419 – Shockwave Therapy

With Steven Bruce and James Woledge

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Steven (00:00:00):

In this evening's shown we are looking once again at shockwave therapy. My guest, James Woledge has brought in a number of toys to play with and we've given him a real shoulder patient to experiment on. So James, welcome back. Great to have you here.

It's been about 18 months since you were last in here, so what's changed in all that time? Don't say nothing.

James (00:00:45):

No, no, no. I think there's been some interesting debates about some of the science behind it, but there always is. There's always this argument as to if we're going to get a plugin machine, is it going to be laser, is it going to be shockwave, which we talked about earlier - Laser. The evidence-based for that? Is all of this placebo?

So there's been some evidence that came out about shockwave and insertional Achilles tendinopathy and there's usual thing happens on Facebook that everyone gets involved and says you see, told you it had no evidence. But steady on, as anyone who might have been on some of my courses knows, It's one of those areas actually, which is the hardest tendon to treat - an insertional achilles tendon.

(00:01:27):

We never advocate for it being the thing you do with shock wave. So it wasn't surprising that the evidence was poor. It's one of the hardest ones to do. So there was that one that came about and then everyone said use that to beat the drum – it's rubbish on everything. And then the other one was a bit of plantar fasciitis came out of one of the Scandinavian countries about six months ago, which was a placebo controlled trial as well. So both of these were placebo controlled, which is actually pretty unusual trying to get a machine that mimics the feeling of it. But I'm all open to look at all the research I've got into research, but

Steven (00:01:59):

Powerful studies with randomization?

James (00:02:01):

and all the other good stuff. Yeah, all of the other ones and the meta analysis that we have now and are all largely supportive of the main conditions, which are still the main conditions,

they're the ones on NICE guidelines. So from the top down, the original one, which we'll talk later on is calcific tendonitis to the shoulder. I think that's 2003. So that's been around a long time where you'd still get NHS funding for treating those areas. You then come down and you are into tennis elbows, another one that's about 15 years old and then you've got, and

Steven (00:02:27):

Therefore presumably golfers elbow.

James (00:02:29):

Strange enough not, but that's not because it doesn't work necessarily because I treat that just as well as I think the tennis elbow. It just hasn't had enough data on it for the Cochrane review to Give Licence to. NICE do say, they think this is worth it. GTPS has been probably the big one over the last couple of years.

Steven (00:02:45):

You might just elaborate. GT PS?

James (00:02:47):

Is, yeah, so what used to be trochanteric bursitis got transformed slowly over the last five or six years into gluteal tendinopathy and has now become GTPS, which is greater trochanteric pain syndrome, which speaks of the fact that it's yet one of these sort of enthesopathies where there's a bit of bursa, there's a bit of tendon, there's a bit of periosteal inflammation. There was a big study in 2019 done by the Orthopaedic Surgeon Society of UK and it advocated for focused shock wave therapy on the NHS.

Steven (00:03:16):

I remember last time you were on the show you said that you think or you feel the evidence suggests there are actually relatively few trochanteric bursitises. It's usually it's a tendon problem. Does that mean there's never a trochanteric bursitis?

James (00:03:29):

No, there can be - about one in seven, they think. So I scan now, so I'm a sonographer, I qualified a couple of years ago, and so we scan these and we look for a bursa because sometimes if the bursa is the majority of the issue, occasionally it's so rampantly bad that a nicely placed steroid injection is still fantastic for those, but most of the time it's a tendinopathy and most of the time it's gluteus medius. That's the thing that does that. And of all the things that the evidence has got, and in my personal experience, that is the condition that you should be looking for with shockwave, that is the number one. And then you go down into mid portion Achilles and then planter fasciitis. So they're the ones that you can hang your hat on and say there's an evidence base.

Steven (00:04:13):

Yeah, and I think you said you mostly treated plantar fasciitis when you were on the show Before.

James (00:04:16):

Yeah, that is still the one thing I think that people will research and say, this is the thing that I should be doing.

Steven (00:04:22):

And is that because you are marketing that or is that what patients look up and they find I've got plantar fasciitis, they look it up and it just pops up on the internet, go for shock wave.

James (00:04:32):

I think it probably is on the internet a lot. I think that it's so common. One in 10 people will get it and I think that the treatment choices for it are pretty minimal. There are lots of exercises you can do for this, that and the other, but actually when you think of the things you can do for plantar fasciitis, you're somewhere between an orthotic, a calf stretch, and then you're into steroid or shockwave pretty much for the buying public. I'm sure that lots of people would argue there's lots of things, but actually from when you go Googling those things, once you've done a Coke bottle full of ice and a stretch, you're done. I think the other things that I mentioned, there's lots of things. We go to your gp, get options here, there and everywhere. See a surgeon do some stuff, but plantar fasciitis maybe is a bit out there. What else are you going to do with it? Actually they're a bit hard.

Steven (00:05:13):

I went to met a guy at a conference who was, he wasn't a therapist of any sort, but he was setting up a business to treat plantar fasciitis, all of it with orthotics, all of them. So you've got them to fit the size of your foot and no other corrections whatsoever, and they were being sold at 400 quid a pair,

James (00:05:34):

Right? It's great business.

Steven (00:05:35):

So the reason I bring that up is because, although it offends me, maybe that's the perfect solution for plantar fasciitis.

I suspect it worked in a number of cases because randomly things do, don't they? But in terms of expense, how many treatments with shockwave is it going to take to fix your bog standard, your average case of plantar fasciitis

James (00:05:58):

For every tendinopathy in plantar fascia, it's largely speaking three to six. That's what we teach.

Steven (00:06:02):

Okay.

James (00:06:03):

Three is if you've had it, four or five months, six sessions might be if you are obese, diabetic, or metabolic issues and it's gone a couple of Years.

Steven (00:06:09):

So if we're comparing that with the 400 pound orthotic is probably still a better deal.

James (00:06:13):

It's still better. But I mean, look, heat moulded orthotics, which I make for £35, it's just a good tool to offload the plantar fascia. So in a perfect world, and there's been a really good trial by Morrissey on this, if people Google Morrissey plantar fasciitis, they'll see it come up and it was patient expectations, patients feeling afterwards about what was the best combination and they shockwave and an orthotic and some stretching, and by far and away that was the best evidence combination.

James (00:06:40):

Doesn't need to be £200. The evidence says it needs to be bespoke. Now bespoke doesn't need to be £250. It can be heat moulded like you would a ski boot and I make those and I can do those in five minutes and they're just absolutely fine. There's no more evidence to say £250, £300, £400 is better. That is a nonsense in my view. Some people might go, no, it's not quite a Savile Row suit, but for the purposes of offloading the planter fascia, a heat moulded slim flex device, which I use is absolutely adequate in combination with the shockwave. I mean, last time when I talked, the big thing that I keep repeating is that shockwave is a part of your tool bag.

Steven (00:07:19):

Glad you said that because it's almost as though there are camps of people like this insole salesman, I won't call it an orthotic, where he would say, this is a solution or a laser practitioner say laser is a solution. Or some people will say exercise is a solution, or stretching.

It's usually a combination of all these things, isn't it?

James (00:07:37):

Always is. And the only problem with that of course, is which one of those things did really do the job, but there's enough evidence to say that when you supplement exercises, graded loading programmes, which is the number one thing for tendon, if you supplement it with shockwave, patients do better long term, they do better in the short term and the long term. So for me, it's definitely adding something that's substantial into the mix, but it's usually a mix. Very rarely would I just do shockwave out the door. That's never really the case. I don't think.

Steven (00:08:07):

Is the bulk of your practice now shockwave?

James (00:08:11):

The big practice I have in Suffolk, I would say that my working week is probably now 50% is either scanning and shockwave. 50% is chronic complex pain. I'd say usually still hands on. And I do something called CFT, which is Peter Sullivan's work on chronic pain. So I treat more of the complex cases than “I've hurt my back”

Steven (00:08:33):

CFT standing for

James (00:08:34):

Cognitive functional therapy. So you'll hear more of it over the next couple of years. The NHS has really latched onto it as the way to deal with persistent pain. It's basically an advancement of what we used to know with chronic pain science teaching patients. This is Butler, and I remember the courses I went on now that come to me, but teaching someone how pain works was thought to be good and useful, but the data didn't support that actually people got any better. So it's still some combination of pain education and trying to get patients to understand how they can move more with pain and take the fear out of their pain and so forth.

Steven (00:09:17):

I've sidetracked myself. I suddenly realised that two days ago somebody sent me in a question for you and I promised him I'd ask it and I've completely forgotten who sent it and what the question was, but he did say he'd remind me.

How do you address this allegation that many in our therapies will have - the purest osteopath or maybe the purest chiropractor, who says that all of this is a distraction from what we are really about as osteopaths?

James (00:09:49):

Yeah. Okay. So I mean I'd got into this 10 years ago and I was very much a purist and worked for a very purist osteopathic practice. And look, one of the main things by how it works, one of the mechanisms is increasing blood supply And stimulating tissues, getting a bit of collagen turnover, and is that not what we do with our hands to some extent. So particularly with radial shockwave, which we'll talk about in a minute, that's doing exactly that, but two and a half thousand repeated efforts around some area of tissue saving my thumbs. I mean, there's some pragmatism here as I'm getting a less young, my thumb's sore. So if I can use a machine to tackle that bit of pain there and try and give that tendon a bit of oomph, I could definitely fit that into my osteopathic philosophy. I'm giving it a bit of a shakeup at the get-go.

Steven (00:10:40):

I think probably there’s a generation of osteopaths and chiropractors now, I expect they would agree with you and maybe the older generation whose thumbs are all knackered would still say, no, I need to feel what I'm doing. But I am with you though. I personally, I

believe that you do need to feel what's going on under your hands, but in terms of treatment, there's limited scope for poking things with your fingers

James (00:11:00):

And some of these tissues when you start, as I said I scanned, some of these tissues are deep and buried under things that you thought you were probably feeling. And I have to say, I've had a bit of a wake up call now I scan. I probably wasn't feeling what I thought. It's deep and buried underneath. And do I really think I'm palpating that? That's a debate in itself, isn't it really?

Steven (00:11:19):

Yeah, and I've often wondered about this, particularly when we talk about craniosacral or sacral occipital techniques. People say what they think they're feeling and they're feeling something, but whether it's what they say is open to debate, isn't it? And it can't be proved one way or the other. What matters is how the patient feels at the end of the treatment. So if it's working, it's working, which is all we really ought to care about,

James (00:11:41):

And I've done all of that. I did all my cranial, so I don't take cheap potshots at something that I used to do myself. I come from what I think is a fairly strong point to be able to critique it on reflection.

Steven (00:11:51):

Oh, I'm not criticising At all.

James (00:11:52):

Well, I mean, so I might do occasionally, but I was there doing that thinking I could feel this, that and the other, and I just got to the point where I sort of doubted myself a little bit. But anyway, I've moved in a different direction, but I think there's plenty of scope to be able to use a bit of technology that especially been fits with some of the osteopathic philosophies that exist about blood flow and stimulation and so forth, lymphatic drainage, tissues, particularly the Achilles. I mean once you treat that, it just looks really good after a couple of sessions. It's lost, its redness, its anger, and patient's report on it.

Steven (00:12:30):

We've stepped your game up a little bit this evening. You've brought in your diagnostic ultrasound machine, but I've got another question about ultrasound already.

James (00:12:40):

Yeah, sure.

Steven (00:12:41):

Mindy says, what's the major difference between therapeutic ultrasound and shockwave in therapy,

James (00:12:47):

Therapeutic ultrasound and Shockwave, so not imaging at all?

Steven (00:12:52):

It's all the same thing, isn't it?

James (00:12:53):

Yeah, it's all sound. Yeah. So ultrasound a long time ago was the thing, and I used to say this when I first started teaching, I hope shockwave doesn't become that because everyone just thought this is the easiest thing in the world. I just put some gel on and rub stuff. But shockwave is a sound wave, but about 10,000 times more energy than an ultrasound wave. Ultrasound has probably not got enough oomph to it to actually change anything biologically. I think there's a loose bit of, I think it's some science to still say if you've got a fresh injury and you can get on it within a couple of days, it may modulate the inflammatory response. But anything after a couple of days, there's no evidence really that it's going to be doing a lot.

Steven (00:13:31):

We started this business up over 10 years ago and one of our earliest spoke speakers was Tim Watson.

And at that time, all the evidence was in favour of ultrasound, but of course shockwave was in its infancy then

James (00:13:47):

And he's a big advocate for shockwave.

Steven (00:13:48):

Yeah,

James (00:13:49):

In the right circumstances. People still use ultrasound. I haven't looked at it in years, but I didn't know that it was a pretty loose science back 10 years ago.

Steven (00:14:00):

Well, I mean we had him on the show, it must've been eight or nine years ago, and I brought in my ultrasound machines so that we could just use it and he looked at it and it was an antique then. But of course it does exactly the same as a big flashy modern one.

James (00:14:11):

It's all the Same stuff.

Steven (00:14:11):

It's still ultrasound. Chubby, thank you for sending in your question again, I apologise. I'd forgotten it was you that sent this question in. And James, this is what I was referring to. Chubby wants to know if you're suggesting a course of radial shockwave therapy treatment for patients with one of the common tendinopathy issues, plantar fascia, achilles tendinopathies, gluteal tendinopathy, patella, chronic tennis golfers elbow and so on. What progressive loading exercises do you suggest for each of those to accompany the treatment? Research he says suggests a combination of tendon loading alongside shockwave gives the best results, which loading type of exercises will help rather than impair the Recovery.

James (00:14:49):

I know Chubby quite well. Good. He's asked us a day's question there. I mean lower extremity and upper extremity loading programmes are slightly different. So for the Achilles, the easiest thing I can answer here is for the Achilles, which is probably the most common area of the body that you need to really focused on with your loading Exercises,

James (00:15:08):

Look up Peter Mallearas, he’s the guy

Steven (00:15:12):

He talks about that in conjunction with Shockwave?

James (00:15:14):

He doesn't, no, he's just come away from the idea. He's used shockwave for about 10 years, but this latest bit of research about Insertional Achilles was actually out of his university and his colleagues, so he's been quite critiquing of shockwave for that condition, but it doesn't remove the fact that he's probably the best tendon guy in the world and his stuff on that is great. So for tendons, for Achilles tendons, it's lots of isometric work followed by then some eccentric concentric stuff and building up from there. He's got all of that information. I could spend all day long talking about what you should do.

James (00:15:50):

But I think what he's getting to maybe is that people sometimes think they've got to do the shock wave first and then load it. None of that's true. You get straight on and load tendons. So when you get into Tendinopathies, which is my sort of thing now, load them straight away regardless of the pain, that's really, and just find, you've got heavy loading plyometrics at one end, and then you've got isometric low loading at the other end. And I guess your clinical expertise is to be able to say, I think you are up for doing a bit of this and some pain is okay and crack on and I'll shockwave through that process because It gives you short-term pain relief. but you don't need to do what a lot of people think - shockwave first and then grade the loading up from that. No, from day one, start getting them a loading programme from day one for whatever tendon it is.

Steven (00:16:36):

There was one therapist, I think he was a therapist himself, but he suffered an Achilles tendinopathy and he thought he wanted surgery. He said, well, I'm just going to continually load this thing until it snapped, then I'll get my surgery. And what did he continually loaded it and it got better

James (00:16:52):

I think That was Alfredson.

Steven (00:16:53):

Yeah, that rings a bell. Yeah. But that was I think almost the start of the progressive loading process for tender.

James (00:16:58):

He basically put a heavier, heavier bag on his back and kept on dropping his heel off the stairs hoping it would snap off and it didn't and it just got better and better and better and better. I think it was Alfredson, but yeah, so loading it right from the offset is the thing.

Steven (00:17:11):

So he managed it without shockwave.

James (00:17:13):

Yeah, you do. You can. Not a problem I think. But this is the point shockwave, when it gets to a point where the patient plateaus and it's chronic, that's its thing. It's become more than that because I think people want to use their machine more and they use it in acute cases, but it's really only for situations where patients have done the normal thing and they've just plateaued and they're no longer moving forwards.

Steven (00:17:35):

Dare I suggest there's also a marketing elements in this. All sportsmen now know about shockwave, so we're probably looking for it and assume that it works for everything from shortsightedness to bunions

James (00:17:46):

This time of the year, I see lots of marathon runners and I've had one this week with a very fresh issue - a couple of weeks, achilles again,

(00:17:59):

And she was almost adamant that she wanted the shockwave and I said, no, it's not going to do any good. We need to get you back into doing a greater loading programme very quick, a shortened one so you can still do the marathon, but it won't do anything in those short-term cases. I mean there's some evidence for focused shockwave doing some short-term acute stuff, but it's very poor and it's not worth the money quite frankly. Come back and see me if

it's no longer getting better at this stage and I give them a plan to say that it's six weeks time, you should be 50% better. And if you're not, then you come back and see me.

Steven (00:18:31):

That's an interesting distinction you've made there because a lot of therapists will ring their hands and say, well, I don't want to put you on the expensive programme until we've proved everything else won't work. Well, you're saying it actually will not work in an acute case.

James (00:18:42):

Not really.

Steven (00:18:43):

So we wait until it gets chronic and then we'll,

James (00:18:46):

That's his bag, that's his entire thing, at least three months. That was all the original evidence was is for stubborn, recalcitrant tendinopathies,

And they're slowly being whittled away for whatever reason. But it's not for evidence-based reasons. Marketing and financial probably is why people want to use the machines more. So they're doing it on more acute cases. As I say, there is a little bit out there on focused shockwave therapy, but as far as I know, there's not for radial.

They've got to just hit a plateau and they're no longer improving. And some people, the reality of some people is that they don't want to do the rehab or any graded loading, they're just not going to do it. There's a lot of them out there and they come to you desperately.

Steven (00:19:21):

Well, we are in a society aren't we where we want someone to fix this rather than to have to get engaged ourselves.

James (00:19:26):

And that is occasionally where I have to wear two hats. One is my ethical, I need to do the right thing, give you the exercise, and the other hat is my pragmatic hat. And if I don't treat you and I try and shuffle you along in as good a direction as I can with some nutritional support, give you some advice about your metabolic issues that you have, they're only going to go see somebody else and then have their machine put on it.

Steven (00:19:46):

But we also have to accept psychology is a very important part of the whole bio-psychosocial model, isn't it? And actually if the patient believes this is what they need, maybe we do need to sometimes give them what they want as well as do the other aspects of their Treatment.

Steven (00:20:06):

I don’t know where we stand ethically with that. I think if we're doing it for ethical reasons rather than financial, we're on solid ground.

James (00:20:11):

Yeah, absolutely. Right. And the evidence base is that if you match their expectations, you're going to get a good outcome, right?

Steven (00:20:15):

Yeah.

James (00:20:15):

I don't think we get that too much with shockwave. You get lots with hands-on, there's so much out there about hands-on and the feeling of it and people think, I definitely need you to touch me. And I think that has got a place for sure for shockwave. If you don't get too much of that, it's very easy for me to talk them out of it, especially when I mention the cost. I don't think this is going to be value for money for you.

Steven (00:20:30):

Are we allowed to ask what the cost is?

James (00:20:31):

Well, my normal fee's £60 pounds for a session and I charge £95 for shockwave. So it's essentially 35 pounds and usually it's three to six,

Steven (00:20:38):

Which I don't think that's unreasonable by comparison with prices across the country – it’s at The bottom end of the cost spectrum, isn't it?

James (00:20:42):

No, I've stuck my prices that for the last five years I think, I haven’t gone up. I dunno why it happened, but £95 seems to be all right for me. I'm okay with that. I paid my machines off and I see a lot of patients, so my numbers are good, so I don't need to grab everyone's £150 or whatever people are charging. Yeah, that's not a Problem.

Steven (00:21:00):

Chubby, hen he asked his question earlier on, talked about radial shockwave. Now of course you have mentioned focused. Before we go and look at the toys, do you want to just explain the difference between focused and radial, why we'd have one or the other or Both?

James (00:21:14):

So focused shockwave therapy is the original. That's a lithotripter, so that means stone splitting. So that's a sound wave that you use for kidney stones or urethral stone. So the sound waves pass through the body's cavities and then at a point it's focused and it breaks

the speed of sound if you like. There's a little mini explosion and a musculoskeletal focused shock wave. A lithotripter is just less powerful, that's all. And it doesn't have quite the accuracy, but they were too expensive. Even the sort of one I've got was a hundred grand 10 years ago.

So there was a particular device manufacturer, not this one, about 18 years ago, and there was another device for breaking up urethral stones was being invented at the time, and that was lithoclast as opposed to lithotripsy. So that's smashing the stone. So that was passing up a tube up into the urethra, and then a bullet was fired up that tube where it nestled up against the stone. So it was a bump on the stone - the bullet would hit, bang, and it would smash the stone. Much cheaper and so forth. But there is actually that use in urology at the moment, but there's only a few manufacturers. But anyway, that manufacturer took that idea and said that's a good cheap version of the musculoskeletal focused shockwave,

(00:22:31):

And that became the radial shockwave device. So it's a bullet in a gun firing down - ballistic energy. It's an air device and it does that as opposed to,"bang!"

Steven (00:22:41):

Yes, okay.

James (00:22:43):

Much cheaper, easier to maintain, so on and so forth, but it's not a shockwave.

Steven (00:22:48):

Do you find people have trouble getting their head around the idea that you are talking about sound waves?

James (00:22:53):

Yeah, and pressure waves,

Steven (00:22:54):

Whereas this is a mechanical thing, which of course a sound wave is

James (00:22:57):

Yes. Yeah, A pressure wave and sound wave there in a sense, the same as far as a physicist is concerned, but a physicist would say that's a shock wave and that's a radial pressure wave. That's a pressure wave. There's a difference there. And the difference between radial and focused in terms of the physics, it's quite large. It is almost like an entirely different thing, but one is much cheaper and more Accessible.

Steven (00:23:19):

But in terms of how you'd use them, why would you choose one over the other in therapeutic Settings?

James (00:23:23):

So radial shockwave is all the energy when you put it against the skin, the energy that produces the skin, most of the energy is then dispersed through the dermis and a little bit underneath. And then as it comes out, it goes in this radial direction, it comes out.

James (00:23:36):

You're getting a big surface area of hit, but by the time it goes an inch or two in, you've lost a lot of the energy. So myofascial treatments - radial's perfect, superficial tendons, good.

When it comes to deeper stuff and more complex stuff, then focused shockwave, which you can really target on the tissue. So that goes through the tissue. No energy is expended, it would go through your hand, so you'd have to put two hands here and you'd hit this hand and not that hand and all the energy would be on Here.

Steven (00:24:02):

So it is not that it goes deeper but affects everything - It won't have any effect on shallow tissue.

James (00:24:09):

Exactly. And you can set it up to about 12 centimetres. So we're talking way deeper than radial. So if you're going to talk about deep gluteal syndrome, piriformis, if you want to target anything in the glutes, you need focused to go There,

Steven (00:24:19):

which means we need to spend something in the region of minimum four grand on a radial machine and 20 grand on a focused machine.

James (00:24:26):

Yeah, minimum. Yeah. So the good manufacturers are about seven or eight for a radial and focused 25, 30 with vat.

Steven (00:24:35):

Yeah. VAT of course is significant for our clinics, isn't it?

James (00:24:39):

Yeah, they never quote you with vat, I think that would be about late twenties or something like that, probably these days.

Steven (00:24:44):

Yeah. Okay. Well maybe we'll come back to the economics of this Later on

Because there are some simple sums you can do.

James (00:24:49):

Yeah, and for all those, the NICE guidelines for everyone out there, but the NICE guidelines and basic tendinopathy stuff, radial is really good. There's not a lot of difference, but in my experience, the more chronic or stubborn, the more they've got associated health issues like metabolic syndrome and so forth and focused just delivers more punch with a bit more accuracy.

Steven (00:25:13):

Here's a question you might find pertinent. Ian says, is shockwave effective for calcific tendinopathy of the shoulder?

James (00:25:19):

Well that's great because we're going to scan that in a minute. Yes. It's one of the first ones on NICE guidelines. The difficulty is patient selection with all of this stuff and patient selection for all the other tendinopathies is really easy. It hurts, you've confirmed it's a tendon, nothing can really go wrong. Calcific tendinitis is really difficult in my experience,

Steven (00:25:39):

Difficult to treat or isolate or diagnose or

James (00:25:42):

Decision to treat.

At what stage is this calcific tendonitis? So there are different stages in calcific tendonitis. So early stage it's just there, not causing a problem because lots of people have them and they don't cause an issue. And then the theory is that the immune system starts to have a little bit of a taste of it, starts to break it up a bit and then you get this vascular response and that can affect the bursa over the top and then you're in loads of pain and sometimes when you sort of stab at it with a shockwave, it can make it worse depending on the sort of stage it's at. It's a really difficult decision. I don't wish for them in practice, I have to say. Even though my machine, a focused device, is where the evidence is for that. The radial not so much

Steven (00:26:24):

What are the NICE guidelines saying about decisions to treat

James (00:26:27):

About those particular conditions?

Steven (00:26:29):

Yeah,

James (00:26:29):

Well the NICE guidelines when you read them, they're mostly set up for what the NHS has to do. The NHS is basically you have to give the patient advice on this. You have to get, there's a stage process that you have to go for funding for the NHS. That's not our business. It's just that the NICE guidelines are there to say, there's enough evidence to say this can be purchased on the NHS, but I mean I certainly,

Steven (00:26:51):

But it doesn't go into what stage you treat at.

James (00:26:54):

No, that's an unknown at the moment. That's the problem. You get better at doing that when you've got sonography and you can see it. And if it is really vascular and you see the bursas are really inflamed over the top, then injection steroids are really good for those. And if then the steroid calms it down, I then would go in with shockwave if it was pretty big. But sometimes if it's too hard a calcific lump, which you can also see on scan, that's probably not great. They might need surgery if it's really dense and they need to be removed. So there's lots of treatment choices for it actually. And once you start scanning them and seeing them, you go, that's not for me, that's for shockwave, that's whatever. And if you get it wrong, it's one of the more painful conditions known to man. Calcific tendonitis when it's ripp-roaring, it's worse than frozen shoulder and they get very confused with frozen shoulder actually.

Steven (00:27:41):

Well, I mean the shoulders a very confusing joint even for people who know about It.

When the GP diagnoses it, pretty much everything is a frozen shoulder that makes life even more confusing.

James (00:27:50):

And then when you scan them you go, it's not frozen, you've just got a big calcific lump in the middle of it and everyone thought it was frozen shoulder for six months. I've seen those For sure.

Steven (00:27:57):

So you talked about it making it worse, and obviously we ought to talk about some of the adverse possible side effects of shockwave. I think they're fairly limited, but what is it physically doing in your calcific tendinopathy that is getting worse? Or is it the bursa that it's Aggravating?

James (00:28:09):

Well, what it's not doing, which is really because unfortunately as I just said, shockwave came about as lithotripsy for breaking up stone. So people still think and they come to see me, patients thinking, can you break up my calcific lump, wherever it might be in whatever tendon. There are calcific tendons all over the body and the shockwave is not enough energy to break that up. What it does do is it's sort of knocking on the door of the calcific lump and Saying to the immune system, Hey, you've forgotten to deal with this. Can you

start really focusing on it? So we think it's the resorption process sped up by the shockwave, the body does it and we're just doing that on it. That sounds osteopathic doesn't it? A little bit. So that's all we're doing is knocking on the door and just tapping away at the crust of the calcium lump And Then you deal with it yourself. But if you do it in the middle of a really inflammatory situation, it just inflames even more. You're just whatever the metaphor might be, stab an angry dog, it just makes it worse and they come back next week and they're horrible

Steven (00:29:06):

Other adverse side effects?

James (00:29:07):

Not really known. If I think about all the other tendons, there was someone that did some in a Chelsea Westminster hospital, they did too much on fresh acute cases. So acute case shockwave on Achilles tendons and a few ruptures happened. They didn't know whether it was that. But what focused shockwave can do in the short term is really reduce your pain. And if you were doing that with a slightly torn Achilles already, then it probably will rupture because you're loading it too quickly because you were painless.

Steven (00:29:37):

I've seen that one of the indications for shockwave is stress fracture and I'm struggling to get my head around how that cannot be painful putting a shockwave machine, which is…shocking

James (00:29:47):

So stress fracture, I would say probably no. There's a bit of evidence for MTSS (shin splints). So bone stress injuries and actual stress fracture, I haven't seen that. What there is good evidence for is non-union fractures,

Steven (00:30:01):

Right?

James (00:30:02):

So non-union long bone fractures, particularly the tibia, really good evidence. And we talked about ultrasound earlier, there's always been this exogen device, which is a wearable ultrasound device. So all that's doing is creating mechano transductive oomph into the bone that you can't currently load because it's broken, so you can't put your weight down through It,which is giving you that lovely piezo-electric feedback, which creates osteoblastic migration into the bone. You are just filling the gap literally with a pressure wave that's stimulating bone growth. It's as simple as that. So the ultrasound device, I think you have to be on the NHS over nine months non-union to get that prescribed or Bupa to pay for.

Steven (00:30:40):

When I spoke to Tim Watson, I think he said that the best ultrasound device for fractures for non-union fractures was very low frequency ultrasound. And he said it was phenomenally expensive so no one had it.

James (00:30:51):

Ah, dunno about that. An Exogen device is about £900. You can rent them for about £300 a month. So it's quite expensive isn't it? But focused shockwave is just that much more energy 10,000 times more. So you can come in once a week for four sessions. I've treated those and both in combination with chatting to the surgeon who I knew and he knew of the Exogen, so he was quite happy for me to use that. But they were both timetabled for surgery. I'm not exaggerating that just they were and they were pulled off the list and they were weightbearing after three or four weeks and they'd looked horrendous. They'd just looked awful.

Steven (00:31:25):

I'm having great fun chatting to you, but I've got loads of questions here that I want to be asking. This is the point of this show. Lawrence wants to know where the shockwaves penetrate fat as well as water

James (00:31:40):

Fat would use up quite a lot of the energy. Water's a brilliant conductor for sound. I mean dolphins and whales, right? Fat just absorbs loads of sound. So fat in ultrasound scanning as well just is a bit of a nightmare, just absorbs so much of the sound. So the answer to that is no water's brilliant.

Steven (00:31:56):

So we live in a society where there are plenty of fat people around, does that mean that you've had tendinopathies that you can't treat? I'd imagine the glutes is going to be one of those areas where you could find difficulties. Achilles is usually fairly surface.

James (00:32:10):

Yeah, that's all fine. So I mean the issue really with having excessive adipose tissue, there's two I suppose. One is that we know that excessive white fat, abdominal fat just is one of those key issues for chronic tendinopathies and inflammatory type conditions. So that we have to be aware of that. But the other thing is just the warning, the patient of side effects bruising. So radial devices around GTPS amost guaranteed with particularly ladies over 50 because the effects of oestrogen as well. They just bruise more. They can be really bruised and you just warn 'em, say look, this could bruise, but weirdly enough, the second time you treat them, it doesn't bruise. I've never worked that out. But the patients are fine. They're usually feeling better after one session with GTPS, they would swap a bruise for being able to sleep on their side. They go, that's fine, I don't mind, it's bruised. What do I care? But as long as you warn them, of course,

Steven (00:33:03):

As long as you warn them. Yeah, Robin wants to know how it reduces pain.

James (00:33:08):

A few theories with one of them is what's called substance P washout. So substance P with chronic tendinopathies is now sort of known thing. So we came from tendonitis is inflammation, tendinopathy is not inflammation. Now we've realised that's not entirely true. It's just neurogenic inflammation. So you're getting lots of substance pr, the sort of inflammatory peptides sitting in the tissue. You push a pressure wave through it, you're just clearing it out a little bit. Massaging the tendon itself, I think that's a fairly well trodden theory. It does seem have focus. Shockwave seems to have an anti-inflammatory effect. So that works at a biochemical level. Radial doesn't have those sorts of responses. Radial is more of a blunt tool, just clear out the tissues.

There's no doubt it has a pain-gate effect. Of course it does. You're repetitively loading the tendon and vibration we know is pain-gating and of course there is this flashy looking machine. I greatly believe in it. It's shiny. There's all of that involved.

Steven (00:34:08):

Combine it with the pictures you put on the screen with your scanner.

James (00:34:10):

Absolutely right. But that is in everything we do. The non specifics of care, how we treat and create rapport with patients, I don't hide away from that.

Steven (00:34:19):

And so obviously part of this is that you can show them your sonography before and then afterwards you can show 'em how they've got better.

James (00:34:26):

No, we try to stay away from that one. So with chronic tendinopathies, they don't change that much after they get better.

Steven (00:34:33):

The picture doesn't, but the pain does

James (00:34:34):

No, that's unfortunately the case. So there's always some hyperemia, we call it sort of intravascular penetration into chronic tendinopathies and you sort of scan 'em. But I've done that a year later when they have a flare up and it's just exactly the same image, it doesn't really change much. Plantar fasciitis is known for its thickening and it loses some of its white texture that doesn't change much either. But the patient would be, I'm fine, I've no problem at all. So my imaging, the sonography is a part of the puzzle. It's a fairly good bit of the puzzle to be fair. But sometimes you can be amazed and you see all sorts of horrible things like we do with MRIs.

Steven (00:35:09):

Yeah. Would it be fair to say that the ultrasound will show you where there's a Problem, but it doesn't necessarily mean it's going to change when you treat that problem?

James (00:35:20):

Right. Yeah, I mean ultrasound's probably most useful for ruling stuff out, more than ruling in. So you it's not that. It's not that. It's not that. So just by the algorithm of things and my clinical examination, it probably is just this issue most of the time I use it to reassure patients really.

Steven (00:35:34):

Yeah. Okay. Asif has asked if you recommend heat or ice after treating tendinopathies?

James (00:35:41):

I think most of the time now we think that warmth is our friend for tendons, they lack blood supply. So starving it of more blood if you like and putting ice on something doesn't make much sense. Just like we now know not to use anti-inflammatories with tendinopathies. We moved away from that, just paracetamol, put some warmth on it. I think when there's an acute real flare in like a 26-year-old who's just gotten a massive swollen whatever it is, that can calm down for a couple of days. But I think most of the time it's warmth that we suggest.

Steven (00:36:07):

Yeah, it might be time, we got somebody who's an expert on cryotherapy back on the show because the years ago there was a theory about short-term ice would reduce the blood flow, leave it on for eight minutes and it increase the blood flow but also had a pain gating effect as well, wasn't there? You remember That?

James (00:36:23):

Yeah. That still exists for a sort of muscular response to exercise almost as maybe a preventer of something happening. But once someone has got a tendon pathology, most of those things don't work at all to be honest.

Steven (00:36:38):

A few more questions then we're going to look at your toys. Trish says, is the training presumably on the heat moulded insole available via Algeo?

James (00:36:47):

Ah, no. I did mine many years ago with Canonbury who I think still exist. I did a day's course on that and then went to see a podiatrist, did some other stuff. I dunno whether algeo still do that. Dunno the answer to that,

Steven (00:37:01):

But I'm sure Google will be her friend and show who the courses are. Yeah. Dawn says, have you heard of the use of shockwave for TMJ issues? Chronic ones,

James (00:37:10):

I've got a few colleagues that do that. So I've got a few colleagues that I trust and they're good guys and they think they're getting some responses with TMJ. I have no knowledge of it to be honest.

Steven (00:37:23):

Okay. And Imran says, how much do you recommend shockwave for frozen shoulder and which? radial or focused?

James (00:37:32):

Both about the same. So focused and radial have a place, there's been a good couple of placebo controlled trials on that and good evidence, not amazing evidence, but it's a difficult condition.

Steven (00:37:44):

So hang on, they're both the same, but one's a surface treatment, one's a deep Treatment,

James (00:37:49):

You can set the focused to be superficial or super deep. You can set it with different things, but we'll look at so you can make it as you will. So in one of my clinics I've got radial and focused in the other clinic, I've just got two focused devices,

Steven (00:38:01):

But you can't set the radial to be deep, you just can't do that.

James (00:38:03):

Yeah, that's right. Yes. So but no for frozen shoulder, second stage for improving range of motion particularly. It's got some place in first stage, particularly if you can get hold of a focused for reducing pain.

(00:38:16):

But the thing about shockwave is that one, it's got to be a chronic stubborn bloody tendon that's not getting better through normal means, that's when you should use it. And number two, it's knowing what other options are available that are cheaper and more effective. And if there isn't any, then I think there's a good place for shockwave.

So for frozen shoulder for instance, if you get it really early days and you can get a steroid into it, there's better evidence. So we have got a guy that comes and does steroids for us, but if a patient doesn't want the steroid for whatever reason or they can't take a steroid, then shockwave is a great option and if it doesn't work then we go to shockwave. So it, it's not the build end all, but it can be quite useful. Yeah,

Steven (00:38:54):

Yeah. Last question before we move over, Nikki says, would a gluteal tendinopathy tend to recur presumably after you've treated it with shockwave?

James (00:39:02):

Yeah, absolutely. It's great responder, but most of the tendinopathies are really just overuse. You've overloaded it too quick too soon. That's really what's happened. But with GTPS, there's so much more. Women more than men - Q angle, hips and in essence it's the ITB friction over the glute medius tendon from that Q angle.

So you've got to give you them glute strengthening, got to make it clear to 'em this is something they need probably ongoing, avoid the cross leg positions and avoid them doing Pilates with the legs coming out to the side. All the clam exercises, stop that. Clam exercises for your GTPS is an absolute no-no and they've got to be on that, otherwise they'll come back a year later

Steven (00:39:45):

A year is about the periodicity.

James (00:39:47):

Yeah, pretty much they last about a year and then they'll come back if they haven't been quite so good with their exercising and so forth because they've still got the hips and the knee angle and it's one of those things that's just predisposed for that. Yeah.

Steven (00:40:00):

So we're going to look at your toys then. Yeah, sure. And we'll do some treatment. Right. So really uninspiring looking little boxes here.

James (00:40:15):

So this is a radial device, so I've just turned it on, I dunno whether the camera's picked that up, but you could hear a sucking in, a whooshing of air. So, oh, there you go. Just on time. So this one's sucking in air. So this is an air compressor and it basically creates the air pressure through this tube. This is the radial device - a radial pressure wave. It's still called shockwave just because it is, but the bullet is then fired with the air pressure, donk, at the end here. So the bullet hits the back of that metal, which creates the vibration of that against the tissue, which you remember, lithoclasts, the banging into the thing that it's attaching to. So this one's the one that most people, when I ask patients when they see me and say, oh, I've had shockwave before. And I say, does it make a loud bang? Like you're getting hit by a Kangol and it's a bit sore. That's a radial pressure wave device. So wherever you put it, you need a gel coupler. So ultrasound gel on and then you move it around and then you are basically getting to those bits of pain where the patient says, that's my pain.

Steven (00:41:19):

It's funny again though, I'm thinking about conventional ultrasound and I can see the point of the gel, yes was this, I'm thinking this is walloping the flesh up and down. Why do I need a gel?

James (00:41:28):

It's less about the coupling than it is about the fact that it also absorbs quite a lot of heat. So there's a lot of heat generated at the end of this. If you didn't have something, you'd very soon have a red, slightly burning mark on the skin. You could use castor oil. That's an old fashioned thing. But it's basically just something just to absorb quite a lot of heat and to give a bit of coupling and these things are designed for, as you might imagine, a wider dispersing hit. So that's more superficial. So you'd use that for myofascial treatment on the hamstrings, almost like a really good sports massage in a local area. And then when it comes to directed treatment, you have the heads and they have different metals. So this one's just a normal steel metal, this one's a titanium I think. So it's more dense, so more of the bullet hitting it gives you more energy out the end. So this one you might decide, so it gets a little bit deeper. This one,

Steven (00:42:24):

This isn't as simple as just saying, I'm going to use the ultrasound. You've got to work out which one of these things you Need And Presumably you can adjust the frequency on this as well. I take It,

James (00:42:32):

so the increasing frequency, which is really fast, that's more of a superficial treatment.

Say for instance what I've just done there to get as deep as possible into a really big shoulder, I would put the gold end on which is narrow, which keeps it as narrow as possible and deeper. And then I'll drop the hertz right back to six or seven. So that means it's going to get deeper in for each hit. Because what happens is that will create a reverberation effect in the tissues and if another one fires off too quickly, it bounces into the one on the way back and then stops energy going too deep. So you reduce the Hertz. And then you've got bar pressure, which is just how hard the bullet's hitting. So I can feel that vibrating in my hand now. Whereas if I took it right back, you wouldn't feel too much, can barely hear the difference. But yes, again, now I can tolerate that, but I probably couldn't tolerate two bar

Steven (00:43:27):

What's the frequency range on them?

James (00:43:29):

It goes down to about three or four and it goes up to about 20.

Yeah. And when we teach the day courses on this, to use this one, it's a day's course to get you started. The high herz is superficial, but the high herz is also numbing. So if you put 20 hertz on something like a really sore tennis elbow, you do that for about 500 shots and then it's just numb and then you could start to get a bit more energy. They'll tolerate more at the appropriate hertz to get into the extensors and so forth. So you use it as a tool by using the high hertz.

Steven (00:43:59):

So it just occurs to me, for all the people who are watching this, there won't be many of them who've got this sort of equipment. What they will want to know is when a patient comes to 'em and says, should I use shockwave, what they should advise them to do. You've given us lots of information. Do you find that patients often, they've decided what they want and someone's got a radial shockwave machine, they go off and get it and it might not be the right thing for them.

James (00:44:22):

Oh, patients hunting down a clinic that's got a radial device. I think patients now compared to 10 years ago are way more educated I suppose because my clinic is sort of a bit of a specialist sort of thing.

Theyn literally find me because I've got focused shockwave, they go, I've done the radial thing, I know the evidence is all about the focused and I've got a calcific tendon in my shoulder and I need that. 10 years ago they just would be happy for me to say, look, I can help with your pain. And they didn't know what any of this was about, but patients now know what this stuff is and they'll come hunting, emailing me and seeing me for it and they'll know the difference between the two.

Steven (00:44:52):

So these Storz machines, they're the cheap, rubbish end of the market. I'm saying that because we've got the rep in the studio

James (00:44:59):

There's about two big German Swiss manufacturers. This is the biggest one. This is like your Mercedes of shockwave.

Steven (00:45:06):

You said last time that these guys had the most research behind The machines

James (00:45:09):

Yeah, they're 80% of the world market now stores because they also, there's some re-badged options that they do. So other companies do have this machine, but they call it something else and I know what they are, but 80% of the marketplace now. Yeah.

Steven (00:45:24):

So is there anything you need to show us on this one that we,

James (00:45:26):

Different heads here. This one's the lithotripter. So this one's creating a shockwave in a true sense.

Speaker 2 (00:45:35):

Yes.

James (00:45:35):

So this is a water-based machine. This is air. So there's water in here, water in the pipe and water is that good conductor of sound.

Steven (00:45:42):

This must be a much better machine. It's got colour pictures

James (00:45:44):

For sure. That's got a nice little laptop on top as well. So you can direct it through here. And there are lots of presets. This is a good funky bit of software. There's also some different things that it does. I think the one that I don't use is there's a visible body on here. You get the anatomy software with it all as well. And that's all funky. I don't use too much of that now. I use this because I'm also involved with the patient.

Steven (00:46:37):

This diagram here is just reminds me of the diagram we've got on our laser equipment, which is, here's a bit that says foot. So if you press foot, does it then say, here's your protocol for dealing with it?

James (00:46:46):

Exactly. Yeah. There are protocols, but it's a loose science. Ultimately you still make your decision over depth, the patient's morphology and so on, so forth. And you do it. So what I was saying earlier about the depth, so you could use it without anything. And then when I put that on the body, say here the point where the sound wave is going to create that poof, that shock wave is about that far away. So I can put that on and somewhere deep in their glutes, they're going to feel and they do say that that feels like really inside, really in the tissues. And then ultimately I can then change the depth by modifying, for instance, that's the biggest one. And then by putting that, that's a standoff, we call it a spacer. So then the energy is only here, so I can use that for Achilles and so on and so forth because that's where the energy is going to be released. And the nice thing about this is ergonomic and all that sort of stuff. I can use that all day long. It's not a problem. And then the frequency and the energy is the same as this, but the energy is millijoules per millimetre squared, which is how to measure actually true sound waves.

Steven (00:47:45):

You do actually make it sound as though you could learn to use these machines in a relatively short space of time. And I mean use them effectively.

James (00:47:52):

Yes, this is a day's course. And then we do advanced courses, which is just another day for this. So within two days you could be pretty good. Then we do other ones. That's your basic conditions sort of tackled. But if you want to get into treating things like there is some evidence for carpal tunnel syndrome and when you're dealing with things like calcific tendonitis in the shoulder, I'd probably turn that into a three or four hour event. That's

complicated. But for treating standard tendinopathies, myofascial pain, you're good to go with a day on each of these. Really, to be honest,

Steven (00:48:21):

When you're treating carpal tunnel, what are you treating? Are nerves or treating ligaments? Treating the median nerve.

James (00:48:27):

You're on the nerves,w ith a very low dose focused.

Steven (00:48:29):

Right. And physiologically what's happening?

James (00:48:31):

That's a good question. Probably when we scan those, the median nerve gets swollen, gets oedematous, is there probably some element of reducing that oedema in the tissue? Probably. But there's a protocol for which is three sessions over six weeks I think, and it's pretty good evidence. There's a couple of trials done on that. Yeah.

Steven (00:48:51):

Okay. Should we move a couple of paces to the other side and have a look at ultrasound scanner?

James (00:49:01):

So the reason why I bought this, which is a larger version of my machine behind me, is that the more, the thing about the focused shockwave is that it's targeted, which is why it's focused. So it's helpful to know the anatomy. So I brought this along today just because when I do the teaching of this, I always couple it with this now because this helps you understand the surface anatomy of what we're trying to do.

I mean my career has changed in that at least 50% of my world is now tendons. And so this is almost being responsible. I see so much of it is that I want to know the state of the tendon before I treat it and take them on. And this is if anyone's interested in doing something midlife crisis like I did do the MSK sonography. Yeah, the PG cert on sonography.

Steven (00:49:57):

You said it was a hard course.

James (00:49:58):

It's the hardest thing I've ever done. Yeah, sure. It's one year and it's really difficult. No, but almost full-time with the amount of scanning you have to do to get signed off to say that you have got this case accredited qualification, really difficult and yeah, taxing. But that's probably only because I'm 50 and it was pretty hard work. I'm getting old, but it's been the best thing I've done though because the way that it's progressed my career and given me a

lift again, things get a bit stale. This has just been the most exciting, great thing I do. Yeah, I pontificate all the time about this.

Steven (00:50:28):

Shall we introduce our patient to the waiting audience. John, thank you for coming in and sitting ready and willing. Would you like to come and take a pew up here?

James (00:50:35):

Come and have a sit sir. Okay,

Steven (00:50:38):

I'll leave you to explain what's going on with John. He does have a shoulder Problem.

James (00:50:42):

I've got a pen to hand. Yeah, he's got, I think your shoulder is this side, is that right? So we will scan the left one. We might look at the right one, but I'm taking you through a protocol about how I would treat it. The two shoulder problemss that we can see with shockwave that has got good evidence is frozen shoulder and calcific tendonitis of the shoulder

With the calcific one. 80% of the calcific lumps are in supraspinatus. But I remember before I got into this thinking, I knew the anatomy of the shoulder and then I realised I didn't really the sort of where you're prodding it around thinking what am I on there? Is that the biceps tendon and so forth. So I use this to guide. So I always scan it first, confirm obviously if there's a calcific lump, and then I use this as a sort of little aid memoir. So then I treat it lying down, which I'll show you in a second. Okay, so if we just have a stab at looking at your shoulder, as long as you get all the right bits in the right places. So if we can pop your hand into this position.

James (00:51:47):

So this is an interesting point in hand. So when people think about the biceps tendon, that's the first thing we always scan when we see a shoulder.

So that is the biceps tendon in the middle. So we're looking at the top of the humerus. That little fellow there is his biceps tend, but most people, if I'd put him into this position and thought about the biceps tend and I'd have gone a lot more medial. Can you see that? I'd have been probably stepping around in here, but actually with him because anatomically a bit different. He's one of those that's quite lateral. So you can see where my transducer is I think on the camera. And so that's his biceps tendon. And if we come down, you'll see the biceps tendon then starts to sit on its own and this little space here starts to pop up.

Steven (00:52:29):

So just guide us again. Medial and lateral.

James (00:52:33):

Left side of the screen is this side of him laterally. I move it that way. He's got a little bit of fluids. A fluid on an ultrasound is the darkness around the tendon. That's not unusual. That's nothing to do with the tendon. That's fluid that can occasionally seep down from the joint above. If there's a bit of inflammation

James (00:53:01):

So we've got over the top. All of this is deltoid with skin at the top. So the sound wave's coming in, it's hitting bone, hitting different tissues and then bouncing back up and the transducer is measuring what's bouncing back to it. That's how ultrasound and effect works. So if we go down through the tendon then becomes separate from the little groove it's in. So that's it there and that's the pec tendon coming in, which gives it a little superficial lid to keep it in place. And then if we turn it around this way, what we call a longitudinal view, we can see that that's the tendon just in there, little thin fibrillar pattern running through the tendon. We can come all the way down, follow it until eventually you'll see it turn into that nice fusiform biceps because that's the bicep muscle there. So when we come back up and look at the shoulder, what we are looking at really is the rotator cuff. That's the exciting stuff. And his internal rotator, his subscapularis is now all of this on here and we can see, interestingly enough, it's almost like he's the perfect patient.

Steven (00:53:59):

This is so much clearer than the ultrasound scanners that people tried to sell us 10 years ago.

James (00:54:06):

Yeah, for sure.

Steven (00:54:07):

I wouldn't have been able to make head to tail of them. But the picture here with a bit of practice, I could work this out.

James (00:54:11):

You could. Yeah. And the nice thing about ultrasound as well is we can now, so we can see that's an internal rotator because we can actually get him to move. And then we can see that just coming into shot is the biceps again there and as we come out, that's his subscapular tendon doing the movement. If we come even further medially, we'll pick up the coracoid process in a minute, which is just off screen. So how we measure things here. So what we want to do with the frozen shoulder's, start with that is that as we come out here, just hold that for me there. If I can get just that perfect. This tissue just off screen coming in here is the coraco humeral ligament. So when we look at frozen shoulder and we take 'em into external rotation and they're limited in external rotation, you can see why that bit of tissue there when it stiffens up and thickens would prevent that movement. You can see it extend there, can't you?

(00:55:07):

And as it comes back, it slackens off and then extends the coraco humoral ligament is that bit of the capsule that we want to affect change when we are doing the shockwave part of the protocol of shockwave for frozen shoulder is anterior capsule for half the treatment and posterior capsule for the other half. So that's where I get my pen out. I can see that my transducer has got little arrow in the middle. So if I get that right in the middle of the screen, I draw out a crude arrow and try not to get gel around it and I can come in from the side, and I can then draw a line. When he's lying on his back in a minute, I can know that that point there is the point where I need to put either the focused or the radial. Does that make sense?

James (00:56:11):

That was a lovely bit. So we looked at subscapularis and we can see these, if you don't mind me saying, age related changes. So we've got these little bits here which are just where the tendon has pulled away a little bit from the bone. And then if we look at his supraspinatus and his hand on his back and the supraspinatus comes from the supraspinous fossa comes around the shoulder in this direction, which is the bit that everyone gets. So this is a modified Crass. So we do this position to treat as well in some situations where we want to affect change to the calcific tendon. So we can see on here, that's his supraspinatus, this grey beak looking thing. So his greater tuberosity is this little bit here. So if we can blow that up, we can get a good look at actually his rather healthy looking supraspinatus. It's healthy, we know because it is really uniformly grey. We call it homogenous.

James (00:57:05):

An homogenous look on ultrasound is great. We've got the bursa over the top, which is here, nothing too bad. And then we've got deltoid over the top of that still.

Steven (00:57:12):

So the bursa there is what

James (00:57:15):

Bura is almost unidentified if I can pick it up, it's that slightly white bit over the top.

Steven (00:57:22):

And so if there was a bursitis that would be much thicker, bright, white,

James (00:57:25):

Thicker and no black actually if it's filled with fluid, black is fluid on an ultrasound. So that would show up and then we'd also then look at putting a doppler on it, which would show us lots of vascular activity in the bursa if a bursitis, right? Yeah. But we haven't got any issue With this.

Steven (00:57:39):

Well John will be very pleased to hear that part of him is healthy at least.

James (00:57:42):

Yeah, this left side supraspinatus is pretty healthy. Nothing much with that. And that's where, so in this instance what you'd see here, you'd see a big white bit and then underneath you'd see a big dark bit in a calcific tendonitis because the white of the calcium would stop the sound travelling through. So you get a gap of black underneath and then you have these white crusty formations which are the calcific lumps and they can be quite robust looking. And then again you do the drawing on there

Steven (00:58:12):

It takes a minute or two doesn't it, to get your head around the fact that the sound is going that way and bouncing back out and you think you're looking downwards on something that it's not

James (00:58:20):

Quite, yeah, it's pretty hard to get your head around. Probably the hard bit is trying to get your brain to look at it and your hand to do it without looking because I can do it without looking. Now I can move that around and go, right, I can see that and I can see that. But that takes some time getting to that point. And then you get this thing called an isotropy, which is the thing you have to really teach yourself about. So where the sound waves coming down directly onto this bit here is bouncing off this angle and a lot of it is going in this direction and therefore not coming back to the transducer. So what the machine thinks is happening is that there's nothing going on here, which is why it's dark, it's not receiving any information back. It's bouncing off.

Steven (00:58:56):

I look at it and think that must be fluid,

James (00:58:58):

Right - fluid or a tear. But because it's on the angle, I know that's an isotropy, that's just a physics thing. I can actually fill it. So if I change the angle, I can fill it and it'll be grey, you see? And then if I come off I can make it dark again, depends on my angle of my transducer. But if you have any doubt, you have to do this fiddling around to try and fill it in with grey and then you're pretty sure. So in that instance, what we would do with John is that once I've done my drawing and that sort of stuff, I keep a bit of gel on. Could you put your hand on your back please?

James (00:59:32):

And most of the research is on radial with frozen shoulder for trying to loosen up the capsule with a bit of pain relief. So if you can slip this way a little bit, I would usually in this circumstance, but I think we've got this set up for the cameras, I'd usually be sitting on my stool, I'd take it easy and I'm going to be there for five minutes. What we want to do again is try and a little bit further this way. We try and keep him in that modified Crass position so the more the arm goes into extension, supraspinatus is pulled out from underneath the acromion and exposes more of the supraspinatus to the treatment for a calcific tendon. So we've got

to treat in this position. So what I usually would be sitting on my stool, I'd get the arm and the elbow supported, I would then I warned the patient that this was going to be a little sore.

(01:00:21):

Of course I probably wouldn't for the shoulder warn them of any bruising unless they were on blood thinners or anything such as aspirin. I'd say look, there could be a bit of bruising where we use this. And I say to the patient, the most important thing is that I want to get to a point around that shoulder, although I've marked it, and I know where I'm going. I would like your feedback. I don't want to go any more than three, four out of 10 discomfort. But I also want to get to those bits where your brain says, that's a bit of my pain. Use languages. You might think, so is that pertinent for you? And so on and so forth. So I would then gently put it on, I'd start as close as I think I could get to it, what I think is the anterior capsule and then I'm trying to aim back through the shoulder almost as if I'm aiming to the back of the shoulder joint.

(01:01:11):

But the angle might then give us better feedback. There might be some bits of the angle where the patient says, I know this is not a problem. So you're going to have to pretend you go, oh, I can feel that travelling into *my* arm like it does when I've got *my* pain. And then you know that you are on a really good bit and you can focused on that with radial. There is a tricky thing that you have to do is that if you keep it on one spot, when you find that spot, the pressure, the vibration disperses the gel. And so you get a big good dollop on one side that'll will stay there just off the treatment area. This is how I teach it, I dunno anybody else does. And then I can just scoop it up and move a bit of fresh bit onto the bit. That's how I do it. And then you can keep it roughly around the area for about 1500 shots. That's the protocol, and trying to reproduce their pain. That's pretty much the gold standard for all the treatments you do with shockwave is that you go, can I get to the bit where your nervous system says that's definitely the bit.

(01:02:17):

So their feedback's really crucial, but only through about four out of 10 discomfort and once you've done your 1500 shots, the protocol for frozen shoulder is if you can tip over onto your right please John, you expose the posterior capsule a bit,

James (01:02:37):

So this one would just be coming in posteriorly just behind that lump of lovely teres just as it's attaching under there. You could dig in quite deep with a radial device with the focus, you don't have to do that and you're trying to aim as if you're aiming to come through to the anterior capsule. In my mind's eye straight through. And again, this is good thick tissue at the back. So this is one of those circumstances where that's deeper in than the front. I would increase the bar, I would reduce the Hertz to get more of a bump impact into the back of the shoulder. And again with the back of the shoulder with frozen shoulder, you tend not to reproduce any of their symptoms like you would at the front. That's where the Issue is.

Steven (01:03:15):

What's the effectiveness of this for frozen shoulder? I mean most frozen shoulder treatments are very long-term - not long-term compared with the problem itself, but...

James (01:03:24):

If I had a patient that was sort of towards the end of first stage and they couldn't get their hand up to the hair, they can't use the gear stick, I'd say to them, look, four sessions is likely to get you about 25 to 50% increased function.

Steven (01:03:40):

What about that night pain? Which is so debilitating.

James (01:03:42):

I don't promise any of the pain things I promise function for this. And I say to the patient, if pain reduces as a result of also what we do, I'm really happy for you but not such a winner. But functional change, that's what you really,

Steven (01:03:59):

And after four sessions they space it how?

James (01:04:01):

Into once a week,

Steven (01:04:02):

Right?

James (01:04:02):

Yeah. And then they'll start,

Steven (01:04:04):

Is there a reason for that? Has somebody experimented with different frequencies?

James (01:04:08):

Oh, what? No, no one's really - not treatment

Well only those placebo controlled trials. Sham - it makes the same noise. They developed a machine, bang, bang, bang. I guess it's quite difficult because one is quite sore to have done, the other one would be not sore. I dunno whether the patient would pick up on that in the trial. But I mean I treat these somewhat begrudgingly I do because I think if you get it early enough, steroids are quite good and so on and so forth. They go away and have a steroid come back again. But it's a good option when they're absolutely running out of options, which is they often do. They've run out of options. You've got all you going to do. I've done some hands-on trigger point stuff, I've done all that. It's not really making a

difference. Let's have a couple of sessions, but that's probably right. I'd probably do a couple of sessions and let them say this is working, let's have another couple then that's fine.

Steven (01:04:56):

Which actually for most therapies for frozen shoulder, getting some sort of indication after two sessions is pretty much a win, isn't it?

James (01:05:02):

Yeah, for sure. But it would take a lot longer with my hands on to do that.

Steven (01:05:07):

Well we've had a couple of courses with Simeon Niel Asher, his shoulder technique and even he would say, we'll take a few more sessions than that before you start getting pain-free nights. He would emphasise the pain-free aspect. Functionality maybe a bit slower with him.

James (01:05:21):

Yeah, I mean if you put Simeon, Shockwave and a well placed steroid early on, I'll take the steroid every time for night pain. For the pain aspect - it doesn't do much for function, but that's where I sort of say, look, if we can get on top of the pain with a steroid first and then we have four sessions of shockwave, then let's do that.

Steven (01:05:43):

So putting this together, your ultrasound is telling you where there's some damage here

James (01:05:48):

Where there's a calcific tendonitis where the calcium lump is, if it is that, I think we mentioned the amount of times I get sent, patients that have got a frozen shoulder and they haven't, they've got a calcific tendonitis instead, but it's almost impossible in the examination to tell the difference. They've got loss of external rotation, they present the same and they're in absolute agony. But one has got the calcific lump in and it's not a frozen shoulder in true sense. So calcific tendonitis to the shoulder, frozen shoulder, preferably second stage when it's calmed down and not absolutely horrific then they're good candidates

Steven (01:06:19):

And easy to recognise bursitis

James (01:06:22):

On a scan. It is,

Yeah, I would say that they're really difficult as well. So a really rampant bursitis will present as a completely torn rotator cuff. They can't lift the arm, they can't do anything you think, well that's completely torn off. You scan them rotator cuff's completely fine. They've just got a really rampant bursitis. But that's the sort of thing when you start doing this you go, ah, it's

really good for rolling out that stuff and now I know what it is for five, 10 days or something and then calming down.

James (01:06:55):

So let's have a look at Achilles and just remind ourselves of the anatomy. Can you lie on your front with your feet off the end here,

So talking of the insertional achilles, which the evidence is not compelling but we often, can we just come a little bit further this way John just so your feet are off the end. That's it. Perfect.

So we can treat them but the mid substance is the one that you want to do. And we have this sort of sometimes artificial separation if you've got a mid substance tendinopathy and an insertional tendinopathy and one should also screen out the enthesitis issues to do with inflammatory arthropathies and so forth. But they often can coexist. They'll have a bit of both. So when we're scanning them, what I try and get across to patients or practitioners when I'm teaching them is that not only does the Achilles go right up into the calf and our sort of perception of what myotendinous junction is, is not often the case. So we are right down on to his insertion there. Now when I take my transducer, patients are often, people are often surprised how low down. So you can pick up there, the middle arrow on my transducer with the camera where my orange circle is now that's lower than people might imagine. Most people when they go with hands on, they're up in here as the insertion. The insertion is lower than people think, which is right where you see that little osteophytic lump at the end. So he's got that bit going on because actually the insertion here is a fibro cartilaginous insertion on Achilles. So you can get these little lifted bits of fibrocartilage at the base there. So as we sweep around, I want to show you how far you have to sweep around before you lose tendons. So that tendon is still there and you can see how far I've come around. You see that darkness there? That's anisatrophy of the tendon. So that's still tendon. Now the tendon's gone and the camera should pick up how laterally I've managed to go on this. So the tendon as it comes down is like a sock attaching to the end of the heel. It's got a really broad attachment

I can come around the other way and I can get to tendon medially that's still tendon, slivers of tendon, slivers of tendon, slivers of tendon. I'm still going and the tendon gets lost there. So I'm that far around.

(01:09:41):

So what I tend to do with these is I use lots of hands-on techniques as well as my shockwave and this gets really podgy with an enthesopathy, which is the same as insertional tendinopathy. The periosteum gets swollen, oedematous, the fibro cartilaginous bits gets oedematous and there's substance P floating around all over the place. So I think's very therapeutic, a good bit of firm massage around the calcaneus - what you thought until I just showed you was bone when it's actually tendon and I do sort of an effleurage sort of approach

James (01:10:17):

There're often very sweet spots of tenderness around here where you get little pockets of inflammatory gunk sitting in those tissues and just clearing that out and then doing some

stretching afterwards and mobilising into dorsiflexion. They get off the table and I haven't used the shockwave device yet because that's not great evidence for an insertional. They're really good and a mid substance can be anywhere. When we're coming into this bit here, this is all the achilles here, this stripy stuff. And below it is at this moment in time fat. So this is all the Kager's fat pad. There's a retro calcaneal bursa that sits there that's often inflamed and grumpy with a condition. We can see a bit of fluid in the bursa just there on that screenshot

James (01:11:07):

What you often do with scanning, you see a bursa and nothing else. That's always quite interesting. They've been diagnosed with a tendon for ages and all they need is to do is wear a heeled shoe for two weeks and the problem would go. So mid substance is up there and then we come into this good looking bit, which is down below. This is flexor hallucis longus,

Which Is a really big muscle.

Here this is soleus and as the tendon comes up above the screen up in here, we start to get way up here a point there. That's his gastrocs way up. But the interesting thing about the Achilles, this is still Achilles all the way. So we just call it the aponeurosis at this point. And you can see as I keep coming up, you can see how the whole thing is just one network of collagen, the Achilles at the bottom going down the screen,

That's gastrocs at the top and soleus underneath. So there's gastrocs and so you get a good view of everything. Obviously you would do the ultrasound, but this is where then you pick up tears when this bit where it becomes the calf, but the whole thing could be a problem. So you come down, mid substance is roughly this bit about an inch above the actual, that's a mid substance problem. That's where you get swelling thickness. This is in short axis, so I'm just, you're looking at the tendon down through itself there. So that's the tendon there at the top

And you can see it's got this lovely twist if I do that, can you see it twist?

Now that's a really brilliant piece of evolution.

Something else, isn't it? Thet detail literally is twisted to give strength. So you can see those little collagen fibres just twisting down

Steven (01:12:57):

And we're looking at the twist going on just up here as you

James (01:12:59):

Move. Exactly right. So as it comes down onto the heel, the lateral gastrocs will attach medially and the medial gastrocs attaches laterally to give you that spiral action, which gives you the strength. It's always funky stuff there.

Steven (01:13:14):

James, we're going to have to go and sit down and just finish up a few questions I'm afraid. Let me just see if I can run through these things. Lawrence says, if the treatment reproduces

the pain, is the principle of its treatment homoeopathic, the treatment causing the symptoms it intends to treat.

James (01:13:51):

Nope.

Steven (01:13:54):

And I think it's possibly the same. Lawrence says, is shockwave therapy curative? Then if things can recur, it suggests that what they're doing is an inherent cause. Does it only work on the C fibres carrying the pain?

James (01:14:09):

The last bit of that's quite interesting. The pain experience with focused shockwave is much more of a deeper sense. I think that's probably a delta fibre activation, sclerotomal pain.

James (01:14:19):

It gets right into where the tendon interface with the bone is. Radial is much more a C fibre superficial, ouch. But the experience of it, if you ever get a chance to experience either one, it's a very different experience. One is a deep boring pain that's slightly unpleasant and the other one is a C fibre thing. But you've got, as I said, go back to the start. You've got to do the corrections to the mechanics. You've got to get them understanding that tendons transmit load and they should have the confidence to do it, but they need to build up slowly, otherwise they'll come back and see you with another tendon problem. So the education bit is hugely important. I've got a whiteboard in my room and tell them everything to do with controlling blood sugars to all sorts of things and then hopefully they don't come back.

Steven (01:15:00):

Okay, Morgan: how effective are we going to be still using shockwave without the imaging aspect?

James (01:15:07):

Pretty effective. I mean it's a corroborative thing. Usually I've got to the point where I pretty much know that this is what it is from the clinical history.

This Is just a bog standard chronic tendonopathy.

Steven (01:15:20):

You said over there, this looks like a tendinopathy, but actually it’s a raging bursitis

James (01:15:24):

Oh yeah, for sure. There are the occasions they're not.

Steven (01:15:28):

Would you know that pretty quickly if you started treatment?

James (01:15:32):

Probably wouldn't. Because what you tend to say is that I need to see you three times and then about three or four weeks after your third last treatment, that would be when you know that you're starting to really improve. It takes a bit of time to build up. But there are occasions where I've a retrocalcaneal bursa as a standalone issue and it had been diagnosed as tendinopathy. So there you're probably going to miss a few, but not many. Yeah,

Steven (01:16:07):

You are only using this, I take it for tendinopathy type problems.

James (01:16:11):

The ultrasound?

Steven (01:16:12):

Yeah, sorry, the ultrasound mostly. Do you also use it for skeletal problems? I mean for if someone says, I've got a lump here. Let's say lump on the sternum or something.

James (01:16:23):

No. So the MSK sonography postgraduate course to say you are qualified and so forth is purely MSK stuff. So lumps and bumps is a separate module, not in any way to do with me because of the false positives, false negatives really

No, thank you. I don't want to say that that's benign. That's not for me,

Steven (01:16:45):

Is it a useful imaging technique for things like that? better than x-ray?

James (01:16:55):

Lumps and bumps it’s the best. Yeah, yeah, absolutely. I mean for MSK, like a shoulder is about 95% as accurate as an MRI. But how cheap and how accessible is that for most patients? When it gets to the knee and seeing knee arthritis, it's not that great, but it's good for superficial ligaments and that sort of stuff. You can't see inside the knee. It depends on what joint you're talking about. But for the Achilles, it's absolutely spot on. It's nearly as good as an MRI again. So if you had to pick two areas, Achilles and shoulders, which happen to be one of the more common things, most of my weak is spent doing those two things.

Steven (01:17:27):

Spinal stuff. Is any good at recognising discs?

James (01:17:29):

No. Nothing at all. No.

Steven (01:17:31):

Claire's asked me to remind those watching that these machines seem really expensive. We were talking about was it seven or eight K for the radial and 20 to 30 for the focused shockwave. She said, if you're interested in buying them, make sure that you do look out for grants. And she's very happy to help you with finding grants if you are interested in that. But I also mentioned earlier on that when you do the sums on this, if you buy a 30 K machine and you're charging a hundred pounds for a treatment, so So we're now into, what is that, 300 treatments to pay for the machine? Well actually, if a patient is having five treatments, so now we're looking at 60 patients. So after 60 patients, you paid for the machine and actually a treatment's going to take you 15 minutes.

James (01:18:23):

All my sessions are half an hour, half education around it. But yeah, you're right. I can get through a third treatment in when I've done most of.

Steven (01:18:28):

So we are not here to do the sums for people. No, just to put it into perspective, a lot of people will look at that and say, I can't afford 30 K.

James (01:18:35):

Yeah,

Steven (01:18:35):

Sure. But actually when you think that, is it useful, does it do something you can't do with your thumbs? Can it do it more effectively than you can do with your thumbs? And is there a market for it? Well, there's clearly a market for it because every sportsman in the world, as soon as there's anything going wrong, wants shockwave, it seems to me these days it's definitely worth considering. And you would pay off the, you probably owe £35k for the machine if you've got a loan for it or something like that. But it's still very manageable, isn't it?

James (01:19:02):

It is. And my perspective is, well, and I've got a multidisciplinary practice, so I've got a great physio, got a couple osteopath, sports therapist and so forth. So what it does do is it feeds lots of other work within the clinic. So we do the graded loading that I pass them onto my physio so you get other sessions out of it. If we're talking just businesswise, not just actually treatment with the machine. So people will see you for these conditions because you become an expert in those conditions

Shockwave is a part of it. But yeah, I've what I say, I've got three focused devices and a radial device. There's a lot of money spent, but I mostly pay them off within a year easily. And that one, my focused device has been five years with me now. The radial has been 10 years with me now they don't really go wrong. I can't speak for any other, manufacturer

Steven (01:19:46):

The maintenance costs?

James (01:19:48):

There is maintenance costs. The focused is a bit pricey. That's about £1500 a year to change the coil because we use it a lot. So we get through the shots and the radial is not very expensive. A couple hundred quid to change that. Every million shots.

So the gun unit on the end, they've got to change the coil after a million, no 2 million shots. That's been added. That takes me about a year. But I'm very busy. Most people would about two years to get through a coil. £1500 every two years.

Steven (01:20:13):

But actually again, people will look at that headline figure, but it is relative to the number of treatments you're doing. So

James (01:20:19):

Exactly. And I see probably 15 to 20 sessions a week easily just with shockwave.

Steven (01:20:27):

Kim's raised a couple of interesting points. She says, I think this treatment would only suit some patients. The noise alone would scare them.

James (01:20:33):

Well

Steven (01:20:34):

Actually you said it's better than MRI for some things and people are scared of going in an MRI, which makes a noise. Well, for some things this would be a better option, wouldn't it?

James (01:20:41):

Oh, the ultrasound scanning.

Steven (01:20:43):

Yeah, sorry, sorry. I'm thinking ultrasound scanning, obviously shockwave here.

James (01:20:47):

No, the radial shockwave is dramatic, but you've warn the patient it's going to be a bit bang, bang. I've never really sort of thought, I don't think patients really are too bothered about it actually.

Steven (01:20:57):

Yeah, I can understand Kim's thinking there. But you can make the noise without it touching the patient. You can make it gentler to start with. Yeah,

James (01:21:07):

You do all of that stuff, high frequency, low bar, and they get used to it within five seconds. You keep reminding them. Sometimes it is just sound wave. They feel like it's electrical. It sounds like electrical – “shockwave”. They've got that perception. That's a scary title, that's a scary thing. So you have to make sure you've definitely doubled down on that. But I've never had a patient say, oh no, I don't like the sound of that. I'm not going to have it done.

Steven (01:21:27):

Kim also says three things she says, says, we need to know the possible adverse effect on patients to inform them. Well, we talked about adverse effects earlier on. There were relatively few

James (01:21:35):

Bruising and increased pain for a couple of days.

Steven (01:21:38):

We've had to that we've about tendon rupture if you used it in the wrong Cases

James (01:21:40):

That was a one-off weird situation. But that was just sort of pointing that out that people are starting to use it in acute cases now and we don't have any evidence really for that.

Steven (01:21:47):

And then Kim says, is there a recommended list of specialists? What qualifications would they have to have to be insured? Now if I just deal with that last one, if you buy one of these machines and you've done whatever course goes with that machine, certainly the insurers we recommend here, BGI, they will cover you for it.

Steven (01:22:03):

If you've had the training, they'll cover you for what you're trained for. So the insurance is not an issue, but the list of recommended practitioners, qualified practitioners, is that available somewhere?

James (01:22:12):

There isn't a specific list. There isn't any particular regulation in this country about who can and who can't use it. Do I have a particular problem with that? A little bit. Maybe in Europe, particularly in Germany, I'm thinking of that the biggest users of this, you have to be use a focused device, you have to be a medic, you have to be a doctor. Osteopath and physios would use a radio device. But there isn't anything as a list, per se, a regulated list in this country. For the users. No.

Steven (01:22:36):

Yeah. Sorry, I'm rushing through these as quickly as I can. Dave says the overuse of shockwave or any modality for that matter is in his opinion, a big part of the reason things have low evidence. If you overuse it outside the proper use cases, naturally it's going to be less effective. I think I see what he means. He's saying if you throw somebody under a shockwave machine every time they come to a clinic, a lot of people are not going to get better it’s not the right thing. And all of these interventions, including our thumbs, if you use 'em on the wrong patients, you're not going to get good outcomes are you? So he might be right. Maybe that's why

James (01:23:10):

He's right to a certain extent.

Steven (01:23:11):

The evidence is quite good for some things.

James (01:23:14):

The evidence is really good for about five or six things. Insertional, Achilles, which is what I just mentioned, it is not good. Anyway, we knew this and I would never use a radial device for an insertional and they used a radial device for that trial. So for those that know, I'm like, well, I expected that to be terrible,

James (01:23:32):

But It still became a thing on social media that it's now got no evidence. I'm like steady on. It's not something you'd want to do anyway.

Steven (01:23:37):

That's one big lesson we should all have learned. Don't trust social Media

James (01:23:40):

The guy that did it and the trial was all very good, but it was out of place. I don't see much reason for them doing it, to be honest.

Steven (01:23:48):

Morgan mentioned about teaching and whether you run courses, and we will send details out afterwards, but just quickly run us through whatever courses that you offer.

James (01:23:58):

I do do some separate teaching myself. I've been known to go to clinics where they've got usually a higher number of patients that clinicians using a machine. I can do in clinic training occasionally, but most of my training is done through Ven Healthcare, which is going to be, I think linked. We will send the link mostly I do the advanced stuff these days. I'm getting old, but we run everything through Ven Healthcare

Steven (01:24:21):

And it was Ven Healthcare who provided the machines for the evening Demonstration and Who I was trying to annoy earlier on by saying that they were low end.

James (01:24:29):

Low end stuff.

Steven (01:24:30):

Did it take you long to decide to buy one of these things?

James (01:24:32):

2013, I had a friend who worked for Chattanooga who had a re-badge, one of these, and I had it on loan for three months and I had a whole host of plantar fasciitis patients that I was trying on. Got some amazing responses. And I tried everything up until that point and I was like, wow. So then I did some research and discovered that storts are the pretty much the best. So I bought Stortz in late 2013. I still have the same machine, which only speaks, I suppose, of the quality of it. I mean, I don't get paid to say that, by the way, but there are a number of Chinese manufacturers. There are a few others that exist, and most people do three or four years down the line regret buying them.

Steven (01:25:12):

Well, that was going to be my next question. I mean, we've talked about what you could describe as the Mercedes, not the Rolls-Royce, but the Mercedes of the shockwave market, which are the ones that people should avoid if they're considering?

James (01:25:23):

Oh, anything with a Chinese brand. I mean, just trying to get, there's no data on that to say that CE marked is stortz. There is another company called Swiss Dollar class. Everyone knows who it's, you can just Google it. So I'm not saying anything I shouldn't, but they are the other good radial device manufacturer, but they don't make a focused device. There's a Pizo electric device by Wolf that's very good, but it's very big. That's pretty much it. Wolf, Swiss dollar. Anything outside of that is getting a little hazy in terms of the evidence that they have for their machines. And also you get to hear these things over the years. The support that you get from if things go wrong, all starts to go a bit. And if your machine breaks down, you want it fixed the next day. You've got a list coming in, patients in, and then healthcare to be credit to them and thoughts that you are covered. That's just what it's, but it will cost you.

Steven (01:26:16):

So they don't challenge you to come out. If it goes wrong, they come out.

James (01:26:18):

Well, there are warranties that you can get there are that right. But it's the speed at which they do. Lots of other companies are not big enough to have their own support network. But

Ven Health there have got service people all travelling around the country all the time and they'll sort you out. Yeah.

Steven (01:26:32):

I've got just time to address this question, which has come in from Morgan who says that he or she must really undercharge for the shockwave charges the same as an osteopathic session for an osteo session as a standalone session. I think we get the point there. If I incorporate it with an osteos, I only charge an extra 10 quid for the shockwave.

James (01:26:51):

Right?

Steven (01:26:53):

So I'm thinking, do you have to be an osteopath to administer shockwave?

James (01:26:56):

No.

Steven (01:27:00):

What sort of qualification would you expect in someone?

James (01:27:04):

I've taught some very good sports therapists. I'm fine with that. I think that's okay. Physio osteo chiro, it's not super complicated in itself. Patient selection gets complicated. If you want good results, you need to be good at patient selection. But even that one, I said to you, look, if you've got a problem from more than three months, have you tried other stuff and you're not getting better and we're pretty sure it's a tendon problem, then you can make it quite easy like that. Really,

Steven (01:27:34):

Morgan doesn't get any details, but says that their shockwave machine was £7,000 from EMS. We don't know when that was. And says it's a shame because their osteopathic practice subsidises the machine. Well, that's not a good business model, is it? And I'm just thinking, I went through my rough calculations earlier on and it should pay for itself pretty damn quickly if you've got patients coming in after which the money is yours as a practitioner, rather than just paying for the bloody machine. Some set aside for the maintenance cost and so on. So maybe Morgan needs to talk to you about How she price sets

Steven (01:28:27):

I'd be surprised if you don't get some people asking for more information coming from courses and things like that. And one thing I didn't ask you, how much is the ultrasound machine?

James (01:28:36):

That's the middle of the range? That was £25k I think. That's portable. That's why I've got it. It's one of the better edge portable ones. Yeah.

Steven (01:28:44):

And if you've got to buy one or the other radial or focused?

James (01:28:46):

Focused. Focused.

Steven (01:28:47):

Yeah. Okay. Brilliant. Thank you for your time.

James (01:28:50):

Pleasure. Thanks for having me again. It's been fascinating. It's been great fun as well.