

View from the Chairside: An Anatomical Approach to Endodontic Access – Dr. Andrew Moncarz

Chiraz: Hello and welcome. Today, I have the pleasure to welcome Dr. Andrew Moncarz. He's an endodontist in Toronto and he is here to share with us a good portion of his experience being an endodontist, share a few tips and advice on how to deal with complex cases endodontically. So, Dr. Moncarz, thank you very much for taking the time to speak with me today and welcome to this conversation.

Dr. Moncarz: I appreciate the opportunity to be here. So, I was asked to do this. That is not my picture behind me. I'm sitting in the Office of Dr Paul Belzycki, who is a known personality here on CDA Oasis. What I might want to discuss, and it came down to two very specific things. So, the first was this idea of particularly for a dentist who really offers comprehensive care to his patients, like how, not our friendship, but our professional relationship, the tenants of that, sort of how that interaction works. And so, what I'll be talking about a little bit, from my perspective, are some of the reasons why a general dentist might wish to consult with a specialist on a particular case. And then very specifically, you know, Paul sharing with you this comprehensive treatment of the patient that I was part of in 2007. And so, he had asked me, he sort of said, how did you do that? And it's not an easy thing to talk about, but to share a little bit of my thought process with regards to some of the technical aspects of that endodontic treatment.

Chiraz: All right, so shall we go and see the presentation?

Dr. Moncarz: That would be great.

Dr. Moncarz: So good afternoon. My name is Drew Moncarz. It's my pleasure to be here today to offer some commentary, a different perspective on this case. I graduated from University of Toronto from the Faculty of Dentistry in 1999 after dental school, I did a two-year training program in dental anesthesia in New York City. While I was a dental student, I thought that the combination of Endo and anesthesia would be novel and would be of benefit to patient care. So, after anesthesia I came back to Toronto, did the Endo program here and graduated in 2004. In 2005, I set up my private practice and as Paul alluded to in his story, I called him up and I came across the street with some Chinese food from the food court in my building. And, we got to know each other. And so here we are now 13 years later, I walked across today and I'm happy to be here. There's a tremendous amount of work that goes into these presentations. So, thank you to Paul and thank you to Chiraz for the opportunity to be a part of things.

Dr. Moncarz: What I wanted to review a little bit was, just from my perspective, why a general dentist may wish to consider referral to consult with a specialist. And then as I

alluded to afterwards, we'll talk a little bit about the treatment considerations for this particular case.

Dr. Moncarz: So, I get referrals for many different reasons. Sometimes they're very straightforward, such as this is an easy endo, but the patient has claustrophobia and can't tolerate the rubber dam. Please put the patient to sleep and render the root canal treatment. And other times there are issues that are more complex issues related to diagnosis, such as is a particular radiographic finding of endodontic origin? Is a particular soft tissue finding of endodontic origin? Is the patient's pain complaint of odontogenic origin? And I'll show you a case in a minute. The other area that we're asked to consult in as endodontists, is prognosis, meaning that in an age of comprehensive treatment planning, I think it's to the patient's and the dentist benefit to have an idea of what the outcome, the survival, and the lifespan of a tooth might be. So, we have meaningful discussions with dentists with whom I work about the predictability of treatment, the outcome of treatment, what the likely survival prognostically for a given tooth is; and how that might impact on the treatment plan.

Dr. Moncarz: And, then the final reason relates to the specific case that we'll be talking about today ([Link to Dr. Belzycki's case presentation](#)), has to do with risk management, the patient's experience, the patient's anatomical complications, and any implications in case of an adverse outcome. So, you know, it's an interesting thing for me. My father is an oral surgeon here in Toronto and the types of referrals or considerations he gets are not dissimilar to those for which a dentist may refer a patient. For example, a dentist may refer to an oral surgeon to see if a patient's pain is related to wisdom teeth, to explore what the considerations for placement of an implant are, to check the prognosis of placing an implant in this site; or for risk management, obviously if there's a risk of paresthesia associated with an extraction or a complex extraction, that would make sense to have that risk mitigated with the extraction performed by a specialist. So, the interaction is not dissimilar.

Dr. Moncarz: So, I just, I have two cases here that, that came across my office recently. And so, one was a referral from a great office, excellent dentist. And the question was: "Drew, what's that thing on the gums?" So, this is the radiograph. I did not perform the endodontic treatment of tooth number 1.7. Basically, the patient presented with this on the gums; and if we go back to the clinical testing, tooth 1.5 had normal response to cold, tooth 1.6 had a normal response to cold, tooth 1.7 had no response to cold. The teeth were basically asymptomatic. There was no associated probing depth with any of the teeth and the periapical bone surrounding the tooth number 1.7 was normal. So, what I could tell the patient from an endodontic perspective is: "I don't think this thing on the gums is coming from your teeth."

Dr. Moncarz: But that's not really what the patient wanted to hear. That's great that we ruled out that they don't need root canal treatment of tooth 1.6 or revision root canal treatment of 1.7. But, really, they wanted to know what is this thing the dentist wanted to know? And, so I forwarded the images along to an oral pathologist and a periodontist. And in my mind, I thought that maybe this was either inflammatory or viral, maybe it was a papilloma; and I don't really know a lot about soft tissue lesions. So, I in fact referred the patient's images on and the diagnosis was pyogenic Granuloma, which is an inflammatory reaction of the soft tissues due to chronic irritation and there must have been an issue related to the contact. So, it was just an interesting thing to almost be the intermediary for the diagnosis of this patient's care.

Dr. Moncarz: I'll go onto another one now. As I alluded to in the age of comprehensive treatment planning, what we want to provide for patients are functional and aesthetic long-term treatment results. I was forwarded this image and the dentist said: "Look, Drew, what, what do you think is going on here? And so, what we see is with tooth number 4.6, we see that the tooth is restored with a large core; we see that there is an active post that's not really actively engaged. We see in fact that the tooth has had on the distal root previous apicoectomy and retro filling. Endodontic treatment here and really the area of concern was this; and it's interesting that we're talking a little bit about external cervical resorption because this is in fact the case that that Paul and I treated together back in 2007.

Dr. Moncarz: So, there are implications here. I mean, what do you say to the patient? "Well, you had an apicoectomy here, there's a large core. I don't know if this is leaking, do we retreat this? Should we take both teeth out and do two implants and what are we going to do with this?" And I'm not going to go into too much detail except to say that the periapical bone here is normal; and ultimately the recommendation was to place a crown on the 4.6 and to monitor the 4.7 because there's no further predictable treatment that will eliminate this resorptive process. It's extended too far down the root. So, ultimately, the patient was advised that this tooth will be lost, the timeline is uncertain, and that they may or may not wish to have the tooth replaced at a later time.

Dr. Moncarz: And so, from my perspective, in neither case was the dentist saying: "You know, do the endo." They were saying: "Look, we don't know what's going on, can you help us to determine what might be going on so that we can provide the best patient care." And really that's what I enjoy. We enjoy the diagnostic challenge and to be a part of the treatment planning and then ultimately the treatment process.

Dr. Moncarz: What we have found very, very helpful in working with the dental interns (I'm on staff at Mount Sinai hospital) is to help them to stratify risk; and we use a modified version of this form. But I just wanted to make the CDA viewership

aware of this document. And it's the AAE Case Difficulty Assessment Form. And what's very interesting is that if you go onto the he website, it says particularly and special thanks to the CAE for their contribution to this form. Then, I went to the CAE website and we don't actually have a case assessment form. So, at some point, I guess some of the Canadian endodontists assisted in the development of this form.

Dr. Moncarz: And it is basically a flow chart. It's available on the AEC website. In a very organized way, the form takes the treatment provider through the considerations that they might encounter and might not immediately be aware of when looking or reviewing a patient's radiograph to help them stratify the difficulty and the risk involved in the case. I just wanted to bring this as a tool and many young dentists know about this because a modified version is used in the faculty of Dentistry at U of T and at Mount Sinai in the dental clinic. The form helps dentists and young dentists understand where to draw that line, where they should be comfortable treating and where they should really say: "This is beyond my comfort level; this is beyond my scope of practice for x, y, and zed reasons and it is for this reason that I am referring you to the specialist."

Dr. Moncarz: So, I'm just going to show you a case that I think illustrates a few interesting points. So, when Paul approached me and said, look, I want to talk about this case. I want you to talk specifically about this case and your approach in this case. In a way, it sort of doesn't matter because my approach is always the same. If we have a philosophy of instrumentation with a view to being able to irrigate and then to obturate with a view to being able to debride or disinfect the canal system to either prevent or treat apical periodontitis, then you sort of don't have to think about it.

Dr. Moncarz: And so here we are now 11 years later. And what's nice about this slide is that it illustrates the contemporary thoughts in endodontic access and shaping versus something that's a little more classic. Again, the intent of this is not to show everyone how good the white stripes are. It really is for educational purposes to try to help you when you're approaching a case to be able to navigate some of the more complex anatomy. And so, again, what I've tried to do in this case, as much as possible, is to eliminate the dentinal triangle. And yet it's certainly narrower than it was in the case from 2007. But the difference between this and this: the reason that the dentist struggled right here is that they can see that they were having trouble getting into the canal; that basically the orifice enters from the access in a very abrupt angle.

Dr. Moncarz: Whereas here what I tried to do is to just get it to flow in, so that when you pass the instrument on the mesial wall, in the Mesial buccal line angle of an upper 6, that the line angle itself guides the file into the orifice. And again, what we try to do is to get into the apical half of the canal system and we can pre-enlarge a

little bit. So, it's the idea that if you're working through a very small hole, it's very, very difficult to navigate with small instruments. But if you pre-enlarge, if you open things up a little bit gently with a view to not blocking yourself out, what that allows is with each successive wave, it allows you to use your small instruments, 8, 10. I like the 12 instruments. So, this is an instrument from [inaudible], it's available from Endotech, they're a Canadian company in Halifax. The 12 file is a very nice instrument because if you think about it: the difference between a 10 file and a 15 file, although it's 0.05 millimeters, in fact the 15 file is 50% larger in diameter. And that's why we struggle sometimes in Endo. The 8 goes, the 10 goes, the 15 doesn't go and then the 10 doesn't go. Whereas if we can transition, if we can blend those small shapes initially, then the 15 file tends to go a little bit more smoothly.

Dr. Moncarz: And really at the end of the day, I kind of do it the same way that we teach the dental students: 8, 10, in my case 12, 15, 20; irrigate back within eight file eight, 10, 12, 15, 20. And what we're trying to do each time is to move to move everything coronally: we don't want to get blocked out. In a vital case, what's working against us is that histologically the pulp is more collagenous in the apical third of the tooth; it's more vascular in the coronal half and it gets sort of gummy and collagenous in the apical third; so, it's not a bad idea to use a viscous EDTA Gel, like a file lube on your small hand instruments in order to gently work your way up.

Dr. Moncarz: And what we do is a number of successive step-backs with a view to getting into the apical third. So, in a way we do the root canal treatment twice. We do root canal treatment of the coronal portion of the canal system, and then we do root canal treatment of the apical portion. What's validating, what's wonderful about endodontic treatment is that it's very gratifying to get a final radiograph and to see white stripes that validate hard work and what we infer is that the canal system is shaped and sealed and that endodontic treatment in general carries a very high prognosis. And so that's the good news. The bad news with endodontic treatment is that it is all contingent on the steps that precede it, so if an instrument gets stuck, if we retain a fragment of a file in step 4 during instrumentation, that impacts on our ability to complete the debridement, on our ability to seal the canal system, potentially impacts on the prognosis, and it certainly contributes to our anxiety.

Dr. Moncarz: And so, it's both a positive and a negative thing that everything in endodontics is contingent on the step before it. And when I teach us, what I try to tell people is, and this is my final thought, is people say: "Well, how do you know you're done? How do you know that you're ready to move on to the next step?" Basically, you know that you're ready to move on to the next step when the preceding step is complete, and you know your step is complete when you're ready to move on to the next step. So, I hope that I've given you a little bit of food for thought both in terms of philosophically and on the role of specialists in



the dental ecosystem with regards to diagnosis and management of potential complications as well as a bit of food for thought regarding shaping a complex canal system.