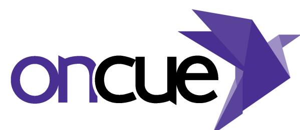
Swartz, Conrad 2018-08-10

Designation List Report

Swartz, Conrad	**2018-08-10**
Plaintiff Affirmatives	00:17:09
TOTAL RUN TIME	**00:17:09**



DESIGNATION	SOURCE	DURATION	ID
41:02 - 41:19	**Swartz, Conrad 2018-08-10**	00:01:30	SWAR2_PR.1

41:02 Q. From your perspective over time, from the first time
41:03 that Somatics started marketing its Thymatron in or about
41:04 1984 to the approximate 2004 time frame where you recall
41:05 writing the Propofol Interruption Method article dealing
41:06 with side effects, has your view of the side effects
41:07 related to ECT changed in that window of time, '84 to
41:08 2004?
41:09 A. Yes, it has.
41:10 Q. All right. When -- let's start with, then, the
41:11 approximate 1984 time frame.
41:12 What side effects did you believe existed in '84,
41:13 when you first started marketing the Thymatron?
41:14 A. I believe that acute confusional states, which I
41:15 called emergence delirium, would occur occasionally, and
41:16 patients would have some difficulty.
41:17 Even patients who did not have this emergence
41:18 delirium, some of them would have memory difficulties.
41:19 And these memory difficulties would fade in time.

DESIGNATION	SOURCE	DURATION	ID
42:16 - 43:01	**Swartz, Conrad 2018-08-10**	00:00:48	SWAR2_PR.2

42:16 Q. Fair to say that, at or about that time frame, you
42:17 did not believe, or have any reason to know, that there
42:18 were any long-term or permanent side effects related to
42:19 ECT?
42:20 A. That's correct; although, I had heard of individual
42:21 patients of -- in the medical literature or presenting at
42:22 meetings, complaining of persistent memory problems. But
42:23 we have this throughout psychiatry.
42:24 Memory problems are part of what it means to be a
42:25 psychiatric patient. Everyone has impaired memory,
43:01 impaired concentration.

DESIGNATION	SOURCE	DURATION	ID
44:08 - 44:12	**Swartz, Conrad 2018-08-10**	00:00:20	SWAR2_PR.3

44:08 After '84, was there some period of time where
44:09 additional side effects were believed by you to be
44:10 associated with ECT?
44:11 A. I read of people dying from it, but that has not been
44:12 my experience.

DESIGNATION	SOURCE	DURATION	ID
89:03 - 89:06	**Swartz, Conrad 2018-08-10**	00:00:17	SWAR2_PR.4

89:03 Q. Do you have any reason to believe that Somatics has

DESIGNATION	SOURCE			DURATION	ID
	89:04		ever advised the users of ECT devices of brain damage		
	89:05		associated with ECT?		
	89:06	A.	Not to my knowledge.		
120:25 - 121:13	**Swartz, Conrad 2018-08-10**			00:00:58	SWAR2_PR.5
	120:25	Q.	After Somatics became incorporated in '84 to market		
	121:01		the Thymatron device, and to the present, have you ever		
	121:02		made any efforts to accumulate a literature review		
	121:03		associated with long-term or permanent side effects		
	121:04		associated with ECT?		
	121:05	A.	No, I have not. And I am not aware of such a		
	121:06		literature.		
	121:07	Q.	Okay.		
	121:08	A.	If one -- an article had appeared, I do believe I		
	121:09		would have noticed it.		
	121:10	Q.	Just in the normal course of your custom, habit,		
	121:11		practice of being aware of literature that might address		
	121:12		ECT findings?		
	121:13	A.	Yes, sir.		
121:19 - 123:02	**Swartz, Conrad 2018-08-10**			00:02:43	SWAR2_PR.7
	121:19		In your custom and practice of literature review,		
	121:20		has any literature ever changed the practice of Somatics		
	121:21		in advising of the possibility of permanent or long-term		
	121:22		consequences associated with ECT?		
	121:23	A.	Maybe.		
	121:24	Q.	All right.		
	121:25	A.	I can tell you what I'm thinking. There was an		
	122:01		article that appeared about the use of caffeine in		
	122:02		animals receiving ECS. And what this article found was		
	122:03		that ECS with caffeine produced long-term structural		
	122:04		damage in animals, but the ECS alone did not. However,		
	122:05		the caffeine alone did also. And so, it -- this led me		
	122:06		to avoid advocating caffeine use at ECT. And I believe		
	122:07		we did not mention caffeine use in our user's manuals		
	122:08		because of just the concern about the general issue that		
	122:09		it had not been proven to be safe to my satisfaction.		
	122:10		That's my own judgment.		
	122:11	Q.	All right. I'm not sure I got all that. So, let me		
	122:12		follow up.		
	122:13		In terms of the caffeine-use-related journal		
	122:14		article that came to your attention, what was the		

DESIGNATION	SOURCE			DURATION	ID
	122:15		conclusion?		
	122:16	A.	The combination of very high dose caffeine with ECS		
	122:17		caused structural change in the brain, but the ECS alone		
	122:18		did not.		
	122:19	Q.	And did you or did you not make any changes in the		
	122:20		owner's manual disclosures in relation to the use of		
	122:21		caffeine and ECT, as a result of that article?		
	122:22	A.	I believe, as a result of that article, we avoided		
	122:23		mentioning using caffeine.		
	122:24	Q.	And you avoided mentioning using caffeine because		
	122:25		why?		
	123:01	A.	Because I wasn't satisfied that it was proven to be		
	123:02		safe.		
123:13 - 124:08	**Swartz, Conrad 2018-08-10**			00:01:19	SWAR2_PR.9
	123:13	Q.	The		
	123:14		journal article came to your attention. It addressed		
	123:15		caffeine use in -- with ECS in animals. It found a		
	123:16		finding of brain damage associated.		
	123:17		But that did not correspond to a change in your		
	123:18		owner's manual because why?		
	123:19	A.	Because it was in animals. And we weren't mentioning		
	123:20		it in our user's manual. I just didn't -- I didn't add		
	123:21		it to the user's manual to mention it, because I wasn't		
	123:22		satisfied that it had been established as safe.		
	123:23	Q.	All right. Now I think I got that. Have there ever		
	123:24		been any -- let me rephrase.		
	123:25		What approximate time was that, that you recall		
	124:01		being aware of a journal article that identified brain		
	124:02		damage in animals with association of caffeine with ECS		
	124:03		use?		
	124:04	A.	I can't recall, but I believe the author's name was		
	124:05		Ende, E-N-D-E.		
	124:06	Q.	All right. Do you recall if it was in the '80s or		
	124:07		the '90s?		
	124:08	A.	Probably the '90s.		
151:13 - 152:10	**Swartz, Conrad 2018-08-10**			00:01:48	SWAR2_PR.10
	151:13	Q.	In terms of the measurement of joules, how many		
	151:14		joules does -- or can ECT deliver to the brain?		
	151:15	A.	At 220 ohms impedance, it's up to 100 joules.		
	151:16	Q.	And how about volts?		

DESIGNATION	SOURCE			DURATION	ID
	151:17		How many volts are involved with ECT?		
	151:18	A.	Well, that depends on the impedance. The important		
	151:19		part is the current. You can get -- with an induction		
	151:20		coil, you can get a shock of many thousands of volts		
	151:21		without burning if the current is down. But with a		
	151:22		welder -- welding device you can melt steel at a few		
	151:23		volts if the current is high enough.		
	151:24	Q.	And so, how about in the application of ECT? What is		
	151:25		the voltage that is used?		
	152:01	A.	No specific voltage is set. The current is set.		
	152:02	Q.	And what's the variation of the current?		
	152:03	A.	The current is 900 milliamps flat.		
	152:04	Q.	Constant?		
	152:05	A.	Constant. Now, if the impedance goes high enough,		
	152:06		the current will start falling. I think it's around		
	152:07		400 ohms dynamic impedance the current starts falling, if		
	152:08		the impedance goes over about 400.		
	152:09		I am not -- I don't have it exactly, but it's		
	152:10		approximately 400, 420.		
169:15 - 169:18	**Swartz, Conrad 2018-08-10**			00:00:18	SWAR2_PR.11
	169:15	Q.	When was the last ECT-related study, that you're		
	169:16		aware of, that addressed the potential for long-term or		
	169:17		permanent side effects to be associated with ECT?		
	169:18	A.	I'm not aware of any.		
179:14 - 180:08	**Swartz, Conrad 2018-08-10**			00:01:22	SWAR2_PR.13
	179:14	Q.	And what, if anything, have you done to ever get		
	179:15		specific information that you can rely on for purposes of		
	179:16		concluding how many people who have ECT are going to have		
	179:17		long, persisting loss of memories or memory function?		
	179:18	A.	It's a very complex and difficult question to		
	179:19		determine because of the enormous incidents of		
	179:20		concentration and memory problems among psychiatric		
	179:21		patients of all kinds; schizophrenia, anxiety disorders,		
	179:22		and mood disorders, not the least of which results from		
	179:23		antipsychotic medications and benzodiazepines and		
	179:24		concurrent substance abuse.		
	179:25	Q.	So, do I understand that -- from your response that,		
	180:01		since most ECT patients have psychiatric issues, by		
	180:02		definition, one is unable to identify damage caused by		
	180:03		ECT?		

DESIGNATION	SOURCE	DURATION	ID
	180:04 A. It's subtle enough so that the answer is yes. 180:05 Q. Okay. 180:06 A. It is very difficult and complex to identify. Even 180:07 cigarette smoking has been proven to cause cognitive 180:08 dysfunction because of the carbon monoxide.		
180:21 - 180:25	**Swartz, Conrad 2018-08-10**	00:00:16	SWAR2_PR.14
	180:21 Q. Would you agree that just because there may 180:22 not be any observable structural brain changes, that that 180:23 is not a conclusive determiner that no brain damage has 180:24 occurred? 180:25 A. Theoretically.		
184:17 - 185:02	**Swartz, Conrad 2018-08-10**	00:00:44	SWAR2_PR.15
	184:17 Q. How do you control how far the brain region's 184:18 affected by the seizure? 184:19 A. You don't control them. You hope for a good 184:20 generalization through the brain. And, in fact, the -- 184:21 it's considered that the tachycardia that accompanies the 184:22 seizure reflects the brain stem back down in the neck, 184:23 which is about as far away from the stimulus electrodes 184:24 as you can get on the head. 184:25 Q. Other than ECT, are you aware of any other 185:01 application in medicine where a seizure is invited? 185:02 A. No.		
192:03 - 193:17	**Swartz, Conrad 2018-08-10**	00:03:04	SWAR2_PR.16
	192:03 Q. Is the view of Somatics that memory loss as a side 192:04 effect of ECT extends past six months? 192:05 A. I don't think that -- we don't have an official view. 192:06 Q. Do you -- 192:07 A. I think we understand that there can be some loss of 192:08 biographical memory. 192:09 Q. Forever? 192:10 A. Yes. 192:11 Q. And if doctors -- if you had read the study where 192:12 Dr. Reed and Ben-Tal conclude that persistent or 192:13 permanent memory loss occurs between 29 and 55 percent of 192:14 the time of ECT, would that information have changed your 192:15 view of whether or not Somatics should advise of those 192:16 risks associated with ECT? 192:17 A. Well, by itself, some personal memory loss is not 192:18 impairment.		

DESIGNATION	SOURCE	DURATION	ID
	192:19 Q. Sorry? 192:20 A. By itself, personal memory loss does not constitute 192:21 impairment. 192:22 So, the answer is no, it wouldn't change it. 192:23 Q. And what is it that you used to reach that 192:24 conclusion, that personal memory loss does not constitute 192:25 impairment? 193:01 A. Impairment means inability to take care of yourself 193:02 and your life. And if you've forgotten some details 193:03 about your children's telephone numbers and who you went 193:04 to school with in the fourth grade, well, that said, I'm 193:05 sorry, but it doesn't constitute impairment. 193:06 Q. Would you agree that the inability to form new 193:07 memories constitutes impairment? 193:08 A. Yes. 193:09 Q. Okay. Would you agree that, back in the '40s when 193:10 ECT was first being implemented, that the view then was 193:11 that ECT worked because it did cause brain damage and 193:12 memory loss? 193:13 A. Oh. The Germans used to say ECT works by killing off 193:14 the weak brain cells. But that's the kind of thing that 193:15 they used to say there in Germany, isn't it? So, it's 193:16 just an old theory, an old concept. 193:17 It doesn't apply to modern ECT.		
194:21 - 195:03	**Swartz, Conrad 2018-08-10**	00:00:49	SWAR2_PR.17
	194:21 Q. What would you define, if you would, as 194:22 non-memory-related cognitive aftereffects? 194:23 A. What other aspects of memory are -- of cognition are 194:24 there outside of memory. Well, there is learning. There 194:25 is executive function. There's attention and 195:01 concentration. There is understanding the rules of 195:02 social behavior. There's ability to speak, understanding 195:03 of language.		
213:08 - 213:15	**Swartz, Conrad 2018-08-10**	00:00:54	SWAR2_PR.18
	213:08 Q. Other than damage to the cells of the brain, what 213:09 other rationale do you have, if any, for the side effects 213:10 that do follow ECT, even short-term? 213:11 A. Well, I think it -- think of it as disruption, not 213:12 damage. It's -- the cells are not killed, but their 213:13 operation is temporarily impaired.		

DESIGNATION	SOURCE	DURATION	ID
	213:14 Q. Would that be like a bruise?		
	213:15 A. Okay. Something like a bruise.		

Plaintiff Affirmatives	00:17:09
TOTAL RUN TIME	**00:17:09**