Best Science (BS) Medicine Podcast: Getting Higher than a Kite on Medical Cannabinoids

https://therapeuticseducation.org/bs-medicine-podcast

The “Best Science (BS) Medicine Podcast” is a popular medical podcast that delves into the best available evidence to inform rational patient treatment in the primary care setting. In educating both patients and healthcare professionals, the podcast strives to enable patients to engage in shared and informed decision making.

The podcast is hosted by the Therapeutics Education Collaboration and presented by Dr James McCormack, a pharmacist and professor in the Department of Pharmaceutical Sciences at the University of British Columbia, and Dr Michael Allen, a family physician and professor in the Department of Family Medicine at the University of Alberta. Healthcare providers themselves, the podcast hosts seek to critically evaluate the evidence and present it in a succinct manner to time-scarce individuals in the podcast medium. With 378 episodes to date, these podcasting veterans have covered a wide range of topics since their first episode in 2008. Most episodes focus on 1 particular medical issue (eg, obesity, anxiety, back pain), interspersed with episodes dedicated to wide-ranging listener questions. Some topics are covered in 1 episode, while others require a 2- to 4-episode series. Medical cannabinoids were recently covered in a 4-part series, “Getting Higher than a Kite on Medical Cannabinoids.” Medical cannabinoid use is a controversial topic, and the self-described “mythbusters” of drug therapy found medical cannabinoids to be promoted for a variety of conditions, even with a lack of high-level research to support their use. In this series they sought to determine exactly what was supported by the data.

The series begins by defining medical cannabinoids (medical marijuana and pharmaceutical cannabinoids) and the various routes of administration. Over the course of the series, the evidence for medical cannabinoid use is discussed and recommendations are made accordingly. The presenters and their colleagues conducted systematic reviews of randomized controlled trials (RCTs)—essentially meta-analyses of RCTs. Owing to the quality of evidence available, they focused on 4 clinical areas: pain, spasticity, nausea and vomiting, and adverse effects.

The hosts conclude that the use of medical marijuana is not supported by the evidence and recommend only very limited pharmaceutical cannabinoid use, in general. They suggest that use be limited to palliative and end-of-life pain, neuro-pathic pain, chemotherapy-induced nausea and vomiting, and spasticity due to multiple sclerosis or spinal cord injury, and almost never as a first- or second-line treatment. Adverse events (side effects) are significantly higher for cannabinoids compared with placebo, and because many studies enrolled patients with a history of cannabinoid use, the benefit of intervention may be exaggerated, and the number of adverse events is almost certainly higher than currently suggested by the data. A corresponding research article and clinical practice guideline were published in a peer-reviewed journal, supporting the legitimacy of the claims and associated recommendations made in this cannabinoid series.

The hosts inject humor to the conversation (eg, suggesting that certain side effects such as “getting high” and euphoria may not be viewed negatively by all patients) to bring a more casual tone to their discussion of the evidence, engaging the audience even as the terminology becomes more technical as the details of clinical trials are discussed. For a listener not adept with clinical trial terminology, it may be difficult to fully comprehend on first listen, but with a few quick online searches, one can quickly get up to speed.

I found this series to be highly informative, well researched, and light enough to digest on an evening stroll. It may serve as a valuable resource in decision making for patient care.

To learn more, visit therapeuticseducation.org or subscribe to the podcast on iTunes or Podcast Addict (Android).

Reviewer: Hazel O’Connor, PhD

Hazel O’Connor is an R&D Scientist at Sciteck in Asheville, North Carolina.

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Organ Donation in Japan: A Medical Anthropological Study

Maria-Keiko Yasuoka

Lanham, MD: Lexington Books, 2015; Hardcover, 186 pages, $89.00

Although Japan boasts one of the finest health care systems in the world, organ transplants are far less common there than elsewhere. Many types of Japanese religious belief abhor the mutilation of the body, and while Japan was home to one of the world’s first heart transplants, it was a high-profile failure that raised serious ethical questions and led to a 30-year ban on organ transplants from the brain dead. In her book Organ Donation in Japan: A Medical Anthropological Study, Maria-Keiko Yasuoka explores Japanese feelings toward organ transplantation.
through in-depth interviews with practitioners, the family members of donors, and the recipients themselves. These interviews make up the core of the book, and they are by turns touching and harrowing. Most of the interviewees’ reactions to their experiences are universal. Although the process is grueling for everyone involved, recipients are deeply grateful for a new chance at life, while those who make transplants possible are proud to provide that chance. Some of their reactions may be more surprising to non-Japanese readers, and these are explored in fascinating depth. Some recipients hide their experiences because they face disapproval so extreme that they may be considered cannibals. The paucity of donated organs in Japan means that donors and their families have enormous power, eclipsing that of practitioners, who are used to playing a far more paternalistic role than in other countries. Finally, in a culture in which mutual exchanges of gifts play an outsized role, receiving a gift of life that can never be repaid can leave organ recipients with a sense of obligation that is impossible to expiate.

This obligation leads interviewees to consider organ transplantation a form of “rebirthable life,” the key concept in Yasuoka’s analysis. Donors’ families speak of them as “missing children” who live on inside organ recipients’ bodies, and some even avoid getting to know recipients because hearing of their deaths would mean hearing that their loved one has died completely. Recipients describe deeply personal relationships with donors they have never met, often to the point of feeling obligated to live as long as possible to keep the donor’s organ alive. Some even describe taking their donor’s wishes into consideration when making decisions.

As the title states, Yasuoka’s approach is rooted in anthropology, so her focus is on exploring the thoughts of participants in the Japanese organ transplant system on their own terms. This may disappoint readers who desire a well-organized introduction to the medical and legal foundations of that system. Even by her own standards, the author is not always successful. Because so few transplants have taken place in Japan, she has had no choice but to recycle a small number of interviews in a way that can be repetitive, and additional material on Japanese funeral practices is enlightening but ultimately irrelevant. Furthermore, the clarity and depth with which the author explains her conceptual framework doesn’t strike me as entirely satisfying.

Still, this book provides a penetrating and affecting glimpse at the human side of health care in Japan. For those of us familiar with that field, it provides many valuable insights into a controversial and high-profile issue. Other readers will, at the very least, find it intriguing and thought-provoking.

Reviewer: David Newby

David Newby is a Japanese translator and medical writer in Philadelphia, Pennsylvania.

**Immunity: How Elie Metchnikoff Changed the Course of Modern Medicine**

* Luba Vikhanski  

He was lauded as the father of innate immunity. News of his experiments graced the front pages of newspapers worldwide. In 1911, he was named one of the world’s greatest men. Yet 50 years after his death, Nobel-laureate scientist Elie Metchnikoff had fallen into obscurity.

In the mid-1800s, infectious diseases such as typhus, cholera, and tuberculosis devastated cities across Europe. By the 1880s, new hope arose following vaccinations that successfully provided immunity against anthrax. However, the mechanism by which immunity was created remained a mystery.

As a Russian zoologist, Metchnikoff began questioning why some people were more susceptible to life-threatening disease than others. In transparent invertebrates, he injected a number of materials—milk, blood, dyes, food, germs—and watched under a microscope as the intruding particles were surrounded and often engulfed by wandering cells. Contrary to most physicians of the time, Metchnikoff became convinced that these cells were part of an active defense system present in all living beings, even humans. In 1883, he presented his theory of innate immunity, which described the immune system with eerie accuracy. When met with scathing criticism, Metchnikoff stubbornly sought more evidence to defend his theory. For this work, he was awarded the 1908 Nobel Prize in Medicine jointly with his rival, Paul Ehrlich.

At the Pasteur Institute in Paris, Metchnikoff founded the field of gerontology. Believing diet could improve health, he prescribed “sour milk” to cultivate healthy gut microbes and prolong life. This research pioneered probiotics and attracted enormous public attention, eventually launching the yogurt industry. However, these longevity theories were ridiculed by critics. In his final days, he agonized over the fate of his theories.

After his death, Metchnikoff faded into obscurity everywhere except his homeland, where Soviet propaganda had exalted him as a national hero. When Luba Vikhanski, the child of Soviet dissenters, first learned about Metchnikoff, she assumed he was a fake. She was surprised when, years later while working as a science writer, he was recommended to her.