

1
00:00:00,000 --> 00:00:07,830
[Music]This is Mayo Clinic
Talks, a curated

2
00:00:07,830 --> 00:00:09,030
weekly podcast for

3
00:00:09,030 --> 00:00:11,325
physicians and
healthcare providers.

4
00:00:11,325 --> 00:00:13,425
I'm your host,
Darryl Chutka,

5
00:00:13,425 --> 00:00:14,685
a general internist at

6
00:00:14,685 --> 00:00:17,040
Mayo Clinic in
Rochester, Minnesota.

7
00:00:17,040 --> 00:00:21,045
Reticular leg pain can
be really frustrating.

8
00:00:21,045 --> 00:00:22,710
There are a variety of

9
00:00:22,710 --> 00:00:23,730
musculoskeletal

10
00:00:23,730 --> 00:00:25,380
disorders that
can produce it.

11
00:00:25,380 --> 00:00:27,690
And pinning down a
specific cause for

12
00:00:27,690 --> 00:00:31,100
the symptoms can be

extremely challenging.

13
00:00:31,100 --> 00:00:34,385
Lumbar radiculopathy,
trochanteric bursitis,

14
00:00:34,385 --> 00:00:36,440
sciatica, hip arthritis,

15
00:00:36,440 --> 00:00:39,230
are just a few conditions
we need to consider.

16
00:00:39,230 --> 00:00:40,640
So to help us through

17
00:00:40,640 --> 00:00:42,050
this difficult terrain we

18
00:00:42,050 --> 00:00:43,460
have with us today Dr.

19
00:00:43,460 --> 00:00:45,770
Jonathan Finnoff,
a physiatrist in

20
00:00:45,770 --> 00:00:47,300
sports medicine
physician in

21
00:00:47,300 --> 00:00:48,380
the Department of Physical

22
00:00:48,380 --> 00:00:49,700
Medicine and Rehabilitation

23
00:00:49,700 --> 00:00:50,945
at the Mayo Clinic.

24
00:00:50,945 --> 00:00:53,149
Jon, thanks for
being here today.

25
00:00:53,149 --> 00:00:55,714
Finnoff: My pleasure. Thanks
for inviting me.

26
00:00:55,714 --> 00:00:57,920
Chutka: Well, Jon, I want
to try a different type

27
00:00:57,920 --> 00:00:59,120
of podcast today.

28
00:00:59,120 --> 00:01:00,260
Normally I'd just ask

29
00:01:00,260 --> 00:01:01,580
questions to our guests,

30
00:01:01,580 --> 00:01:04,160
but I would like to
run through a case,

31
00:01:04,160 --> 00:01:06,200
this is a real
case with you, and

32
00:01:06,200 --> 00:01:09,484
then ask your comments
along the way.

33
00:01:09,484 --> 00:01:11,134
Finnoff: That sounds good to me.

34
00:01:11,134 --> 00:01:12,950
Chutka: Alright, so
the patient is

35
00:01:12,950 --> 00:01:14,795
a 60 year old male and

36
00:01:14,795 --> 00:01:17,075
he's actually a

physician here at Mayo.

37
00:01:17,075 --> 00:01:20,555
And he developed right
radicular leg pain.

38
00:01:20,555 --> 00:01:22,070
The only significant past

39
00:01:22,070 --> 00:01:23,660
medical history
is that he had

40
00:01:23,660 --> 00:01:25,805
a left cervical
radiculopathy

41
00:01:25,805 --> 00:01:28,160
which resolved with
conservative treatment.

42
00:01:28,160 --> 00:01:30,050
And this occurred
several years prior to

43
00:01:30,050 --> 00:01:33,260
this episode of right
radicular leg pain.

44
00:01:33,260 --> 00:01:36,470
So his symptoms developed
after he started

45
00:01:36,470 --> 00:01:38,030
increasing use of
his treadmill from

46
00:01:38,030 --> 00:01:39,980
30 to 60 minutes per day.

47
00:01:39,980 --> 00:01:42,980
And after about six
months of these symptoms,

48
00:01:42,980 --> 00:01:45,155
he presented to orthopedics

49
00:01:45,155 --> 00:01:46,760
and he had actually done

50
00:01:46,760 --> 00:01:48,620
some research on
his symptoms and he

51
00:01:48,620 --> 00:01:51,005
thought he had
piriformis syndrome.

52
00:01:51,005 --> 00:01:52,640
So that's when he
went in orthopedics

53
00:01:52,640 --> 00:01:54,380
with. So Jon,

54
00:01:54,380 --> 00:01:56,180
what is piriformis syndrome

55
00:01:56,180 --> 00:01:58,174
and how does it present?

56
00:01:58,174 --> 00:02:01,550
Finnoff: So the
piriformis muscle can

57
00:02:01,550 --> 00:02:04,700
cause pain
locally or it can

58
00:02:04,700 --> 00:02:06,395
be a syndrome where it's

59
00:02:06,395 --> 00:02:08,270
actually compressing the
sciatic nerve

60
00:02:08,270 --> 00:02:10,130
and causing pain radiating

61
00:02:10,130 --> 00:02:12,365
down the leg and
neurologic symptoms.

62
00:02:12,365 --> 00:02:16,580
And so standard piriformis
myofascial pain

63
00:02:16,580 --> 00:02:19,250
will be a deep
aching buttock pain.

64
00:02:19,250 --> 00:02:20,690
Often it happens when

65
00:02:20,690 --> 00:02:21,920
you're doing transitions

66
00:02:21,920 --> 00:02:24,350
of movement from
sitting to standing.

67
00:02:24,350 --> 00:02:26,570
It can hurt with
prolonged walking

68
00:02:26,570 --> 00:02:28,520
and it's really
annoying for patients,

69
00:02:28,520 --> 00:02:29,570
but it's not
associated with

70
00:02:29,570 --> 00:02:31,490
any numbness or tingling.

71
00:02:31,490 --> 00:02:32,600

They'll often hurt with

72
00:02:32,600 --> 00:02:34,700
direct pressure
in the area or

73
00:02:34,700 --> 00:02:36,740
either activating
or stretching that

74
00:02:36,740 --> 00:02:38,345
piriformis muscle.

75
00:02:38,345 --> 00:02:41,540
Whereas piriformis
syndrome can

76
00:02:41,540 --> 00:02:43,820
either be from the nerve
passing underneath

77
00:02:43,820 --> 00:02:45,950
a tight piriformis
so it gets pushed

78
00:02:45,950 --> 00:02:48,560
on or possibly the nerve

79
00:02:48,560 --> 00:02:50,960
piercing through
the piriformis

80
00:02:50,960 --> 00:02:52,160
and getting
entrapped within

81
00:02:52,160 --> 00:02:54,110
the muscle itself
or compressed

82
00:02:54,110 --> 00:02:56,390
by a fibrous band
within the muscle.

83
00:02:56,390 --> 00:02:57,590
And so those people will

84
00:02:57,590 --> 00:02:58,550
have that buttock pain,

85
00:02:58,550 --> 00:03:01,925
but also the
typical sciatica

86
00:03:01,925 --> 00:03:04,985
that would mimic
a radiculopathy,

87
00:03:04,985 --> 00:03:06,530
but it would be
brought on by

88
00:03:06,530 --> 00:03:08,180
similar things to
what I talked about

89
00:03:08,180 --> 00:03:09,530
piriformis syndrome before

90
00:03:09,530 --> 00:03:11,060
as opposed to
radiculopathy,

91
00:03:11,060 --> 00:03:13,774
which is brought on
more with sitting.

92
00:03:13,774 --> 00:03:16,235
Chutka: Okay. Well, this patient

93
00:03:16,235 --> 00:03:18,410
described right gluteal pain

94
00:03:18,410 --> 00:03:19,730
radiating into the right

95
00:03:19,730 --> 00:03:21,350
posterior and lateral thigh

96
00:03:21,350 --> 00:03:23,390
and actually down
into the calf.

97
00:03:23,390 --> 00:03:25,610
And the gluteal
pain was present

98
00:03:25,610 --> 00:03:28,445
primarily with walking
and with sitting.

99
00:03:28,445 --> 00:03:29,900
The pain was improved

100
00:03:29,900 --> 00:03:31,460
by shifting positions while

101
00:03:31,460 --> 00:03:33,050
sitting or standing with

102
00:03:33,050 --> 00:03:34,160
the right leg in somewhat

103
00:03:34,160 --> 00:03:35,900
of an external rotation.

104
00:03:35,900 --> 00:03:37,805
There was no back pain,

105
00:03:37,805 --> 00:03:40,460
no lower extremity
weakness, no paraesthesias,

106
00:03:40,460 --> 00:03:41,330
no change in bowel

107

00:03:41,330 --> 00:03:44,614
or bladder
dysfunction. Exam,

108
00:03:44,614 --> 00:03:46,760
spine inspection
and palpation, all

109
00:03:46,760 --> 00:03:48,050
Normal. Range of

110
00:03:48,050 --> 00:03:49,340
motion in the
lower extremities,

111
00:03:49,340 --> 00:03:50,375
normal strength,

112
00:03:50,375 --> 00:03:52,580
lower extremities
and gait was normal.

113
00:03:52,580 --> 00:03:54,215
Deep tendon reflexes

114
00:03:54,215 --> 00:03:56,270
equal and symmetric
in lower extremities.

115
00:03:56,270 --> 00:03:58,805
Plantar reflex going down
going bilaterally.

116
00:03:58,805 --> 00:04:01,325
Sensation to light
touch was normal.

117
00:04:01,325 --> 00:04:04,070
Straight leg raising 90
degrees bilaterally.

118
00:04:04,070 --> 00:04:05,800
The patient did

demonstrate 00:04:31,925 --> 00:04:34,295
caused by radiculopathy,

119 00:04:05,800 --> 00:04:08,435
some discomfort with
extreme lumbar flexion.

120 00:04:08,435 --> 00:04:11,045
So the impression of the
orthopedist was no,

121 00:04:11,045 --> 00:04:12,620
this is not
piriformis syndrome.

122 00:04:12,620 --> 00:04:13,610
You've got a lumbar

123 00:04:13,610 --> 00:04:16,025
ridiculitis and
right sciatica.

124 00:04:16,025 --> 00:04:19,519
So Jon, what is sciatica?

125 00:04:19,519 --> 00:04:22,370
Finnoff: Well, sciatica is just a
descriptive term

126 00:04:22,370 --> 00:04:24,125
for any pain that radiates

127 00:04:24,125 --> 00:04:26,180
down the leg and it
doesn't necessarily tell

128 00:04:26,180 --> 00:04:29,250
you where that pain
is coming from.

129 00:04:29,380 --> 00:04:31,925
So sciatica absolutely be

130

131 00:04:34,295 --> 00:04:38,000
via herniated disc or facet

132 00:04:38,000 --> 00:04:39,890
arthropathy that
causes neural foraminal

133 00:04:39,890 --> 00:04:42,230
stenosis and cause
radiculopathy

134 00:04:42,230 --> 00:04:43,520
or it can be central canal

135 00:04:43,520 --> 00:04:45,245
stenosis that can cause

136 00:04:45,245 --> 00:04:47,345
multiple different
nerve roots

137 00:04:47,345 --> 00:04:49,190
to be compressed,

138 00:04:49,190 --> 00:04:51,500
but it also can be from

139 00:04:51,500 --> 00:04:54,170
entrapment of a nerve
distal to that area.

140 00:04:54,170 --> 00:04:56,060
So in the buttock region,

141 00:04:56,060 --> 00:04:57,110
just like we talked about

142 00:04:57,110 --> 00:04:58,520
with piriformis syndrome,

143
00:04:58,520 --> 00:05:00,740
that will cause very
similar symptoms

144
00:05:00,740 --> 00:05:02,540
radiating down the leg.

145
00:05:02,540 --> 00:05:04,400
But each of these do have

146
00:05:04,400 --> 00:05:07,520
some different, different
characteristics.

147
00:05:07,520 --> 00:05:09,830
You can have a normal

148
00:05:09,830 --> 00:05:11,810
neurologic examination
with any of these,

149
00:05:11,810 --> 00:05:12,950
but most of them,

150
00:05:12,950 --> 00:05:15,590
if you have nerve
involvement it is irritated,

151
00:05:15,590 --> 00:05:17,820
it's radiculitis,

152
00:05:17,860 --> 00:05:19,850
then they'll usually have

153
00:05:19,850 --> 00:05:21,050
a positive slump test.

154
00:05:21,050 --> 00:05:22,190
And so that's one
of the things that

155
00:05:22,190 --> 00:05:23,750
I will often do and it's

156
00:05:23,750 --> 00:05:27,380
just one of the different
dural tension tests.

157
00:05:27,380 --> 00:05:30,350
You have them sitting on an
examination table.

158
00:05:30,350 --> 00:05:32,180
They put their hands
behind their back.

159
00:05:32,180 --> 00:05:34,040
They slump down
through their trunk

160
00:05:34,040 --> 00:05:36,110
and tuck their chin
down to their chest.

161
00:05:36,110 --> 00:05:38,464
And while they're
in that position,

162
00:05:38,464 --> 00:05:41,330
you straighten out the leg

163
00:05:41,330 --> 00:05:43,250
on the side of
their symptoms.

164
00:05:43,250 --> 00:05:45,440
So if they're in a
seated position

165
00:05:45,440 --> 00:05:46,670
initially, then their knees

166
00:05:46,670 --> 00:05:47,750

are bent at 90 degrees.

167
00:05:47,750 --> 00:05:48,890
But you start to straighten

168
00:05:48,890 --> 00:05:50,975
that knee and they'll start

169
00:05:50,975 --> 00:05:52,520
having their
ridiculous symptoms

170
00:05:52,520 --> 00:05:54,500
radiating down
into the leg.

171
00:05:54,500 --> 00:05:56,960
And then you'd have them
tip their head back

172
00:05:56,960 --> 00:05:58,430
while keeping
everything else

173
00:05:58,430 --> 00:05:59,810
in the exact same position.

174
00:05:59,810 --> 00:06:00,920
You're not, not

175
00:06:00,920 --> 00:06:02,600
changing their
hamstring tension.

176
00:06:02,600 --> 00:06:04,385
You're not changing
their back,

177
00:06:04,385 --> 00:06:06,320
you're just
tipping their head

178

00:06:06,320 --> 00:06:08,405
back and if their
symptoms go away,

179
00:06:08,405 --> 00:06:10,700
then that's suggestive
that within

180
00:06:10,700 --> 00:06:12,920
their nerve system they

181
00:06:12,920 --> 00:06:14,510
have irritation

182
00:06:14,510 --> 00:06:15,920
of the nerves going
down into their legs.

183
00:06:15,920 --> 00:06:18,395
And so I use that as
a sensitive test

184
00:06:18,395 --> 00:06:22,745
for any type of
pinched nerve,

185
00:06:22,745 --> 00:06:24,230
whether it's in
the buttock area

186
00:06:24,230 --> 00:06:25,805
or in the back.

187
00:06:25,805 --> 00:06:27,440
And then I, you know,

188
00:06:27,440 --> 00:06:29,150
I would, I would talk

189
00:06:29,150 --> 00:06:30,350
to them about
their history.

190
00:06:30,350 --> 00:06:32,150
And I would, with the
physical examination

191
00:06:32,150 --> 00:06:34,190
typically with
a disk problem.

192
00:06:34,190 --> 00:06:35,600
They're going to
hurt when they lean

193
00:06:35,600 --> 00:06:37,040
forward and try to
touch their toes.

194
00:06:37,040 --> 00:06:39,590
So flexion based or
with siting,

195
00:06:39,590 --> 00:06:41,585
they'll feel better
with extension,

196
00:06:41,585 --> 00:06:42,785
but usually they're not
going to hurt

197
00:06:42,785 --> 00:06:44,540
when you palpate
their piriformis.

198
00:06:44,540 --> 00:06:45,230
They're not going to hurt

199
00:06:45,230 --> 00:06:47,675
when you stretch their
piriformis,

200
00:06:47,675 --> 00:06:51,320
which would be pulling
their hip into

201
00:06:51,320 --> 00:06:53,390
an internally
rotated position

202
00:06:53,390 --> 00:06:55,670
or when they activate it.

203
00:06:55,670 --> 00:06:56,840
So one of the things
that we do to

204
00:06:56,840 --> 00:06:58,550
activate it is to have
people get into

205
00:06:58,550 --> 00:07:00,560
a quadruped position and

206
00:07:00,560 --> 00:07:01,820
then lift up their leg like

207
00:07:01,820 --> 00:07:05,390
their, their dog urinating
on a fire hydrant,

208
00:07:05,390 --> 00:07:07,490
the fire hydrant
test, and then

209
00:07:07,490 --> 00:07:08,840
pushing down on their leg

210
00:07:08,840 --> 00:07:10,040
and having them
resist. And

211
00:07:10,040 --> 00:07:12,035
so if they have pain with

212
00:07:12,035 --> 00:07:15,575
that and deep palpation
in the piriformis,

213
00:07:15,575 --> 00:07:17,900
and they have a positive
dural tension test,

214
00:07:17,900 --> 00:07:19,235
then I, I'd be thinking

215
00:07:19,235 --> 00:07:21,995
piriformis is one of
the central issues.

216
00:07:21,995 --> 00:07:24,965
I would still image
their back because

217
00:07:24,965 --> 00:07:27,650
I'd want to rule out
a more common cause

218
00:07:27,650 --> 00:07:29,329
which is a radiculopathy.

219
00:07:29,329 --> 00:07:30,740
Chutka: Alright. And that
is what was

220
00:07:30,740 --> 00:07:32,630
done. A lumber
spine X-ray was

221
00:07:32,630 --> 00:07:34,340
performed and it showed

222
00:07:34,340 --> 00:07:36,620
subtle narrowing of
the L4 interspace,

223
00:07:36,620 --> 00:07:38,240
degenerative
arthritic changes of

224

00:07:38,240 --> 00:07:39,140
the lumbar facet

225
00:07:39,140 --> 00:07:41,390
joints, and some
degenerative changes

226
00:07:41,390 --> 00:07:43,955
at the lumbosacral interspace.

227
00:07:43,955 --> 00:07:46,400
I think of facet
arthritis as

228
00:07:46,400 --> 00:07:48,860
a cause for localized
low back pain.

229
00:07:48,860 --> 00:07:50,720
But you kind of inferred
that that can cause

230
00:07:50,720 --> 00:07:53,434
some ridiculous symptoms
too, is that right?

231
00:07:53,434 --> 00:07:55,400
Finnoff: Yeah and the reason is
you have to facet

232
00:07:55,400 --> 00:07:56,870
arthropathy, that is

233
00:07:56,870 --> 00:07:58,340
typically going
to cause low

234
00:07:58,340 --> 00:08:00,455
back and buttock pain,

235
00:08:00,455 --> 00:08:03,770
sometimes radiating to the
posterior thigh, rarely

236
00:08:03,770 --> 00:08:05,150
below the knee and it's

237
00:08:05,150 --> 00:08:07,220
usually more
extension based.

238
00:08:07,220 --> 00:08:10,430
And we will do maneuvers like
a facet loading maneuver

239
00:08:10,430 --> 00:08:13,910
where you'll extend them,

240
00:08:13,910 --> 00:08:15,590
side bend them towards the side,

241
00:08:15,590 --> 00:08:17,300
the side of their pain,

242
00:08:17,300 --> 00:08:18,770
and then rotate them

243
00:08:18,770 --> 00:08:20,330
in the contralateral
direction.

244
00:08:20,330 --> 00:08:21,350
And all those
things are going to

245
00:08:21,350 --> 00:08:22,820
load their facet

246
00:08:22,820 --> 00:08:24,920
joint and that
will cause pain.

247
00:08:24,920 --> 00:08:28,685
But if you get a
lot of facet arthropathy

248
00:08:28,685 --> 00:08:30,890
and you get a lot

249
00:08:30,890 --> 00:08:33,740
of hypertrophy and bone
spurs in that area,

250
00:08:33,740 --> 00:08:35,690
so osteophytes and
stuff then that can

251
00:08:35,690 --> 00:08:37,310
encroach upon the
neural foramen

252
00:08:37,310 --> 00:08:38,340
that's adjacent to it

253
00:08:38,340 --> 00:08:40,190
and cause neural foraminal
stenosis.

254
00:08:40,190 --> 00:08:42,890
And so yeah, it can
cause radiculopathy,

255
00:08:42,890 --> 00:08:45,364
but that's a
secondary issue.

256
00:08:45,364 --> 00:08:47,990
Chutka: Well, additional
imaging was done.

257
00:08:47,990 --> 00:08:50,675
An MRI of the lumbar
spine was performed.

258
00:08:50,675 --> 00:08:53,300
No evidence for
spinal stenosis.

259
00:08:53,300 --> 00:08:55,880
The interspaces
between L1 and L2,

260
00:08:55,880 --> 00:08:59,085
L2 and L3 were
all negative, L3,

261
00:08:59,085 --> 00:09:02,060
L4 there was mild
facet arthropathy.

262
00:09:02,060 --> 00:09:04,760
L4 to L5, mild diffuse bulge,

263
00:09:04,760 --> 00:09:06,590
and facet
arthropathy and

264
00:09:06,590 --> 00:09:09,050
L5 to S1 spondylolysis
with interspace

265
00:09:09,050 --> 00:09:11,570
narrowing in
disk bulging. And

266
00:09:11,570 --> 00:09:13,730
both foramina at
that interspace

267
00:09:13,730 --> 00:09:16,280
were narrowly or
moderately narrowed.

268
00:09:16,280 --> 00:09:19,205
Is this MRI?

269
00:09:19,205 --> 00:09:20,989
Does that give
you the answer?

270

00:09:20,989 --> 00:09:22,850
Finnoff: Well it would suggest

271
00:09:22,850 --> 00:09:25,040
you know, that
possibly this is an

272
00:09:25,040 --> 00:09:26,360
L5 radiculopathy, if

273
00:09:26,360 --> 00:09:28,010
you have bilateral
moderate,

274
00:09:28,010 --> 00:09:31,190
moderately severe
spinal stenosis

275
00:09:31,190 --> 00:09:34,715
and you have radicular
symptoms into

276
00:09:34,715 --> 00:09:39,590
the leg than I would, that
would probably be one

277
00:09:39,590 --> 00:09:42,050
of the top differential
on my, on the top

278
00:09:42,050 --> 00:09:44,900
of my differential
diagnosis would be radicular
myelopathy.

279
00:09:44,900 --> 00:09:47,855
And you could do an
epidural injection,

280
00:09:47,855 --> 00:09:50,540
and see if that alleviated
their symptoms

281

00:09:50,540 --> 00:09:52,490
dramatically during
the anesthetic

282
00:09:52,490 --> 00:09:54,140
phase of the epidural,

283
00:09:54,140 --> 00:09:55,460
then diagnostically
that would

284
00:09:55,460 --> 00:09:57,845
confirm that's the
location of pain.

285
00:09:57,845 --> 00:09:59,375
Whereas if they didn't have

286
00:09:59,375 --> 00:10:01,940
any diagnostic
benefits during

287
00:10:01,940 --> 00:10:03,545
the local anesthetic phase

288
00:10:03,545 --> 00:10:04,160
and they didn't get

289
00:10:04,160 --> 00:10:05,855
any therapeutic
benefits, then

290
00:10:05,855 --> 00:10:07,250
that is not the cause and

291
00:10:07,250 --> 00:10:10,219
you start looking at
other potential causes.

292
00:10:10,219 --> 00:10:12,170
Chutka: While the
plan here was to

293
00:10:12,170 --> 00:10:13,970
start physical
therapy working on

294
00:10:13,970 --> 00:10:15,890
core stability
and increase the

295
00:10:15,890 --> 00:10:18,275
lower back and lower
extremity flexibility.

296
00:10:18,275 --> 00:10:21,290
And that was done.
A month passes,

297
00:10:21,290 --> 00:10:23,090
patient returns to
orthopedics for

298
00:10:23,090 --> 00:10:25,100
recheck, no
improvement. Right

299
00:10:25,100 --> 00:10:27,785
gluteal pain was probably
even a bit worse.

300
00:10:27,785 --> 00:10:29,840
The patient was now
using a pillow,

301
00:10:29,840 --> 00:10:31,190
sitting on his
office chair,

302
00:10:31,190 --> 00:10:33,125
and when riding in a car.

303
00:10:33,125 --> 00:10:35,150
He described
worsening the pain

304
00:10:35,150 --> 00:10:37,220
with coughing or bending.

305
00:10:37,220 --> 00:10:38,930
And the decision was then

306
00:10:38,930 --> 00:10:41,180
to ask neurosurgery
to look at

307
00:10:41,180 --> 00:10:43,070
the situation for question

308
00:10:43,070 --> 00:10:45,440
of lumbar sacral nerve
root compression.

309
00:10:45,440 --> 00:10:48,470
So how does a lumbar
radiculopathy

310
00:10:48,470 --> 00:10:51,529
present, is this consistent
with that?

311
00:10:51,529 --> 00:10:53,435
Finnoff: You know, some things,

312
00:10:53,435 --> 00:10:55,745
essentially, and by the way,

313
00:10:55,745 --> 00:10:57,230
there's no doubt that
I would have tried

314
00:10:57,230 --> 00:10:58,340
physical therapy before I

315
00:10:58,340 --> 00:10:59,660
did an epidural injection.

316

00:10:59,660 --> 00:11:01,010
So I think that they did

317
00:11:01,010 --> 00:11:03,005
the right course
of treatment.

318
00:11:03,005 --> 00:11:05,030
One of the issues
is there a lot

319
00:11:05,030 --> 00:11:06,710
of different causes
of radiculopathy,

320
00:11:06,710 --> 00:11:08,270
it can be from
neuroforaminal

321
00:11:08,270 --> 00:11:09,500
stenosis, which would

322
00:11:09,500 --> 00:11:10,580
essentially be the case

323
00:11:10,580 --> 00:11:12,770
in this individual,
or it can be from

324
00:11:12,770 --> 00:11:14,480
a disc herniation and they

325
00:11:14,480 --> 00:11:16,760
cause radiculopathy
which feels the same.

326
00:11:16,760 --> 00:11:18,620
But it, it, it is provoked

327
00:11:18,620 --> 00:11:21,005
by totally
different things.

328
00:11:21,005 --> 00:11:23,240
So with neuroforaminal
stenosis,

329
00:11:23,240 --> 00:11:24,815
it's going to have

330
00:11:24,815 --> 00:11:26,270
neurogenic
claudication types

331
00:11:26,270 --> 00:11:29,060
of provocative maneuvers.

332
00:11:29,060 --> 00:11:30,170
So it will hurt worse,

333
00:11:30,170 --> 00:11:31,730
typically with walking

334
00:11:31,730 --> 00:11:33,710
hurt worse walking downhill

335
00:11:33,710 --> 00:11:35,600
than uphill, will not

336
00:11:35,600 --> 00:11:37,670
have any symptoms in
a seated position,

337
00:11:37,670 --> 00:11:39,710
it'll feel better in
a seated position.

338
00:11:39,710 --> 00:11:42,440
So flexion opens
up that area,

339
00:11:42,440 --> 00:11:45,905
whereas a radiculopathy
from a disc herniation,

340
00:11:45,905 --> 00:11:47,510
they're going to
hurt more with

341
00:11:47,510 --> 00:11:49,160
sitting and with flexion.

342
00:11:49,160 --> 00:11:50,960
They're gonna feel better
when they stand up.

343
00:11:50,960 --> 00:11:52,610
Sometimes movement
actually feels

344
00:11:52,610 --> 00:11:54,740
pretty good so walking
feels good.

345
00:11:54,740 --> 00:11:56,045
And those two things

346
00:11:56,045 --> 00:11:56,870
change how you would

347
00:11:56,870 --> 00:11:57,980
approach them
from a physical

348
00:11:57,980 --> 00:11:59,720
therapy standpoint as well.

349
00:11:59,720 --> 00:12:01,490
So if you're doing
physical therapy for

350
00:12:01,490 --> 00:12:02,690
a standard radiculopathy

351
00:12:02,690 --> 00:12:03,740
from a disc herniation,

352
00:12:03,740 --> 00:12:05,419
you're gonna want to
do a lot of extension-

353
00:12:05,419 --> 00:12:07,415
based exercises,

354
00:12:07,415 --> 00:12:09,635
they call them
centralization exercises.

355
00:12:09,635 --> 00:12:10,820
So you might be in a prone

356
00:12:10,820 --> 00:12:12,560
position and
then do a press

357
00:12:12,560 --> 00:12:17,554
up, where you push up into almost
like a Cobra position.

358
00:12:17,554 --> 00:12:19,580
That's going to
cause somebody with

359
00:12:19,580 --> 00:12:21,470
spinal stenosis or

360
00:12:21,470 --> 00:12:24,200
neropforaminal stenosis,
impingement on

361
00:12:24,200 --> 00:12:26,015
their nerves, and it will worsen
their symptoms.

362
00:12:26,015 --> 00:12:27,560
So in that person,

363
00:12:27,560 --> 00:12:28,280
you're going to want to

364
00:12:28,280 --> 00:12:30,020
stretch their hip flexors

365
00:12:30,020 --> 00:12:32,750
and their latissimus dorsi.

366
00:12:32,750 --> 00:12:34,340
You're gonna strengthen
their glutes and

367
00:12:34,340 --> 00:12:35,930
their abdominal
muscles and cause

368
00:12:35,930 --> 00:12:37,835
a posterior pelvic tilt

369
00:12:37,835 --> 00:12:40,610
in order to open up
their nueroforamina.

370
00:12:40,610 --> 00:12:43,520
So very different
approaches in terms

371
00:12:43,520 --> 00:12:45,140
of how you would treat

372
00:12:45,140 --> 00:12:47,090
it from a physical
therapy standpoint,

373
00:12:47,090 --> 00:12:49,310
and then also what
would provoke it.

374
00:12:49,310 --> 00:12:52,160
So I think there
are some things on

375
00:12:52,160 --> 00:12:53,855

this person's
history that

376

00:12:53,855 --> 00:12:56,039
are still in question.

377

00:12:56,039 --> 00:12:58,435
Chutka: Well, let's continue.

378

00:12:58,435 --> 00:13:01,210
The neurosurgeon
wasn't convinced

379

00:13:01,210 --> 00:13:03,130
that the L5, S1 foramen
narrowing was

380

00:13:03,130 --> 00:13:04,180
a cause of the pain and

381

00:13:04,180 --> 00:13:05,260
he certainly didn't
feel there was

382

00:13:05,260 --> 00:13:07,975
any surgical need here.

383

00:13:07,975 --> 00:13:09,610
So he suggested doing

384

00:13:09,610 --> 00:13:12,475
an epidural injection,
and this was done.

385

00:13:12,475 --> 00:13:15,940
So what does an
epidural injection do

386

00:13:15,940 --> 00:13:17,830
and why does injection of

387

00:13:17,830 --> 00:13:20,110

steroid in the epidural
area provide relief

388

00:13:20,110 --> 00:13:22,795
in some cases?
Finnoff: What you're

389

00:13:22,795 --> 00:13:25,660
trying to do is
reduce irritation

390

00:13:25,660 --> 00:13:26,905
of the nerve either

391

00:13:26,905 --> 00:13:30,310
through chemical
neutralization, so reducing

392

00:13:30,310 --> 00:13:31,930
the inflammatory
chemicals in

393

00:13:31,930 --> 00:13:33,790
that area because those

394

00:13:33,790 --> 00:13:36,190
inflammatory mediators
themselves can cause a chemical

395

00:13:36,190 --> 00:13:39,105
radiculitis, so the
steroid will help with that.

396

00:13:39,105 --> 00:13:41,180
And also by
reducing swelling,

397

00:13:41,180 --> 00:13:43,280
you can potentially reduce

398

00:13:43,280 --> 00:13:45,830
the mass effect
in that area.

399
00:13:45,830 --> 00:13:47,915
And so that's one
of the benefits

400
00:13:47,915 --> 00:13:50,780
around doing it
with somebody

401
00:13:50,780 --> 00:13:51,980
who has a fair amount
of swelling in

402
00:13:51,980 --> 00:13:53,990
the area from an
acute injury.

403
00:13:53,990 --> 00:13:58,910
So I would say that
it's a very commonly

404
00:13:58,910 --> 00:14:02,285
used treatment
for radiculopathy

405
00:14:02,285 --> 00:14:03,935
from a disc herniation.

406
00:14:03,935 --> 00:14:05,915
Also commonly used for

407
00:14:05,915 --> 00:14:08,240
neural foraminal canal stenosis.

408
00:14:08,240 --> 00:14:09,680
But it's not as

409
00:14:09,680 --> 00:14:13,310
permanent a treatment for
those because those

410
00:14:13,310 --> 00:14:15,500

problems, often you're
going to try to

411
00:14:15,500 --> 00:14:18,890
treat with postural
restoration,

412
00:14:18,890 --> 00:14:21,425
but the actual stenosis
doesn't go away,

413
00:14:21,425 --> 00:14:23,870
whereas a disk often
will heal and

414
00:14:23,870 --> 00:14:25,040
so you do the

415
00:14:25,040 --> 00:14:26,720
epidural, the
appropriate therapy.

416
00:14:26,720 --> 00:14:28,565
Your body heals
that disk and

417
00:14:28,565 --> 00:14:30,745
you no longer have
pressure in that area,

418
00:14:30,745 --> 00:14:32,660
so you just likely won't

419
00:14:32,660 --> 00:14:34,729
have to have an epidural
in the future.

420
00:14:34,729 --> 00:14:36,634
Chutka: Well let us continue.

421
00:14:36,634 --> 00:14:38,930
Unfortunately, the
epidural didn't

422
00:14:38,930 --> 00:14:41,270
give any benefit,
two months pass.

423
00:14:41,270 --> 00:14:42,695
Patient comes back

424
00:14:42,695 --> 00:14:44,930
because he's
somewhat concerned because

425
00:14:44,930 --> 00:14:46,340
he mentions a close member of

426
00:14:46,340 --> 00:14:49,685
the family had a mild
sarcoma of the leg

427
00:14:49,685 --> 00:14:52,880
and hearing that,
the orthopedist

428
00:14:52,880 --> 00:14:54,320
decided to do an MRI

429
00:14:54,320 --> 00:14:56,149
of the right
lower extremity.

430
00:14:56,149 --> 00:14:57,815
Interesting findings.

431
00:14:57,815 --> 00:14:59,690
A tiny hyperintense nodule

432
00:14:59,690 --> 00:15:01,745
associated with a
right sciatic nerve,

433
00:15:01,745 --> 00:15:02,870
just proximal to the

434
00:15:02,870 --> 00:15:04,160
greater sciatic notch was

435
00:15:04,160 --> 00:15:07,235
found, five by seven
by nine millimeters.

436
00:15:07,235 --> 00:15:08,720
This was felt to represent

437
00:15:08,720 --> 00:15:11,660
a benign nerve sheath tumor.

438
00:15:11,660 --> 00:15:13,460
Mild degenerative
changes were

439
00:15:13,460 --> 00:15:15,140
also noted in
the right hip.

440
00:15:15,140 --> 00:15:17,210
So could this lesion on

441
00:15:17,210 --> 00:15:18,395
the sciatic nerve

442
00:15:18,395 --> 00:15:19,910
produce the
patient's symptoms,

443
00:15:19,910 --> 00:15:22,040
Do you think?
Finnoff: They can,

444
00:15:22,040 --> 00:15:23,750
that's certainly
a possibility.

445
00:15:23,750 --> 00:15:26,465
I would say that if

the patient had

446
00:15:26,465 --> 00:15:28,550
no benefit during the

447
00:15:28,550 --> 00:15:30,470
anesthetic phase
of the epidural.

448
00:15:30,470 --> 00:15:32,150
And if it was a
Transforaminal

449
00:15:32,150 --> 00:15:34,640
epidural at the L5 level,

450
00:15:34,640 --> 00:15:36,695
then that would rule out

451
00:15:36,695 --> 00:15:39,710
that area, nerve
root impingement at

452
00:15:39,710 --> 00:15:41,750
L5, as the primary cause of

453
00:15:41,750 --> 00:15:43,250
the pain, because during

454
00:15:43,250 --> 00:15:44,930
that local
anesthetic phase,

455
00:15:44,930 --> 00:15:46,370
the pain should have gone

456
00:15:46,370 --> 00:15:48,695
away if that was
the cause of the pain.

457
00:15:48,695 --> 00:15:51,170
So now you see that

nerve sheath tumor?

458
00:15:51,170 --> 00:15:53,630
Well, nerve sheath
tumors can,

459
00:15:53,630 --> 00:15:54,950
there can be
benign tumors that

460
00:15:54,950 --> 00:15:56,330
just don't ever
cause any symptoms,

461
00:15:56,330 --> 00:15:58,550
but they can also cause

462
00:15:58,550 --> 00:16:02,075
mass effect and
radicular symptoms.

463
00:16:02,075 --> 00:16:03,620
And it's not
going to be easy

464
00:16:03,620 --> 00:16:06,380
to sort that out on

465
00:16:06,380 --> 00:16:11,390
physical examination.
You know with EMG,

466
00:16:11,390 --> 00:16:13,580
if they had an abnormal EMG

467
00:16:13,580 --> 00:16:17,030
then you would find
no abnormalities in

468
00:16:17,030 --> 00:16:19,040
the paraspinal
muscle regions

469
00:16:19,040 --> 00:16:20,750
which would be associated

470
00:16:20,750 --> 00:16:21,815
with anything that would

471
00:16:21,815 --> 00:16:25,040
be a radiculopathy up higher,

472
00:16:25,040 --> 00:16:27,605
whereas you might have
more abnormalities

473
00:16:27,605 --> 00:16:30,785
in the gluteal musculature
and down the leg.

474
00:16:30,785 --> 00:16:33,920
And so the EMG

475
00:16:33,920 --> 00:16:36,995
might help sort out
where the lesion is, but

476
00:16:36,995 --> 00:16:38,930
much more difficult
on history

477
00:16:38,930 --> 00:16:41,165
and physical
examination to localize

478
00:16:41,165 --> 00:16:43,610
a lesion in the
sciatic nerve at

479
00:16:43,610 --> 00:16:47,224
that location
versus radiculopathy.

480
00:16:47,224 --> 00:16:50,000
Chutka: All right. Well, the

next thing that was

481
00:16:50,000 --> 00:16:52,550
done was a
consultation with

482
00:16:52,550 --> 00:16:54,530
interventional
radiology was ordered

483
00:16:54,530 --> 00:16:57,410
for a steroid injection
of the lesion on

484
00:16:57,410 --> 00:16:59,780
the right sciatic nerve and

485
00:16:59,780 --> 00:17:02,360
the radiologist

486
00:17:02,360 --> 00:17:03,560
really couldn't
see the lesion.

487
00:17:03,560 --> 00:17:05,165
He was using
ultrasound guidance,

488
00:17:05,165 --> 00:17:08,480
so injected some steroid
around the area.

489
00:17:08,480 --> 00:17:11,240
Unfortunately, no
improvement resulted.

490
00:17:11,240 --> 00:17:12,650
So the next thing a

491
00:17:12,650 --> 00:17:14,585
different neurosurgeon
was consulted

492
00:17:14,585 --> 00:17:16,580
about surgical excision of

493
00:17:16,580 --> 00:17:18,335
this nerve sheath tumor.

494
00:17:18,335 --> 00:17:20,660
And the neurosurgeon
was not totally

495
00:17:20,660 --> 00:17:22,010
convinced that excision

496
00:17:22,010 --> 00:17:23,180
would relieve the symptoms.

497
00:17:23,180 --> 00:17:24,740
And he said this
thing is pretty

498
00:17:24,740 --> 00:17:25,820
tiny and it's going to be

499
00:17:25,820 --> 00:17:27,245
really tough to find.

500
00:17:27,245 --> 00:17:30,695
So the neurosurgeon
suggested gabapentin.

501
00:17:30,695 --> 00:17:33,890
So do you use gabapentin
in radicular pain?

502
00:17:33,890 --> 00:17:35,750
Is this useful?
Finnoff: Yeah

503
00:17:35,750 --> 00:17:38,660
Gabapentin, definitely
for neuropathic pain, it is

504
00:17:38,660 --> 00:17:44,720
a useful agent, not addictive
or habit forming.

505
00:17:44,720 --> 00:17:47,900
It really has minimal
effect in terms

506
00:17:47,900 --> 00:17:50,960
of negative
consequences with

507
00:17:50,960 --> 00:17:53,030
your stomach or
kidneys or liver.

508
00:17:53,030 --> 00:17:55,625
So it's a quite
benign medication

509
00:17:55,625 --> 00:17:58,010
and it definitely
helps with nerve pain.

510
00:17:58,010 --> 00:17:59,930
Multiple studies have
shown that whether it's

511
00:17:59,930 --> 00:18:00,410
diabetic

512
00:18:00,410 --> 00:18:02,765
peripheral neuropathy
or radiculopathy,

513
00:18:02,765 --> 00:18:05,269
the main side effect
is sleepiness.

514
00:18:05,269 --> 00:18:06,620
And so frequently you'll

515

00:18:06,620 --> 00:18:08,120
do more of a bedtime dose,

516
00:18:08,120 --> 00:18:10,940
but you can do daytime
doses as well.

517
00:18:10,940 --> 00:18:13,415
And some people get
some dizziness with it.

518
00:18:13,415 --> 00:18:15,560
So you have to make sure
that people are ok

519
00:18:15,560 --> 00:18:20,150
feeling a bit like
they're medicated on it,

520
00:18:20,150 --> 00:18:22,220
but it can reduce pain.

521
00:18:22,220 --> 00:18:23,870
And frankly, for people

522
00:18:23,870 --> 00:18:24,890
who are having nerve pain,

523
00:18:24,890 --> 00:18:26,750
a lot of times they
struggle to sleep,

524
00:18:26,750 --> 00:18:28,610
and so giving them
a medication that

525
00:18:28,610 --> 00:18:30,650
facilitates sleep and
reduces their pain.

526
00:18:30,650 --> 00:18:33,034
It it's kind of a
nice combination.

527
00:18:33,034 --> 00:18:35,210
Chutka: Okay. Well,
gabapentin was

528
00:18:35,210 --> 00:18:37,370
tried and over two
months, the dose

529
00:18:37,370 --> 00:18:38,690
was gradually escalated to

530
00:18:38,690 --> 00:18:42,020
the maximum and
unfortunately, no benefit.

531
00:18:42,020 --> 00:18:44,705
So the patient returned.

532
00:18:44,705 --> 00:18:47,150
But first he attended

533
00:18:47,150 --> 00:18:48,380
a lecture given by one of

534
00:18:48,380 --> 00:18:50,210
his colleagues from
complimentary medicine

535
00:18:50,210 --> 00:18:51,979
about the benefits
of acupuncture.

536
00:18:51,979 --> 00:18:53,750
So he spoke with
that colleague

537
00:18:53,750 --> 00:18:54,980
regarding acupuncture,

538
00:18:54,980 --> 00:18:56,780
and the colleague offered

539
00:18:56,780 --> 00:18:59,870
an acupuncture
treatment. Tried it.

540
00:18:59,870 --> 00:19:02,150
Tiny little needles
inserted into the ear

541
00:19:02,150 --> 00:19:03,380
resulted in dramatic and

542
00:19:03,380 --> 00:19:05,030
complete relief of pain.

543
00:19:05,030 --> 00:19:05,930
Unfortunately,

544
00:19:05,930 --> 00:19:08,495
for only four hours,
pain returned.

545
00:19:08,495 --> 00:19:10,580
So that wasn't the answer.

546
00:19:10,580 --> 00:19:12,740
Month later back to
the neurosurgeon

547
00:19:12,740 --> 00:19:14,960
to reconsider excision
of the nerve sheath

548
00:19:14,960 --> 00:19:17,570
tumor. Neurosurgeon
said, Well,

549
00:19:17,570 --> 00:19:19,370
let's check the MRI again,

550
00:19:19,370 --> 00:19:20,420
see if there's

any change in

551
00:19:20,420 --> 00:19:22,715
this thing. And
there wasn't.

552
00:19:22,715 --> 00:19:24,725
The nerve sheath tumor
looked unchanged,

553
00:19:24,725 --> 00:19:26,210
but now what was identified

554
00:19:26,210 --> 00:19:27,560
was some mild hamstring

555
00:19:27,560 --> 00:19:29,765
tendinopathy on
the right leg.

556
00:19:29,765 --> 00:19:31,760
So the surgeon said we're

557
00:19:31,760 --> 00:19:32,810
not going to
operate on this,

558
00:19:32,810 --> 00:19:34,355
but you may have a

559
00:19:34,355 --> 00:19:36,110
hamstring tendinopathy.

560
00:19:36,110 --> 00:19:37,940
So how does a
hamstring tendin-

561
00:19:37,940 --> 00:19:41,104
opathy present?
Finnoff: Well, hamstring

562
00:19:41,104 --> 00:19:42,170

tendinopathy tends to be
563
00:19:42,170 --> 00:19:44,330
lower than some of
the other problems.
564
00:19:44,330 --> 00:19:46,160
A lot of times with
565
00:19:46,160 --> 00:19:48,365
facetarthropathy or
radiculopathy,
566
00:19:48,365 --> 00:19:51,095
usually you'll have
some back pain
567
00:19:51,095 --> 00:19:54,875
and then symptoms
radiating down into the leg.
568
00:19:54,875 --> 00:19:57,920
With that piriformis
syndrome,
569
00:19:57,920 --> 00:19:58,340
you're gonna have
570
00:19:58,340 --> 00:20:01,175
buttock pain
radiating down into
571
00:20:01,175 --> 00:20:05,040
the leg. With hamstring
tendinopathy
572
00:20:05,040 --> 00:20:06,760
you might have
symptoms radiating
573
00:20:06,760 --> 00:20:08,230
in the leg and frankly

574
00:20:08,230 --> 00:20:10,030
because the
sciatic nerve goes
575
00:20:10,030 --> 00:20:12,265
right next to the
hamstring tendons,
576
00:20:12,265 --> 00:20:13,810
if you have enough of
577
00:20:13,810 --> 00:20:16,120
an inflammatory response in
578
00:20:16,120 --> 00:20:18,670
that area or a big tendin-
579
00:20:18,670 --> 00:20:20,050
apathic tendon
that's causing
580
00:20:20,050 --> 00:20:22,510
a mass effect against
the sciatic nerve.
581
00:20:22,510 --> 00:20:25,885
You can get neuropathic
pain into the leg.
582
00:20:25,885 --> 00:20:27,835
So it can cause sciatica,
583
00:20:27,835 --> 00:20:29,830
but the pain will often
584
00:20:29,830 --> 00:20:32,020
originate right under
the ischial tuberosity.
585
00:20:32,020 --> 00:20:34,060
So it'll hurt when you're
sitting, frequently,

586
00:20:34,060 --> 00:20:35,830
particularly on
a hard chair.

587
00:20:35,830 --> 00:20:37,480
It hurts during

588
00:20:37,480 --> 00:20:39,370
the Terminal Swing
Phase of gait.

589
00:20:39,370 --> 00:20:41,170
So during that
eccentric contraction

590
00:20:41,170 --> 00:20:42,730
of your hamstring,

591
00:20:42,730 --> 00:20:44,965
it'll hurt when you stretch

592
00:20:44,965 --> 00:20:47,580
or contract that muscle.

593
00:20:47,580 --> 00:20:49,910
It'll hurt when you
palpate it directly.

594
00:20:49,910 --> 00:20:51,260
There are a lot of
different things on

595
00:20:51,260 --> 00:20:53,240
physical examination
and history that would

596
00:20:53,240 --> 00:20:54,710
have suggested if that

597
00:20:54,710 --> 00:20:57,319
was your symptomatic problem.

598
00:20:57,319 --> 00:21:00,890
Chutka: Okay. Well, a
steroid injection to

599
00:21:00,890 --> 00:21:02,195
the right hamstring was

600
00:21:02,195 --> 00:21:04,040
performed and the patient

601
00:21:04,040 --> 00:21:05,600
actually did show
some improvement,

602
00:21:05,600 --> 00:21:08,135
he estimated 30 to
50% improvement.

603
00:21:08,135 --> 00:21:11,735
Unfortunately, it only
lasted several days.

604
00:21:11,735 --> 00:21:13,835
So two months pass,

605
00:21:13,835 --> 00:21:15,890
patient returns
no improvement.

606
00:21:15,890 --> 00:21:18,140
And it was suggested
that they try a

607
00:21:18,140 --> 00:21:20,030
platelet rich
plasma injection into

608
00:21:20,030 --> 00:21:21,395
the right hamstring.

609
00:21:21,395 --> 00:21:24,110

So how does a PRP
injection work,

610
00:21:24,110 --> 00:21:25,310
and when you consider

611
00:21:25,310 --> 00:21:28,160
those?
Finnoff: Well, you know,

612
00:21:28,160 --> 00:21:31,880
and we're playing sort of the
arm chair physician

613
00:21:31,880 --> 00:21:34,010
right now with a
retrospective scope

614
00:21:34,010 --> 00:21:35,615
on and

615
00:21:35,615 --> 00:21:36,980
I would say hamstringing
tendinopathy

616
00:21:36,980 --> 00:21:39,275
usually responds
to physical therapy.

617
00:21:39,275 --> 00:21:40,670
And so while I think

618
00:21:40,670 --> 00:21:42,080
the injection
was worthwhile

619
00:21:42,080 --> 00:21:44,600
just to see if it
alleviated symptoms.

620
00:21:44,600 --> 00:21:46,220
So from a diagnostic
standpoint,

621
00:21:46,220 --> 00:21:48,560
would've provided
some information

622
00:21:48,560 --> 00:21:49,910
and then hopefully
therapeutically

623
00:21:49,910 --> 00:21:50,915
it provided some benefit.

624
00:21:50,915 --> 00:21:52,190
I would have really focused on

625
00:21:52,190 --> 00:21:53,780
physical therapy and done

626
00:21:53,780 --> 00:21:54,980
a good solid

627
00:21:54,980 --> 00:21:56,629
eccentric strengthening
program.

628
00:21:56,629 --> 00:21:58,550
So a lengthening
contraction

629
00:21:58,550 --> 00:21:59,900
that stimulates tendon

630
00:21:59,900 --> 00:22:01,505
regeneration and

631
00:22:01,505 --> 00:22:03,515
increased strength
of the tendon so it

632
00:22:03,515 --> 00:22:07,685
can tolerate normal
daily stress.

633
00:22:07,685 --> 00:22:09,110
Working on the biomechanics

634
00:22:09,110 --> 00:22:10,070
around the hip girdle,

635
00:22:10,070 --> 00:22:11,120
making sure there aren't

636
00:22:11,120 --> 00:22:13,505
any patterns that are
contributing to it.

637
00:22:13,505 --> 00:22:15,515
So I would have really
focused on that.

638
00:22:15,515 --> 00:22:17,690
Now, if a steroid injection

639
00:22:17,690 --> 00:22:19,625
and physical therapy

640
00:22:19,625 --> 00:22:21,470
were not
providing benefit,

641
00:22:21,470 --> 00:22:23,990
but the local
anesthetic phase

642
00:22:23,990 --> 00:22:25,445
of that steroid injection

643
00:22:25,445 --> 00:22:26,900
alleviated some
of the symptoms.

644
00:22:26,900 --> 00:22:27,995
So you're pretty confident

645
00:22:27,995 --> 00:22:29,405
that this is indeed

646
00:22:29,405 --> 00:22:32,390
a hamstring issue, than I

647
00:22:32,390 --> 00:22:33,950
think an ultrasound

648
00:22:33,950 --> 00:22:35,750
guided percutaneous needle

649
00:22:35,750 --> 00:22:38,270
tenotomy and platelet
rich plasma injection

650
00:22:38,270 --> 00:22:41,224
are very reasonable
treatment options.

651
00:22:41,224 --> 00:22:43,355
Chutka: And you are right.

652
00:22:43,355 --> 00:22:46,280
PRP injection was
done, no benefit.

653
00:22:46,280 --> 00:22:47,690
Physical therapy for

654
00:22:47,690 --> 00:22:49,220
hamstringing eccentric
training was

655
00:22:49,220 --> 00:22:51,320
recommended and
that continued

656
00:22:51,320 --> 00:22:53,210
for a few months.

657

00:22:53,210 --> 00:22:57,050
Patient returned six months
later, no improvement.

658
00:22:57,050 --> 00:23:00,035
So where are we at now?
We've looked at

659
00:23:00,035 --> 00:23:02,060
multiple possible causes

660
00:23:02,060 --> 00:23:03,530
for radicular leg pain.

661
00:23:03,530 --> 00:23:04,880
Can you think
of others that

662
00:23:04,880 --> 00:23:07,710
really haven't been
thought of yet?

663
00:23:07,989 --> 00:23:12,320
Finnoff: I mean, the maturity
of causes of

664
00:23:12,320 --> 00:23:16,130
radicular pain
we've discussed

665
00:23:16,130 --> 00:23:20,129
starting up at the spine,

666
00:23:20,680 --> 00:23:23,510
spinal stenosis,
neuroforaminal stenosis.

667
00:23:23,510 --> 00:23:26,540
Going outside
of the spine

668
00:23:26,540 --> 00:23:27,890
you already talked about

669
00:23:27,890 --> 00:23:29,150
the nerve sheath tumor.

670
00:23:29,150 --> 00:23:30,335
There could be
compression at

671
00:23:30,335 --> 00:23:32,255
piriformis muscle,

672
00:23:32,255 --> 00:23:34,520
could be impinged

673
00:23:34,520 --> 00:23:36,560
at the ischiofemoral space

674
00:23:36,560 --> 00:23:39,875
or by an enlarged
hamstring tendon.

675
00:23:39,875 --> 00:23:42,230
And then further down you

676
00:23:42,230 --> 00:23:44,240
wouldn't, it would be unlikely

677
00:23:44,240 --> 00:23:46,040
because the problem you are

678
00:23:46,040 --> 00:23:47,300
having pain up in

679
00:23:47,300 --> 00:23:48,530
the buttocks going
down the leg.

680
00:23:48,530 --> 00:23:49,910
And so it's unlikely
that this is

681

00:23:49,910 --> 00:23:51,980
just a leg problem. So

682
00:23:51,980 --> 00:23:55,430
I think we've been
Pretty, pretty thorough.

683
00:23:55,430 --> 00:23:56,270
The only one, I guess of

684
00:23:56,270 --> 00:23:57,170
those that we
haven't talked

685
00:23:57,170 --> 00:23:59,615
about is the
ischiofemoral impingement.

686
00:23:59,615 --> 00:24:01,640
So ischiofemoral impingement

687
00:24:01,640 --> 00:24:04,340
involves compression of

688
00:24:04,340 --> 00:24:07,130
soft tissues between
the lesser trochanter

689
00:24:07,130 --> 00:24:10,115
on your femur and the
ischial tuberosity.

690
00:24:10,115 --> 00:24:12,860
And so that space
can be either

691
00:24:12,860 --> 00:24:14,870
narrowed because of

692
00:24:14,870 --> 00:24:17,854
anatomic factors
like the larger,

693
00:24:17,854 --> 00:24:20,090
lesser trochanter

694
00:24:20,090 --> 00:24:22,670
or possibly an
emulsion fracture of

695
00:24:22,670 --> 00:24:24,815
the ischial tuberosity that

696
00:24:24,815 --> 00:24:27,650
resulted in a large
ischial tuberosity.

697
00:24:27,650 --> 00:24:29,780
It can be from a large kind

698
00:24:29,780 --> 00:24:31,940
of hepatic hamstring tendon.

699
00:24:31,940 --> 00:24:33,440
But it can also
be functional,

700
00:24:33,440 --> 00:24:35,210
where when you walk,

701
00:24:35,210 --> 00:24:37,220
if you have a Trendelenburg
walk because of

702
00:24:37,220 --> 00:24:40,025
weakness in the
hip abductors,

703
00:24:40,025 --> 00:24:43,400
then that will
cause, it causes

704
00:24:43,400 --> 00:24:44,810
the contralateral
pelvis from

705
00:24:44,810 --> 00:24:47,360
the stance leg
to drop down.

706
00:24:47,360 --> 00:24:48,830
And so if you
think about it,

707
00:24:48,830 --> 00:24:53,090
that adduct your femur
towards the pelvis and

708
00:24:53,090 --> 00:24:55,220
that will compress
the soft tissues

709
00:24:55,220 --> 00:24:57,605
between the femur and
the ischial tuberosity.

710
00:24:57,605 --> 00:24:59,720
So the muscle that
lives in that area is

711
00:24:59,720 --> 00:25:01,745
your quadratus femoris but your
sciatic nerve is

712
00:25:01,745 --> 00:25:04,175
also right there,
and so it can cause

713
00:25:04,175 --> 00:25:06,950
buttock pain and radicular
features

714
00:25:06,950 --> 00:25:08,539
in the lower extremity.

715
00:25:08,539 --> 00:25:10,940
Chutkan: Well, at this point I

716
00:25:10,940 --> 00:25:11,780
think the orthopedist

717
00:25:11,780 --> 00:25:12,875
was out of ideas.

718
00:25:12,875 --> 00:25:14,330
So she turned in

719
00:25:14,330 --> 00:25:16,265
a pain clinic consultation

720
00:25:16,265 --> 00:25:18,200
and the patient met with the

721
00:25:18,200 --> 00:25:20,615
pain clinic
anesthesiologist and

722
00:25:20,615 --> 00:25:22,280
initially they said let's

723
00:25:22,280 --> 00:25:24,380
try duloxetine, I presume

724
00:25:24,380 --> 00:25:27,140
for the neuropathic
pain benefits.

725
00:25:27,140 --> 00:25:29,660
But they also
said, you know,

726
00:25:29,660 --> 00:25:31,205
this sounds a
little bit like

727
00:25:31,205 --> 00:25:33,230
piriformis syndrome.

728
00:25:33,230 --> 00:25:36,665

So they offered to do a piriformis injection.

729
00:25:36,665 --> 00:25:39,440
And following the injection,

730
00:25:39,440 --> 00:25:40,670
the patient was completely

731
00:25:40,670 --> 00:25:42,500
pain-free and actually

732
00:25:42,500 --> 00:25:44,929
remained pain-free thereafter.

733
00:25:44,929 --> 00:25:46,490
So if you haven't guessed, this

734
00:25:46,490 --> 00:25:48,065
Is, this was actually me.

735
00:25:48,065 --> 00:25:49,370
This was something that went

736
00:25:49,370 --> 00:25:50,660
on for almost two years.

737
00:25:50,660 --> 00:25:52,070
And I think it just

738
00:25:52,070 --> 00:25:54,545
illustrates the variety of

739
00:25:54,545 --> 00:25:55,984
things that can cause

740
00:25:55,984 --> 00:25:57,440
radicular leg pain that

741
00:25:57,440 --> 00:25:59,180
can be very frustrating to treat.

742
00:25:59,180 --> 00:26:01,310
And this was my first experience

743
00:26:01,310 --> 00:26:03,590
with chronic pain, which, you know,

744
00:26:03,590 --> 00:26:05,270
I try to learn something and

745
00:26:05,270 --> 00:26:07,385
out of every thing that happens, and

746
00:26:07,385 --> 00:26:09,290
this was beneficial because I look at

747
00:26:09,290 --> 00:26:10,460
patients now who have chronic

748
00:26:10,460 --> 00:26:12,050
pain a little bit differently.

749
00:26:12,050 --> 00:26:15,560
And yet it was quite a relief to get

750
00:26:15,560 --> 00:26:17,240
this pain gone because dealing with

751
00:26:17,240 --> 00:26:18,230
something for that long,

752
00:26:18,230 --> 00:26:19,340
it's very frustrating.

753
00:26:19,340 --> 00:26:20,870
And I think our
patients often have

754
00:26:20,870 --> 00:26:22,100
radicular leg pain for

755
00:26:22,100 --> 00:26:24,259
an extended period
of time as well.

756
00:26:24,259 --> 00:26:25,970
Finnoff: Absolutely.
And, you know,

757
00:26:25,970 --> 00:26:27,530
some of the things that

758
00:26:27,530 --> 00:26:29,525
I think are
takeaway points.

759
00:26:29,525 --> 00:26:31,160
You know,
piriformis syndrome

760
00:26:31,160 --> 00:26:32,525
hurts when you push on it.

761
00:26:32,525 --> 00:26:34,100
And to make sure
that you do

762
00:26:34,100 --> 00:26:36,170
a nice physical
examination and push

763
00:26:36,170 --> 00:26:38,915

on the areas that might
be causing the pain.

764
00:26:38,915 --> 00:26:41,300
There are a lot of things
that can cause pain

765
00:26:41,300 --> 00:26:43,925
radiating to the leg
that are not nerve.

766
00:26:43,925 --> 00:26:46,250
So whether that is

767
00:26:46,250 --> 00:26:49,880
from a muscle based
problem where frankly,

768
00:26:49,880 --> 00:26:52,100
the sacroiliac
joints can cause

769
00:26:52,100 --> 00:26:54,245
pain radiating all the
way down to the foot.

770
00:26:54,245 --> 00:26:56,660
That's not the more
common distribution.

771
00:26:56,660 --> 00:26:58,835
But there are
things that are not

772
00:26:58,835 --> 00:26:59,930
radicular that can

773
00:26:59,930 --> 00:27:02,120
cause pain radiating down

774
00:27:02,120 --> 00:27:03,500
into that area. They
just won't have

775
00:27:03,500 --> 00:27:05,630
associated neurologic
symptoms like numbness,

776
00:27:05,630 --> 00:27:08,810
tingling, or weakness. And then
things

777
00:27:08,810 --> 00:27:11,045
that can cause symptoms.

778
00:27:11,045 --> 00:27:13,220
You know, if if
you're doing

779
00:27:13,220 --> 00:27:14,930
your history,
physical examination,

780
00:27:14,930 --> 00:27:17,000
and diagnostic tests and

781
00:27:17,000 --> 00:27:18,290
it's not really following

782
00:27:18,290 --> 00:27:19,490
the pattern that fits with

783
00:27:19,490 --> 00:27:22,340
that problem, you know like for
you,

784
00:27:22,340 --> 00:27:24,230
the neuroforaminal stenosis
that didn't

785
00:27:24,230 --> 00:27:26,315
respond to the treatments
in that area,

786
00:27:26,315 --> 00:27:27,770

then look for other things.

787
00:27:27,770 --> 00:27:29,510
Don't get fixated on

788
00:27:29,510 --> 00:27:31,639
something just because
you see pathology,

789
00:27:31,639 --> 00:27:34,279
you can have stuff that
is asymptomatic.

790
00:27:34,279 --> 00:27:36,110
So it's really
important to have

791
00:27:36,110 --> 00:27:38,150
a broad differential
diagnosis and really

792
00:27:38,150 --> 00:27:40,175
Investigate.
Chutka: Yes, especially with our

793
00:27:40,175 --> 00:27:42,965
imaging studies now
that are so sensitive,

794
00:27:42,965 --> 00:27:46,550
you never see a completely
normal MRI of the spine,

795
00:27:46,550 --> 00:27:49,640
there's always some
degrees of facet arthritis or

796
00:27:49,640 --> 00:27:51,470
foraminal narrowing
and it's hard to know

797
00:27:51,470 --> 00:27:53,524
when those are

clinically significant.

798
00:27:53,524 --> 00:27:55,234
Finnoff: Yeah. Agreed.

799
00:27:55,234 --> 00:27:57,125
Chutka: Well, we've been
discussing radicular

800
00:27:57,125 --> 00:27:59,150
leg pain with Dr.
Jonathan Finnoff,

801
00:27:59,150 --> 00:28:00,710
a physiatrist and Sports

802
00:28:00,710 --> 00:28:02,570
Medicine Physician
at the Mayo Clinic.

803
00:28:02,570 --> 00:28:03,980
Jon this has been fun. Thank you

804
00:28:03,980 --> 00:28:05,569
for sharing your
knowledge with us.

805
00:28:05,569 --> 00:28:07,894
Finnoff: Thank you so much
for inviting me today.

806
00:28:07,894 --> 00:28:09,905
Chutka: You can now
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