.313 I mean this is this is looking a lot

NOTE Confidence: 0.893079400062561

00:21:53.313 --> 00:21:55.000 like Hypertrophic Cardiomyopathy.

NOTE Confidence: 0.893079400062561

00:21:55.000 --> 00:21:57.256 You have to be a little bit cautious

NOTE Confidence: 0.893079400062561

00:21:57.256 --> 00:21:58.848 'cause the guys in athlete.

NOTE Confidence: 0.893079400062561

00:21:58.850 --> 00:22:00.330 I'm assuming he played basketball.

NOTE Confidence: 0.893079400062561

00:22:00.330 --> 00:22:02.395 The relatively young guy, so you know,

NOTE Confidence: 0.893079400062561

00:22:02.400 --> 00:22:04.656 if the guys on the basketball court 3

NOTE Confidence: 0.893079400062561

00:22:04.656 --> 00:22:06.840 four days a week if he's exercising,

NOTE Confidence: 0.893079400062561

00:22:06.840 --> 00:22:09.208 he can have increased voltage. the Q waves.

NOTE Confidence: 0.893079400062561

00:22:09.208 --> 00:22:11.569 You said there in the inferior leads. Yeah.

NOTE Confidence: 0.893079400062561

00:22:11.570 --> 00:22:13.649 Q Waves in fear leads are suspicious.

NOTE Confidence: 0.893079400062561

00:22:13.650 --> 00:22:14.535 Not they're not.

NOTE Confidence: 0.893079400062561

00:22:14.535 --> 00:22:15.420 Diagnostic could be.

NOTE Confidence: 0.893079400062561

00:22:15.420 --> 00:22:17.778 I don't know how how tall the guy is

NOTE Confidence: 0.893079400062561

00:22:17.778 --> 00:22:19.859 could be something about his body.

NOTE Confidence: 0.893079400062561

00:22:19.860 --> 00:22:20.745 Habitus could be.

NOTE Confidence: 0.893079400062561

00:22:20.745 --> 00:22:22.810 Doing that so LVH some QA is

NOTE Confidence: 0.893079400062561

00:22:22.882 --> 00:22:24.490 in fairly I'm suspicious,

NOTE Confidence: 0.893079400062561

00:22:24.490 --> 00:22:26.458 but I'm not sure if you had told

NOTE Confidence: 0.893079400062561

00:22:26.458 --> 00:22:29.142 me he's also got significant T wave

NOTE Confidence: 0.893079400062561

00:22:29.142 --> 00:22:31.267 inversion across the anterior precordium.

NOTE Confidence: 0.893079400062561

00:22:31.270 --> 00:22:33.298 Now I'm really worried about it,

NOTE Confidence: 0.893079400062561

00:22:33.300 --> 00:22:34.700 or even out laterally.

NOTE Confidence: 0.893079400062561

00:22:34.700 --> 00:22:36.450 Then I really think hypertrophic

NOTE Confidence: 0.893079400062561

00:22:36.450 --> 00:22:38.132 cardiomyopathy is coming big into

NOTE Confidence: 0.893079400062561

00:22:38.132 --> 00:22:39.408 the differential diagnosis here,

NOTE Confidence: 0.893079400062561

00:22:39.410 --> 00:22:41.438 but this could be a hypertrophic

NOTE Confidence: 0.893079400062561

00:22:41.438 --> 00:22:42.120 cardiomyopathy, EKG,

NOTE Confidence: 0.893079400062561

00:22:42.120 --> 00:22:44.490 and then you said the BMP is

NOTE Confidence: 0.893079400062561

00:22:44.490 --> 00:22:45.850 elevated elevated 800 OK,

NOTE Confidence: 0.893079400062561

00:22:45.850 --> 00:22:47.878 so that's really really interesting fact.

NOTE Confidence: 0.893079400062561

00:22:47.880 --> 00:22:48.837 So I mean,

NOTE Confidence: 0.893079400062561

00:22:48.837 --> 00:22:50.113 we always associate elevated

NOTE Confidence: 0.893079400062561

00:22:50.113 --> 00:22:51.610 BNP with heart failure,

NOTE Confidence: 0.893079400062561

00:22:51.610 --> 00:22:52.762 reduced ejection fraction.

NOTE Confidence: 0.893079400062561

00:22:52.762 --> 00:22:54.298 Sometimes our fair preserved

NOTE Confidence: 0.893079400062561

00:22:54.298 --> 00:22:55.066 ejection fraction,

NOTE Confidence: 0.893079400062561

00:22:55.070 --> 00:22:57.814 but we you know it's not usually associated

NOTE Confidence: 0.893079400062561

00:22:57.814 --> 00:22:59.410 with hypertrophic cardiomyopathy.

NOTE Confidence: 0.893079400062561

00:22:59.410 --> 00:23:02.231 I would guess that most people walking

NOTE Confidence: 0.893079400062561

00:23:02.231 --> 00:23:04.529 around don't necessarily think about BMP,

NOTE Confidence: 0.893079400062561

00:23:04.530 --> 00:23:06.106 asmark, fireproof, according me,

NOTE Confidence: 0.893079400062561

00:23:06.106 --> 00:23:08.470 but it is an we are.

NOTE Confidence: 0.893079400062561

00:23:08.470 --> 00:23:10.440 This is actually public data,

NOTE Confidence: 0.893079400062561

00:23:10.440 --> 00:23:12.410 so we presented at European

NOTE Confidence: 0.893079400062561

00:23:12.410 --> 00:23:14.380 side of Cardiology in August.

NOTE Confidence: 0.893079400062561

00:23:14.380 --> 00:23:17.359 The I think it was 36 week data from

NOTE Confidence: 0.893079400062561

00:23:17.359 --> 00:23:20.113 the pioneer study which was a phase

NOTE Confidence: 0.893079400062561

00:23:20.113 --> 00:23:23.499 two study of an ATP myosin modulator.

NOTE Confidence: 0.893079400062561

00:23:23.500 --> 00:23:25.670 That really is a negative on it.

NOTE Confidence: 0.893079400062561

00:23:25.670 --> 00:23:26.910 Rope used for obstructive

NOTE Confidence: 0.893079400062561

00:23:26.910 --> 00:23:27.530 hypertrophic cardiomyopathy.

NOTE Confidence: 0.893079400062561

00:23:27.530 --> 00:23:28.770 We had 21 patients.

NOTE Confidence: 0.893079400062561

00:23:28.770 --> 00:23:29.700 The initial study,

NOTE Confidence: 0.893079400062561

00:23:29.700 --> 00:23:31.494 one who dropped out of the

NOTE Confidence: 0.893079400062561

00:23:31.494 --> 00:23:33.110 initial study because of A-fib.

NOTE Confidence: 0.893079400062561

00:23:33.110 --> 00:23:35.334 Then I think it was six or Seven

NOTE Confidence: 0.893079400062561

00:23:35.334 --> 00:23:37.185 patients ended up going for surgical

NOTE Confidence: 0.893079400062561

00:23:37.185 --> 00:23:39.424 myectomy in between the end of that

NOTE Confidence: 0.893079400062561

00:23:39.424 --> 00:23:41.410 study and the initiation of the

NOTE Confidence: 0.893079400062561

00:23:41.410 --> 00:23:43.391 long-term access to the drug study.

NOTE Confidence: 0.893079400062561

00:23:43.391 --> 00:23:45.353 So there were 13 patients who

NOTE Confidence: 0.893079400062561

00:23:45.353 --> 00:23:46.747 continued on in this study.

NOTE Confidence: 0.893079400062561

00:23:46.750 --> 00:23:49.109 So the 13 pages to continue for

NOTE Confidence: 0.893079400062561

00:23:49.109 --> 00:23:51.361 36 months there BMP started an

NOTE Confidence: 0.893079400062561

00:23:51.361 --> 00:23:52.917 average of around 1500.

NOTE Confidence: 0.893079400062561

00:23:52.920 --> 00:23:55.447 These are patients who had class two

NOTE Confidence: 0.893079400062561

00:23:55.447 --> 00:23:58.189 or three hard failure type symptoms.

NOTE Confidence: 0.893079400062561

00:23:58.190 --> 00:24:00.098 Some limitation from some limitation to

NOTE Confidence: 0.893079400062561

00:24:00.098 --> 00:24:02.644 a lot of limitation with obstructive

NOTE Confidence: 0.893079400062561

00:24:02.644 --> 00:24:03.858 hypertrophic cardiomyopathy.

NOTE Confidence: 0.893079400062561

00:24:03.860 --> 00:24:05.075 Normal hyperdynamic ventricles

NOTE Confidence: 0.893079400062561

00:24:05.075 --> 00:24:07.100 did not have volume overload,

NOTE Confidence: 0.893079400062561

00:24:07.100 --> 00:24:08.315 just obstructive hypertrophic

NOTE Confidence: 0.893079400062561

00:24:08.315 --> 00:24:10.340 cardiomyopathy and their BNP levels.

NOTE Confidence: 0.893079400062561

00:24:10.340 --> 00:24:11.944 Basically normalized on the

NOTE Confidence: 0.893079400062561

00:24:11.944 --> 00:24:13.949 therapy that also reduced their

NOTE Confidence: 0.893079400062561

00:24:13.949 --> 00:24:15.615 obstruction to basically normal

NOTE Confidence: 0.893079400062561

00:24:15.615 --> 00:24:17.625 without dropping the F substantially.

NOTE Confidence: 0.893079400062561

00:24:17.630 --> 00:24:20.048 So my point in telling that

NOTE Confidence: 0.893079400062561

00:24:20.048 --> 00:24:22.949 long story is to say that BMP.

NOTE Confidence: 0.893079400062561

00:24:22.950 --> 00:24:24.728 Looks at this point like a reasonable

NOTE Confidence: 0.893079400062561

00:24:24.728 --> 00:24:26.015 marker of symptomatic obstruction

NOTE Confidence: 0.893079400062561

00:24:26.015 --> 00:24:27.440 and Hypertrophic Cardiomyopathy,

NOTE Confidence: 0.893079400062561

00:24:27.440 --> 00:24:29.666 so I don't know what to say

NOTE Confidence: 0.893079400062561

00:24:29.666 --> 00:24:30.980 exactly about the BNP.

NOTE Confidence: 0.893079400062561

00:24:30.980 --> 00:24:32.898 The BNP at this point that you

NOTE Confidence: 0.893079400062561

00:24:32.898 --> 00:24:34.830 going to be NPR nonspecific.

NOTE Confidence: 0.893079400062561

00:24:34.830 --> 00:24:36.114 The guys gotta murmur.

NOTE Confidence: 0.893079400062561

00:24:36.114 --> 00:24:37.398 I don't really know.

NOTE Confidence: 0.893079400062561

00:24:37.400 --> 00:24:39.738 I don't trust my physical exam enough

NOTE Confidence: 0.893079400062561

00:24:39.738 --> 00:24:42.207 to say conclusively whether this is ASM are.

NOTE Confidence: 0.898902952671051

00:24:42.210 --> 00:24:44.100 I don't know whether he had

NOTE Confidence: 0.898902952671051

00:24:44.100 --> 00:24:46.065 the Valsalva response or not at

NOTE Confidence: 0.898902952671051

00:24:46.065 --> 00:24:47.665 this point in my differential,

NOTE Confidence: 0.898902952671051

00:24:47.670 --> 00:24:48.834 diagnosis is still dilated.

NOTE Confidence: 0.898902952671051

00:24:48.834 --> 00:24:50.289 Cardiomyopathy with with Mia versus

NOTE Confidence: 0.898902952671051

00:24:50.289 --> 00:24:51.200 hypertrophic cardiomyopathy.

NOTE Confidence: 0.898902952671051

00:24:51.200 --> 00:24:53.146 I don't think at this point he

NOTE Confidence: 0.898902952671051

00:24:53.146 --> 00:24:55.130 has a primary rhythmic disease.

NOTE Confidence: 0.898902952671051

00:24:55.130 --> 00:24:57.434 Or like I don't think that was a

NOTE Confidence: 0.898902952671051

00:24:57.434 --> 00:24:59.420 seizure or something like that.

NOTE Confidence: 0.898902952671051

00:24:59.420 --> 00:25:01.070 Like I think you know,

NOTE Confidence: 0.898902952671051

00:25:01.070 --> 00:25:03.471 I think we're dealing with the structural

NOTE Confidence: 0.898902952671051

00:25:03.471 --> 00:25:05.360 heart disease here at this point,

NOTE Confidence: 0.898902952671051

00:25:05.360 --> 00:25:07.425 and probably I think top of the

NOTE Confidence: 0.898902952671051

00:25:07.425 --> 00:25:08.762 list is hypertrophic cardiomyopathy

NOTE Confidence: 0.898902952671051

00:25:08.762 --> 00:25:10.306 and after that some

NOTE Confidence: 0.899352610111237

00:25:10.310 --> 00:25:11.960 other version of Nonischemic Cardiomyopathy.

NOTE Confidence: 0.898516476154327

00:25:12.000 --> 00:25:13.460 Quick question that came to

NOTE Confidence: 0.898516476154327

00:25:13.460 --> 00:25:14.920 mind after discussing that EKG,

NOTE Confidence: 0.898516476154327

00:25:14.920 --> 00:25:16.736 so you talked a little bit about how

NOTE Confidence: 0.898516476154327

00:25:16.736 --> 00:25:19.352 the key waves can point you in the

NOTE Confidence: 0.898516476154327

00:25:19.352 --> 00:25:20.756 direction of Hypertrophic Cardiomyopathy.

NOTE Confidence: 0.898516476154327

00:25:20.760 --> 00:25:22.506 Though not definitely specific for that,

NOTE Confidence: 0.898516476154327

00:25:22.510 --> 00:25:24.830 whi can you explain why you would get

NOTE Confidence: 0.898516476154327

00:25:24.830 --> 00:25:27.474 Q Waves on EKG and a patient like this?

NOTE Confidence: 0.898516476154327

00:25:27.480 --> 00:25:29.100 Is it because there's fibrosis in

NOTE Confidence: 0.898516476154327

00:25:29.100 --> 00:25:30.690 the area of hypertrophied ventricle,

NOTE Confidence: 0.898516476154327

00:25:30.690 --> 00:25:32.770 or 'cause I CQ waves and I think

NOTE Confidence: 0.898516476154327

00:25:32.770 --> 00:25:34.773 of old infarct, that's you know.

NOTE Confidence: 0.898516476154327

00:25:34.773 --> 00:25:35.646 I've trained myself.

NOTE Confidence: 0.898516476154327

00:25:35.650 --> 00:25:37.260 So what makes you think that this

NOTE Confidence: 0.898516476154327

00:25:37.260 --> 00:25:38.480 could potentially point towards

NOTE Confidence: 0.898516476154327

00:25:38.480 --> 00:25:39.450 Hypertrophic cardiomyopathy?

NOTE Confidence: 0.898516476154327

00:25:39.450 --> 00:25:39.740 Well,

NOTE Confidence: 0.898516476154327

00:25:39.740 --> 00:25:41.784 you raise a good point and I

NOTE Confidence: 0.898516476154327

00:25:41.784 --> 00:25:43.480 didn't say that, but obviously.

NOTE Confidence: 0.898516476154327

00:25:43.480 --> 00:25:45.530 Ischemic heart disease is still

NOTE Confidence: 0.898516476154327

00:25:45.530 --> 00:25:47.454 in the differential diagnosis as

NOTE Confidence: 0.898516476154327

00:25:47.454 --> 00:25:49.666 our as is now most coronary artery

NOTE Confidence: 0.898516476154327

00:25:49.666 --> 00:25:52.047 and there is no way to be specific

NOTE Confidence: 0.898516476154327

00:25:52.047 --> 00:25:54.166 about that with regards to the EKG,

NOTE Confidence: 0.898516476154327

00:25:54.166 --> 00:25:56.050 I don't know physiologically why patients

NOTE Confidence: 0.898516476154327

00:25:56.109 --> 00:25:58.425 with hypertrophic cardiomyopathy get Q waves,

NOTE Confidence: 0.898516476154327

00:25:58.430 --> 00:26:00.500 and specifically needs, and some don't.

NOTE Confidence: 0.898516476154327

00:26:00.500 --> 00:26:02.195 There are some patients with

NOTE Confidence: 0.898516476154327

00:26:02.195 --> 00:26:04.300 recording app that have normal EKG's.

NOTE Confidence: 0.898516476154327

00:26:04.300 --> 00:26:05.299 It's not, though,

NOTE Confidence: 0.898516476154327

00:26:05.299 --> 00:26:07.297 for the same reason that patients

NOTE Confidence: 0.898516476154327

00:26:07.297 --> 00:26:09.569 for the schema cardiomyopathy get it

NOTE Confidence: 0.898516476154327

00:26:09.569 --> 00:26:12.144 because in those patients the QA can

NOTE Confidence: 0.898516476154327

00:26:12.144 --> 00:26:14.356 actually tell you where the infarct was.

NOTE Confidence: 0.898516476154327

00:26:14.360 --> 00:26:15.074 In this case,

NOTE Confidence: 0.898516476154327

00:26:15.074 --> 00:26:17.250 if you do an MRI in patient with

NOTE Confidence: 0.898516476154327

00:26:17.250 --> 00:26:19.480 hypertrophic cardiomyopathy with Q waves,

NOTE Confidence: 0.898516476154327

00:26:19.480 --> 00:26:21.490 you're not going to see transmural

NOTE Confidence: 0.898516476154327

00:26:21.490 --> 00:26:23.177 fibrosis in the inferior wall

NOTE Confidence: 0.898516476154327

00:26:23.177 --> 00:26:24.597 because of those Q waves.

NOTE Confidence: 0.898516476154327

00:26:24.600 --> 00:26:26.520 You may see fibrosis over 70%

NOTE Confidence: 0.898516476154327

00:26:26.520 --> 00:26:27.800 of patients with hypertrophic

NOTE Confidence: 0.898516476154327

00:26:27.800 --> 00:26:29.080 cardiomyopathy have fibrosis apparent.

NOTE Confidence: 0.898516476154327

00:26:29.080 --> 00:26:31.320 an MRI when you do the MRI,

NOTE Confidence: 0.898516476154327

00:26:31.320 --> 00:26:33.240 but it's in all kinds of

NOTE Confidence: 0.898516476154327

00:26:33.240 --> 00:26:33.880 different distributions.

NOTE Confidence: 0.898516476154327

00:26:33.880 --> 00:26:36.440 Most of it is not very, very severe,

NOTE Confidence: 0.898516476154327

00:26:36.440 --> 00:26:38.360 and it's rare to see transmural.

NOTE Confidence: 0.898516476154327

00:26:38.360 --> 00:26:41.240 You can see it, but it's much more rare,

NOTE Confidence: 0.898516476154327

00:26:41.240 --> 00:26:43.160 and it doesn't distribute according to

NOTE Confidence: 0.889961242675781

00:26:43.160 --> 00:26:44.760 the EKG. OK, that was

NOTE Confidence: 0.884782856160944

00:26:44.760 --> 00:26:46.132 kind of my question.

NOTE Confidence: 0.884782856160944

00:26:46.132 --> 00:26:48.750 Me if you see dagger Q waves,

NOTE Confidence: 0.884782856160944

00:26:48.750 --> 00:26:50.016 it's hypertrophic cardiomyopathy.

NOTE Confidence: 0.884782856160944

00:26:50.016 --> 00:26:52.548 Is that just like a Association

NOTE Confidence: 0.884782856160944

00:26:52.548 --> 00:26:54.790 that is like a knee jerk reaction?

NOTE Confidence: 0.884782856160944

00:26:54.790 --> 00:26:57.066 Or is that something that holds

NOTE Confidence: 0.884782856160944

00:26:57.066 --> 00:26:59.346 weight send that person to me?

NOTE Confidence: 0.884782856160944

00:26:59.346 --> 00:27:01.928 I don't know. I've never heard of

NOTE Confidence: 0.892313778400421

00:27:01.930 --> 00:27:02.664 that before.

NOTE Confidence: 0.892313778400421

00:27:02.664 --> 00:27:04.499 The dagger, the word Daggeron,

NOTE Confidence: 0.892313778400421

00:27:04.500 --> 00:27:05.232 hypertrophic cardiomyopathy,

NOTE Confidence: 0.892313778400421

00:27:05.232 --> 00:27:06.696 go together on echo.

NOTE Confidence: 0.892313778400421

00:27:06.700 --> 00:27:09.948 OK, so you see, these dagger shaped.

NOTE Confidence: 0.892313778400421

00:27:09.950 --> 00:27:11.625 Continuous wave Doppler tracings going

NOTE Confidence: 0.892313778400421

00:27:11.625 --> 00:27:13.300 through the left ventricular outflow

NOTE Confidence: 0.892313778400421

00:27:13.345 --> 00:27:15.109 tract because as sisterly progress is

NOTE Confidence: 0.892313778400421

00:27:15.109 --> 00:27:16.650 the obstruction becomes more severe,

NOTE Confidence: 0.892313778400421

00:27:16.650 --> 00:27:19.202 so the so instead of being a nice

NOTE Confidence: 0.892313778400421

00:27:19.202 --> 00:27:21.136 curves review, shape parabola like you

NOTE Confidence: 0.892313778400421

00:27:21.136 --> 00:27:23.669 get with them are where it goes up,

NOTE Confidence: 0.892313778400421

00:27:23.670 --> 00:27:25.260 and then it goes down.

NOTE Confidence: 0.892313778400421

00:27:25.260 --> 00:27:27.804 This one gets worse and worse and worse.

NOTE Confidence: 0.892313778400421

00:27:27.810 --> 00:27:30.058 So it kind of cuts out like a

NOTE Confidence: 0.892313778400421

00:27:30.058 --> 00:27:32.278 dagger on one side it's inverse,

NOTE Confidence: 0.892313778400421

00:27:32.280 --> 00:27:34.188 and then it goes straight down.

NOTE Confidence: 0.892313778400421

00:27:34.190 --> 00:27:35.785 So that's the dagger that

NOTE Confidence: 0.892313778400421

00:27:35.785 --> 00:27:37.380 I know about in HCM,

NOTE Confidence: 0.892313778400421

00:27:37.380 --> 00:27:38.340 but you know,

NOTE Confidence: 0.892313778400421

00:27:38.340 --> 00:27:39.620 I'm open to new

NOTE Confidence: 0.774741768836975

00:27:39.620 --> 00:27:42.860 information. I might be getting that

NOTE Confidence: 0.774741768836975

00:27:42.860 --> 00:27:47.420 wrong and mix the old echo with the kids.

NOTE Confidence: 0.774741768836975

00:27:47.420 --> 00:27:50.030 Yeah, yeah. So here we are.

NOTE Confidence: 0.774741768836975

00:27:50.030 --> 00:27:52.541 We got this case and you know it sounds

NOTE Confidence: 0.774741768836975

00:27:52.541 --> 00:27:55.420 a lot like hypertrophic cardiomyopathy.

NOTE Confidence: 0.774741768836975

00:27:55.420 --> 00:27:57.350 I'm not a steam diagnostician,

NOTE Confidence: 0.774741768836975

00:27:57.350 --> 00:27:59.270 but does sound like that,

NOTE Confidence: 0.774741768836975

00:27:59.270 --> 00:28:02.662 and that is the title of the episode, but.

NOTE Confidence: 0.774741768836975

00:28:02.662 --> 00:28:04.534 So doctor Kobe suspend your disbelief

NOTE Confidence: 0.774741768836975

00:28:04.540 --> 00:28:06.572 so you know they come to you.

NOTE Confidence: 0.774741768836975

00:28:06.572 --> 00:28:08.300 They probably already have an echo

NOTE Confidence: 0.774741768836975

00:28:08.361 --> 00:28:10.157 before they get referred to you,

NOTE Confidence: 0.774741768836975

00:28:10.157 --> 00:28:11.640 but I'm sure you're going

NOTE Confidence: 0.774741768836975

00:28:11.640 --> 00:28:13.115 to be looking at this.

NOTE Confidence: 0.774741768836975

00:28:13.120 --> 00:28:14.608 Echo yourself and like.

NOTE Confidence: 0.774741768836975

00:28:14.608 --> 00:28:16.096 What specifically like you're

NOTE Confidence: 0.774741768836975

00:28:16.096 --> 00:28:17.798 sitting down at the computer?

NOTE Confidence: 0.774741768836975

00:28:17.800 --> 00:28:19.360 What are you looking for

NOTE Confidence: 0.774741768836975

00:28:19.360 --> 00:28:20.920 and what is important to

NOTE Confidence: 0.911399722099304

00:28:20.920 --> 00:28:22.480 you is the key thing,

NOTE Confidence: 0.911399722099304

00:28:22.480 --> 00:28:23.724 because the diagnosis of

NOTE Confidence: 0.911399722099304

00:28:23.724 --> 00:28:24.346 hypertrophic cardiomyopathy,

NOTE Confidence: 0.911399722099304

00:28:24.350 --> 00:28:25.910 it's an image in diagnosis.

NOTE Confidence: 0.911399722099304

00:28:25.910 --> 00:28:28.406 So whether you look at echo or MRI,

NOTE Confidence: 0.911399722099304

00:28:28.410 --> 00:28:30.615 you need a picture of the heart to make

NOTE Confidence: 0.911399722099304

00:28:30.615 --> 00:28:32.458 diagnosis of Hypertrophic Cardiomyopathy.

NOTE Confidence: 0.911399722099304

00:28:32.460 --> 00:28:34.644 If you really want to be sure,

NOTE Confidence: 0.911399722099304

00:28:34.650 --> 00:28:36.380 because the diagnostic criteria are

NOTE Confidence: 0.911399722099304

00:28:36.380 --> 00:28:38.430 dependent upon finding greater than 15

NOTE Confidence: 0.911399722099304

00:28:38.430 --> 00:28:40.038 millimeter wall thickness in at least

NOTE Confidence: 0.911399722099304

00:28:40.038 --> 00:28:41.820 one segment in the left ventricle,

NOTE Confidence: 0.911399722099304

00:28:41.820 --> 00:28:43.686 in the absence of abnormal afterloader,

NOTE Confidence: 0.911399722099304

00:28:43.690 --> 00:28:45.194 other stimulus for hypertrophy.

NOTE Confidence: 0.911399722099304

00:28:45.194 --> 00:28:47.450 So finding 50 millimeter wall segment

NOTE Confidence: 0.911399722099304

00:28:47.514 --> 00:28:49.383 and some will severe IIS not good

NOTE Confidence: 0.911399722099304

00:28:49.383 --> 00:28:51.009 enough can give the diagnosis.

NOTE Confidence: 0.911399722099304

00:28:51.010 --> 00:28:53.390 Persons blood pressure is 180 over 110

NOTE Confidence: 0.911399722099304

00:28:53.390 --> 00:28:55.677 every time they come to the office.

NOTE Confidence: 0.911399722099304

00:28:55.680 --> 00:28:58.004 Not good enough, can't give the diagnosis,

NOTE Confidence: 0.911399722099304

00:28:58.010 --> 00:29:00.334 but person comes in even mild hypertension.

NOTE Confidence: 0.911399722099304

00:29:00.340 --> 00:29:01.504 Even mild aortic stenosis.

NOTE Confidence: 0.911399722099304

00:29:01.504 --> 00:29:03.250 No real good reason to have

NOTE Confidence: 0.911399722099304

00:29:03.306 --> 00:29:04.330 severe hypertrophy.

NOTE Confidence: 0.911399722099304

00:29:04.330 --> 00:29:06.148 You find 50 millimeters of wall

NOTE Confidence: 0.911399722099304

00:29:06.148 --> 00:29:08.000 thickness in the left ventricle.

NOTE Confidence: 0.911399722099304

00:29:08.000 --> 00:29:11.108 You have pretty good case for diagnosis.

NOTE Confidence: 0.911399722099304

00:29:11.110 --> 00:29:13.686 So that's the first thing I'm looking for.

NOTE Confidence: 0.911399722099304

00:29:13.690 --> 00:29:16.014 The other thing that I'm looking for

NOTE Confidence: 0.911399722099304

00:29:16.014 --> 00:29:18.456 is anything in terms of making the

NOTE Confidence: 0.911399722099304

00:29:18.456 --> 00:29:20.526 diagnosis that's going to be what

NOTE Confidence: 0.911399722099304

00:29:20.591 --> 00:29:22.735 I would call a fino copy of this,

NOTE Confidence: 0.911399722099304

00:29:22.740 --> 00:29:24.522 so there's lots of things that

NOTE Confidence: 0.911399722099304

00:29:24.522 --> 00:29:26.105 can cause hypertrophy that aren't

NOTE Confidence: 0.911399722099304

00:29:26.105 --> 00:29:27.820 dependent on after load abnormality

NOTE Confidence: 0.911399722099304

00:29:27.820 --> 00:29:29.192 that can also employed.

NOTE Confidence: 0.911399722099304

00:29:29.200 --> 00:29:29.850 For instance,

NOTE Confidence: 0.911399722099304

00:29:29.850 --> 00:29:31.150 can cause severe hypertrophy

NOTE Confidence: 0.911399722099304

00:29:31.150 --> 00:29:32.750 with no elevated after load,

NOTE Confidence: 0.911399722099304

00:29:32.750 --> 00:29:35.030 and they get wall thickness.

NOTE Confidence: 0.911399722099304

00:29:35.030 --> 00:29:36.906 You know greater than 15 and then

NOTE Confidence: 0.911399722099304

00:29:36.906 --> 00:29:39.363 there are some other sort of fino

NOTE Confidence: 0.911399722099304

00:29:39.363 --> 00:29:40.955 copies of Hypertrophic Cardiomyopathy.

NOTE Confidence: 0.911399722099304

00:29:40.960 --> 00:29:43.040 Some people call them subtypes.

NOTE Confidence: 0.911399722099304

00:29:43.040 --> 00:29:43.936 Mitochondrial disease,

NOTE Confidence: 0.911399722099304

00:29:43.936 --> 00:29:44.832 syndromic diseases,

NOTE Confidence: 0.911399722099304

00:29:44.832 --> 00:29:46.624 infiltrative diseases like glycogen

NOTE Confidence: 0.911399722099304

00:29:46.624 --> 00:29:48.686 storage diseases that can cause

NOTE Confidence: 0.911399722099304

00:29:48.686 --> 00:29:49.430 hypertrophic cardiomyopathy

NOTE Confidence: 0.911399722099304

00:29:49.430 --> 00:29:50.918 like Physiology and imaging,

NOTE Confidence: 0.911399722099304

00:29:50.920 --> 00:29:53.410 but without being sort of the

NOTE Confidence: 0.911399722099304

00:29:53.410 --> 00:29:54.655 classic hypertrophic cardiomyopathy.

NOTE Confidence: 0.911399722099304

00:29:54.660 --> 00:29:57.558 So I'm looking for all that stuff.

NOTE Confidence: 0.911399722099304

00:29:57.560 --> 00:30:00.272 One of the big clues is if you

NOTE Confidence: 0.911399722099304

00:30:00.272 --> 00:30:02.088 see increased wall thickness

NOTE Confidence: 0.911399722099304

00:30:02.088 --> 00:30:04.196 but decreased wall motion,

NOTE Confidence: 0.911399722099304

00:30:04.200 --> 00:30:06.064 it's probably not straightforward

NOTE Confidence: 0.911399722099304

00:30:06.064 --> 00:30:07.928 hypertrophic cardiomyopathy and I've

NOTE Confidence: 0.911399722099304

00:30:07.928 --> 00:30:10.387 seen that mistake made before someone

NOTE Confidence: 0.911399722099304

00:30:10.387 --> 00:30:12.589 coming in with acute Sarcoid Oasys.

NOTE Confidence: 0.911399722099304

00:30:12.590 --> 00:30:14.138 Leading to inflammation.

NOTE Confidence: 0.911399722099304

00:30:14.138 --> 00:30:15.170 Severe hypertrophy,

NOTE Confidence: 0.911399722099304

00:30:15.170 --> 00:30:17.740 but with focal wall motion

NOTE Confidence: 0.911399722099304

00:30:17.740 --> 00:30:19.796 abnormality in that area.

NOTE Confidence: 0.911399722099304

00:30:19.800 --> 00:30:21.965 Given the diagnosis of Hypertrophic

NOTE Confidence: 0.911399722099304

00:30:21.965 --> 00:30:23.697 cardiomyopathy treated for as

NOTE Confidence: 0.911399722099304

00:30:23.697 --> 00:30:25.980 if hypertrophic cardiomyopathy,

NOTE Confidence: 0.911399722099304

00:30:25.980 --> 00:30:28.560 treated as if burnt out.

NOTE Confidence: 0.911399722099304

00:30:28.560 --> 00:30:29.964 Hypertrophic cardiomyopathy later

NOTE Confidence: 0.911399722099304

00:30:29.964 --> 00:30:31.836 with poorly functioning ventricle

NOTE Confidence: 0.911399722099304

00:30:31.836 --> 00:30:34.220 sent for heart transplantation.

NOTE Confidence: 0.911399722099304

00:30:34.220 --> 00:30:35.765 Diagnosis post transplant

NOTE Confidence: 0.911399722099304

00:30:35.765 --> 00:30:38.330 circling so that happens.

NOTE Confidence: 0.911399722099304

00:30:38.330 --> 00:30:39.442 But that's to say,

NOTE Confidence: 0.911399722099304

00:30:39.442 --> 00:30:41.110 like you can't just put your

NOTE Confidence: 0.911399722099304

00:30:41.173 --> 00:30:42.948 Blinders on and see thickness,

NOTE Confidence: 0.911399722099304

00:30:42.950 --> 00:30:44.798 and I get patients with fabreeze.

NOTE Confidence: 0.911399722099304

00:30:44.800 --> 00:30:47.230 Disease is one in about 1 in 500 patients

NOTE Confidence: 0.911399722099304

00:30:47.230 --> 00:30:48.799 referred by bridge overcrowding.

NOTE Confidence: 0.911399722099304

00:30:48.800 --> 00:30:50.032 Map of fabreeze disease

NOTE Confidence: 0.911399722099304

00:30:50.032 --> 00:30:51.264 amyloid much more common.

NOTE Confidence: 0.911399722099304

00:30:51.270 --> 00:30:53.062 You see it all the time people

NOTE Confidence: 0.911399722099304

00:30:53.062 --> 00:30:54.631 referred for HTM actually totally

NOTE Confidence: 0.911399722099304

00:30:54.631 --> 00:30:56.794 different treatment by the way, right?

NOTE Confidence: 0.911399722099304

00:30:56.794 --> 00:30:57.676 We know that.

NOTE Confidence: 0.911399722099304

00:30:57.676 --> 00:31:00.200 And then you're looking at the HL findings.

NOTE Confidence: 0.911399722099304

00:31:00.200 --> 00:31:01.740 They'll vote gradient mitral valve,

NOTE Confidence: 0.911399722099304

00:31:01.740 --> 00:31:02.661 the right ventricle.

NOTE Confidence: 0.911399722099304

00:31:02.661 --> 00:31:03.889 Whether there's an infusion,

NOTE Confidence: 0.911399722099304

00:31:03.890 --> 00:31:05.430 all the usual echo stuff.

NOTE Confidence: 0.781199991703033

00:31:06.220 --> 00:31:09.426 That's why you keep your differential broad.

NOTE Confidence: 0.781199991703033

00:31:09.430 --> 00:31:12.092 Yeah, could be sarcoid on pathology.

NOTE Confidence: 0.781199991703033

00:31:12.092 --> 00:31:15.490 No one wants to look like you to do it.

NOTE Confidence: 0.781199991703033

00:31:15.490 --> 00:31:18.130 Yeah wow, that is crazy. Yeah yeah, if

NOTE Confidence: 0.87654754290214

00:31:18.130 --> 00:31:20.890 you like so. I live on the Safari

NOTE Confidence: 0.87654754290214

00:31:20.890 --> 00:31:23.110 in Africa like that's where,

NOTE Confidence: 0.87654754290214

00:31:23.110 --> 00:31:24.860 so it's easy for Maine.

NOTE Confidence: 0.87654754290214

00:31:24.860 --> 00:31:26.948 I cursed myself out this space

NOTE Confidence: 0.87654754290214

00:31:26.948 --> 00:31:29.099 of practice where I I'm looking

NOTE Confidence: 0.87654754290214

00:31:29.099 --> 00:31:31.139 for the zebra all the time.

NOTE Confidence: 0.87654754290214

00:31:31.140 --> 00:31:32.880 'cause That's my comfort zone.

NOTE Confidence: 0.87654754290214

00:31:32.880 --> 00:31:35.664 That's why I got made fun of in

NOTE Confidence: 0.901830964618259

00:31:35.670 --> 00:31:36.934 residency that one time.

NOTE Confidence: 0.901830964618259

00:31:36.934 --> 00:31:39.040 I feel like you know, like doctors

NOTE Confidence: 0.901830964618259

00:31:39.040 --> 00:31:41.120 have this muscle in their skill is like

NOTE Confidence: 0.901830964618259

00:31:41.170 --> 00:31:42.870 when something doesn't make sense.

NOTE Confidence: 0.901830964618259

00:31:42.870 --> 00:31:45.134 You need to have that alarm that go

NOTE Confidence: 0.901830964618259

00:31:45.134 --> 00:31:47.611 off and be like I gotta stop and I

NOTE Confidence: 0.901830964618259

00:31:47.611 --> 00:31:50.117 gotta look at this a little bit harder.

NOTE Confidence: 0.901830964618259

00:31:50.120 --> 00:31:51.570 Yeah, what's the environment that

NOTE Confidence: 0.911922693252563

00:31:51.570 --> 00:31:53.600 allows you to do that? We don't

NOTE Confidence: 0.911922693252563

00:31:53.600 --> 00:31:55.630 really have an environment like that. You

NOTE Confidence: 0.911922693252563

00:31:55.630 --> 00:31:57.660 have to carve yourself out that environment.

NOTE Confidence: 0.911922693252563

00:31:57.660 --> 00:31:59.940 I mean, that's one of the things that

NOTE Confidence: 0.911922693252563

00:31:59.940 --> 00:32:02.006 you need to do as an individual.

NOTE Confidence: 0.911922693252563

00:32:02.010 --> 00:32:03.460 I think that's the key.

NOTE Confidence: 0.911922693252563

00:32:03.460 --> 00:32:05.518 If all the drivers in your practice

NOTE Confidence: 0.911922693252563

00:32:05.518 --> 00:32:07.186 environment are telling you, don't stop.

NOTE Confidence: 0.911922693252563

00:32:07.186 --> 00:32:08.526 Don't listen to that voice,

NOTE Confidence: 0.911922693252563

00:32:08.530 --> 00:32:10.078 then you're eventually going to Cave.

NOTE Confidence: 0.911922693252563

00:32:10.080 --> 00:32:11.886 Most people are going to Cave 'cause

NOTE Confidence: 0.911922693252563

00:32:11.886 --> 00:32:13.900 it's really hard, but if the drivers

NOTE Confidence: 0.911922693252563

00:32:13.900 --> 00:32:15.760 in your environment are telling you.

NOTE Confidence: 0.911922693252563

00:32:15.760 --> 00:32:16.888 Bonus, you found it,

NOTE Confidence: 0.911922693252563

00:32:16.888 --> 00:32:18.810 you didn't let that patient go by,

NOTE Confidence: 0.911922693252563

00:32:18.810 --> 00:32:20.190 you did the right thing.

NOTE Confidence: 0.911922693252563

00:32:20.190 --> 00:32:21.580 Then you will do that.

NOTE Confidence: 0.911922693252563

00:32:21.580 --> 00:32:23.519 I think that yeah we do that.

NOTE Confidence: 0.911922693252563

00:32:23.520 --> 00:32:24.905 I think we create environment

NOTE Confidence: 0.911922693252563

00:32:24.905 --> 00:32:26.560 where we do tell people hey,

NOTE Confidence: 0.911922693252563

00:32:26.560 --> 00:32:27.114 great job.

NOTE Confidence: 0.911922693252563

00:32:27.114 --> 00:32:28.776 You didn't make the wrong diagnosis,

NOTE Confidence: 0.911922693252563

00:32:28.780 --> 00:32:30.436 both in training and in practice,

NOTE Confidence: 0.911922693252563

00:32:30.440 --> 00:32:32.204 but you gotta watch out in modern

NOTE Confidence: 0.911922693252563

00:32:32.204 --> 00:32:33.875 Medison you can plug yourself into

NOTE Confidence: 0.911922693252563

00:32:33.875 --> 00:32:35.603 an environment where you might end

NOTE Confidence: 0.911922693252563

00:32:35.603 --> 00:32:37.635 up feeling like that's a tough thing

NOTE Confidence: 0.908439834912618

00:32:37.640 --> 00:32:39.320 to do. So

NOTE Confidence: 0.893550753593445

00:32:39.320 --> 00:32:41.944 we're going to actually take a pause here.

NOTE Confidence: 0.893550753593445

00:32:41.950 --> 00:32:44.246 Will break this episode into two parts,

NOTE Confidence: 0.893550753593445

00:32:44.250 --> 00:32:45.900 and so will stop here.

NOTE Confidence: 0.893550753593445

00:32:45.900 --> 00:32:47.846 In next time we'll be back with

NOTE Confidence: 0.893550753593445

00:32:47.846 --> 00:32:49.955 Doctor Jacobi to focus on management

NOTE Confidence: 0.893550753593445

00:32:49.955 --> 00:32:51.910 accounts like these patients. Thanks

NOTE Confidence: 0.819315612316132

00:32:51.910 --> 00:32:53.860 for listening to the moon liners.

NOTE Confidence: 0.819315612316132

00:32:53.860 --> 00:32:55.490 We'll see you next time.