“The immense variability of human tooth anatomy”

Interview with Dr Craig Barrington about his technique for capturing high-definition endodontic images

Author: Fred Michmershuizen, DTI

With his high-definition photography of complex root canal systems, Dr Craig Barrington, who practices dentistry in Waxahachie, Texas, is developing quite a name for himself. Just check out his presence on Facebook, at craiggbarringtondds. In an interview with DTI, Barrington talks about how he captures these high-definition endodontic images and how he uses them to increase his knowledge and help improve the level of care he provides to his patients.

DTI: Please tell our readers a little bit about yourself and your dental practice.

Dr Craig Barrington: I graduated Summa Cum Laude from the University of Texas Health Science Center in San Antonio in 1996. I am a general dentist in Waxahachie, Texas. I have been in my current location for 20 years.

What do you like best about practicing dentistry?

I most enjoy the science, the biology and having a front-row seat in and around the ability to interact with, affect and watch the human body function and heal. I appreciate the ability to solve problems and the ability to work on problems that are yet to be solved. I like being a part of a “past, present and future” continuum that is the overall profession of dentistry. I enjoy having the ability to affect an individual person, from patient to fellow practitioner to dental student, all the way up to having the ability to have a positive effect on humanity across the globe.

Who influenced you most in your career?

First, I would thank Dr Joel B. Alexander. He was an endodontic professor when I was in dental school who encouraged and taught the value of recalling your cases in order to assess your treatment outcomes.
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Secondly, I would thank Dr Terry Pannkuk. After much awareness, pursuit of and concentration on the topic of mentorship, I certainly believe he is the best doctor alive today. He has done much for our profession from a philosophical standpoint to the actualities of clinical healthcare. He sees the value in this tooth clearing and diaphonization project I am involved in and consistently has provided more support and encouragement than anyone else. He has kept me motivated even if it is just by simply saying “wow, that result is amazing”. I can’t say enough about what he has done for me personally or in my career as my friend and mentor. I continue to learn from him daily and I hope that somewhere along the way, I reciprocate some of the support he has given me over the years.

I could change to improve my outcomes. It was via the internet that I met Dr Arnaldo Casteallucci. After the interactions we had, I saw the cover of his textbook.

The tooth on the cover put me in awe. This was the first “cleared tooth” I had ever seen. It is from there that my interest in clearing teeth originated. I just had to figure out what was going on and how and why it worked. Fifteen years later, I am still manipulating processes in the diaphonization of human teeth in search of the “answers”. I have a patent pending in the clearing process, and the knowledge it has provided has become one of the most valuable tools in pre-operative and post-operative evaluation of the internal anatomy of human teeth.

You have become known for your high-definition photography of the root canal anatomy. How did you become interested in this area?

That too goes back to Dr Alexander and Dr Pannkuk. Both of these doctors influenced me to recall my work in endodontics and truly take a scientific approach to the question of whether endodontics actually works and whether it actually works in my hands. After recalling many of my own cases, I started to see failures and problems that I was not satisfied with. I started to postoperatively evaluate my work and found that there were clinical aspects

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Can you tell our readers a little bit about how you go about capturing these images? It must take some technical skill.

The photography is actually not difficult. It is oil immersion oblique illumination light microscopy, which has been done in histology labs for years. It is, however, a new realization in this area for dentistry. In dentistry, we are familiar with the study of microscopic histologic sections. Teeth, on the other hand, are gross histologic specimens that can understandably be seen via the naked eye; however, viewing of the internal anatomic structures is greatly
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Dr Craig Barrington uses oil immersion oblique illumination light microscopy to capture high-resolution images of root canal anatomy.

All images provided by Dr Craig Barrington.

enhanced with microscopic evaluation. Any photographs of the teeth I work with are simply obtained through my “artistic” arrangement of the specimen in either a visually interesting position or in what I would consider an educational interpretation that I think would most benefit the viewer of the photograph.

What have you learned most by taking these root canal photographs?

As Napoleon Hill said: “Whatever your mind can conceive and believe, it can achieve.”

Where I sit today in my understanding of tooth clearing and diaphonization, I at first thought was never possible. It started as a simple question, then the development and realization of a goal. The process has been consistently evolving and delivering information and results ever since.

Today, I see characteristics of the internal anatomy of human teeth that I never thought possible or knew existed. Visualizing the immense variability of human tooth anatomy has changed my clinical practices and improved my clinical results, which benefits the patients I treat.

Do you perform endodontic therapy yourself or do you typically refer cases out?

I do all of my own endodontic treatments in my office. It has taken me years to identify the area of dentistry that I love. Perhaps one day I will take the necessary steps to specialize, but life is currently focused on my family and my children.

Is there anything you would like to see changed about the way dentistry is practiced today?

Absolutely! More than you can imagine or can be covered in this session. In short, we need to work on our ethical standards within the profession itself and move back toward being true, real doctors over the business-focused patient treatment we are seeing overwhelm the practice environment today. The actual care of the patient is always in competition with and in direct contrast to the business and profit. We have to get back to patient-centered practices. The profits are there in mass quantities if we can just take the time to follow our rolls as doctors.

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Is there anything you would like to add?

I am respectfully honored by this opportunity, your questions and in you finding significance in this work of mine. Thank you!

contact

Dr Craig Barrington received his DDS from the University of Texas Health Science Center San Antonio in 1996 and is a member of Omicron Kappa Upsilon. He is also an associate member of the American Academy of Endodontists. He maintains a practice in Waxahachie, Texas. He has written various articles and publications on the dental operating microscope in general dentistry. For comments, questions or presentation requests, please contact Barrington at cbdds002@yahoo.com.

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