Transcript Details
This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/clinicians-roundtable/cosmetic-neurology-and-the-extreme-makeover-for-the-brain/2959/

ReachMD
www.reachmd.com
info@reachmd.com
(866) 423-7849

Cosmetic Neurology and the Extreme Makeover for the Brain

Announcer:
This is Dr. Paul Shin with George Washington University Hospital in our nation's capital, Washington, DC, and you're listening to ReachMD. The channel for medical professionals.

Dr. Maurice Pickard:
Our segment could be called Extreme Makeover of the Brain. You're listening to ReachMD, the channel for medical professionals. Welcome to the clinician's roundtable. I'm your host, Dr. Maurice Pickard and joining me today is Dr. Anjan Chatterjee. Dr. Chatterjee is Professor of Psychiatry and neurology at The Center for Cognitive neuroscience at The University of Pennsylvania School of Medicine.

Thank you, very much, for joining us today.

Anjan Chatterjee:
Thank you for having me. A great pleasure.

Dr. Maurice Pickard:
To begin with, I'd like to just have you discuss a term that I believe you've coined, called cosmetic neurology.

Anjan Chatterjee:
Well, I coined this term in a paper that was published in 2004 in a journal called neurology, which is the Journal for the American Academy of neurology, and the reason I coined that term, or what it refer to was the use of medical technologies, in this case, mostly pharmacologic interventions in the setting of individuals that did not have a disease. So the idea was to possibly enhance their abilities, but the use of medications outside of the model that most physicians are used to, which is in the service of creating diseases.

Dr. Maurice Pickard:
That's right. The doctor's model is usually diagnosing, treating and prevention. Has this changed the model for physicians if they're asked to prescribe medications for the intellectually intact, to improve their cognitive function?

Anjan Chatterjee:
I think in some ways it does change the model but maybe not as much as it might appear at first blush. And I say that for two reasons. First is, that we have had, for close to a century, not quite but close to a century, of another cosmetic intervention, which is cosmetic surgery, which is well ensconced with the medical tradition right now. So there is a tradition of an intervention, in that case, surgical intervention usually, to enhance people, that for example, are not necessarily disfigured, by genetic defects or tumors, or invasive growths, that sort of thing. So there is a precedence for that already within the medical model.

The second is maybe a more subtle issue, which is in some arenas we are starting to get a sense that individual's quality of life is not directly correlated with the kind of biomarkers we tend to use in medicine, and just to give you two examples, we've started to realize that patients with multiple sclerosis may have plaques that show up on MRI scan for which they don't have symptoms. So you have a biomarker that is not necessarily associated with symptoms or patients with epilepsy that if you look at their own judgments of their quality of life, what they really want is to have no seizures. And the difference between say having five seizures or two seizures a month doesn't end up mattering very much.

It's a long and roundabout way to getting at the point, which is that once we start focusing on what I think most physicians want to, which is the quality of life of individuals, and you accept the notion that in many instances quality of life is only loosely correlated with pathology, Then it opens up the issue that what we're really after is people's quality of life, and why should that just be restricted to

people with disease.

Dr. Maurice Pickard:
To begin with then, some of the questions I would have for you is, safety. This is one of the first things that a physician like myself, and I am sure you have thought about, the drugs that we're using to improve cognitive function in a normal person, are we comfortable that it's a safe modality to be doing?

Anjan Chatterjee:
I think we're not completely comfortable. So we don't know what the long-term consequences of many of these medications are. We know that there are some short-term risks and some of the risks, even though they're small, are not trivial. So just an example, being the use of amphetamines to enhance attention and concentration, there is a risk of cardiac arrhythmias. It's not very high but it's real and with widespread use of this, if that should happen, certainly some people will have side effects in the short term that you would like to avoid.

And we have very little information of long-term effects. Having said that, I think this in my mind, is a practical issue and one that both patients, I don't know if we would call these people in this situation, if we would even call them patients or consumers, and physicians would need to struggle with and need to think about.

In my mind, it's not an ethical issue, per se, because it is in everybody's interest to have these medications be as safe as possible.

Dr. Maurice Pickard:
I remember, maybe 10-15 years ago, patients coming in asking for beta-blockers to allow them to rehearse for a famous orchestra in our city, and people would audition and want beta-blockers. I also had executives who made presentations and who wanted to avoid flushing or perspiring and asked for beta-blockers, and my answer was always about the side effects of hypotension. How do we respond to this now, as this seems to become more and more frequent?

Anjan Chatterjee:
Well, I think what physicians will end up doing, or should end up doing, is what we've always done, which is list for people the potential side effects, as we understand them. Going back to my issue of whether it is an ethical issue, I think it is an ethical issue if information about the potential side effects are withheld. That clearly becomes an ethical issue.

But as you did with the example of beta-blockers, it is the responsibility of physicians to have people be informed of the potential side effects. Now, I don't travel in the music world, but at least I'm told that beta-blockers continue to be used very widely in that arena, in addition to executives. I've also been told and have no personal confirmation of this, but I have also been told that golfers also use beta-blockers, that it helps particularly with putting, where slight tremors can actually affect their putt.

So my sense is beta-blockers for those kinds of situations are used to some extent, then I would hope that physicians are letting their patients know the potential side effects to them, in addition to hypotension, including symptoms that lean people towards depression.

Dr. Maurice Pickard:
I'm not a golfer but I know how golfers appear, or feel about their game, and it's probably a risk-reward benefit that maybe golfers are willing to take.

If you're just joining us, you're listening to the clinician's roundtable on ReachMD, the channel for medical professionals. I'm your host, Dr. Maurice Pickard, and I'm speaking with Dr. Anjan Chatterjee, and we're discussing the concept of cosmetic neurology.

There's always a subject of distributive justice. Will these enhancements become available only to a limited population, that is those people who can afford them? Some of the medications are extremely expensive and so the gap that may exist between one part of our population that can afford this and those that are the underserved will become even greater. Is that an ethical issue?

Anjan Chatterjee:
That is absolutely an ethical issue. I think it's an ethical issue that is not confined to this particular form of intervention in which physicians will likely play a role. For purposes of argument, let's say these medications do help and do help where it makes people smarter, they make people happier, maybe more alert, move better, it's likely that these are not going to be covered under people's pharmacy plans or insurance companies, and that they would have to pay out of pocket. And so clearly, there would be an uneven distribution of who could avail themselves to these medications.

I think that is absolutely an ethical issue, however I think it needs to be placed in the context of what is a more widespread issue of mal-distribution of access, both to things that direct medical care, but also to things like nutrition and education that have a huge impact on our wellbeing and our brain functions.

So, I live in Philadelphia, and for some time, worked for a nonprofit organization in a relatively poor part of the city, in the north part of the city, there for usually a boy, for a kid to graduate high school is considered a real success. On the other hand, maybe a 20-minute drive from there is the Philadelphia mainline which is one of the wealthiest suburbs in the country, virtually every kid there is taking SAT preparatory courses to get into the best college that they possibly can.

Since education has a huge impact on our cognitive abilities and how we end up living our lives past high school, we already see that there's a huge mal-distribution, I would suggest that these medications, again should they work, that they will be disproportionately available to those with resources. But it's in the context of massive disproportionate issues of distribution that we already have.

Dr. Maurice Pickard:
I certainly realize there is much bigger issues that have to do with the underserved than what we are talking about today. This brings up an interesting point, though. When these students from the mainline take their SATs or if they're interested in being in our profession, take MCATs, should there be an asterisks after their scores, just like homerun hitters that are now on the front page of sport's pages and have their homerun titles total numbers questioned, we're going to see asterisks after them. Fortunately, none of them are in Chicago or in Philadelphia, but should see an asterisk after those students who take enhancing drugs as opposed to those that don't have this privilege?

Anjan Chatterjee:
Well, I think you can ask the question of should we have asterisks next to people who have taken preparatory courses versus those that haven't. You know, I think there is some value to that. I'm hard pressed to see how we would go about regulating this and actually determining who was taking these medications and who wasn't. It's hard enough to do it for athletes. Imagine trying to do this for every high school student who is taking standardized tests, let alone pre-professional tests.

Dr. Maurice Pickard:
You know, I think that's a good thing. How are we going to regulate this? I can see big Pharm becoming involved and going directly to the client or customer, certainly again, using the word patient is a little difficult, in suggesting this type of medication for parents who have children or certainly with the baby boomers now entering into the phase of aging, where normal memory loss takes place, how are we going to deal with the massive amounts of requests that are going to come our way…our way meaning the private physician or the physician in practice, how is he going to be prepared to deal with direct Pharm going to the general public and advertising these kinds of mediations?

Anjan Chatterjee:
This is a real issue and it in part was what motivated my writing the paper that we talked about earlier in the segment which was published in 2004, and that was published in a physicians' journal rather than in a traditional ethical journal that devotes itself to ethics, precisely because of the issue you raise, which is, physicians are going to be at the front line of this and they're going to have to deal with it if they aren't already. And as you say, the demand for this will continue to grow as the baby boomers get older, and as advertising drives the demand. I think that undoubtedly will happen. And I think there's no easy answer to this.

Individual physicians have their own opinions on what they should or shouldn't do and I suspect have been dealing with these concerns based on their own principles. So for example, as you mentioned, you've encountered people, musicians and executives that have asked for beta-blockers for indications that are not in the realm of what we normally think of as treating disease. I think that will happen more and more often.

I think the issues are there aren't easy solutions to this and what part of my hope is, is that papers, writing about this and you kinds of shows, would generate enough interest that ultimately institutional bodies like the American Academy of Neurology or American Medical Association, would come out with things like practice guidelines that individual physicians could at least refer to whether or not they end up adhering to them by the letter, but that there would be some norms established, social norms for how to deal with these issues established by institutions.

Dr. Maurice Pickard:
I want to thank Dr. Chatterjee. We've been talking about a new problem that doctors are going to face. They thought that their plate was already full. I think that they're going to have to think about becoming advocates and setting guidelines within their own private practices, about how to deal with enhancing drugs to people who are basically normal.

Again, I'd like to thank you for being our guest and we've been discussing cosmetic neurology.

I'm Dr. Maurice Pickard, and you've been listening to the clinician's roundtable on ReachMD, the channel for medical professionals.

To comment or listen to our full library of podcasts, visit us at ReachMd.com. Thank you for listening.