On-line Table: Summary of imaging findings and impact on management in 23 patients

Patient No.	Age (yr)	Sex	Duration of Symptoms	Clinical History and Findings	Preimaging Clinical Differential	Prior MRI (Yes/No)? Pertinent Findings?	Pertinent MRN Findings	Change in Diagnostic Thinking	Change in Management
1	28	F	1 yr	Urinary symptoms, lower extremity numbness, PFD	1) Tethered cord 2) PFD 3) Coccydynia	None	1) No, CES 2) Mild L>R trochanteric bursitis	Yes	No, continue PFPT
2	73	M	2.5 yr	Defecatory and urinary symptoms after Tarlov cyst operation, PFD	1) Cauda equina nerve root injury 2) Recurrent Tarlov cysts 3) PFD	Yes, and sacral Tarlov cysts	1) S1 and S2 ganglionopathies with residual Tarlov cysts	Yes	Yes, referral to pain management
3	32	M	~3 yr	Urinary retention with left sacral neurologic deficits	1) Demyelinating disease 2) Cauda equina syndrome	None	1) Large sacral lipomyelocele with tethered cord 2) Sacral dysraphism	Yes	Yes, referred to neurosurgery
4	80	F	~1 yr	Sensory and defecatory symptoms, Tarlov cysts S2–3, left leg radiculopathy and PFD	1) S2–3 neuropathy/radiculopathy 2) Left lower lumbar radiculopathy 3) PFD	Yes, anterolisthesis L3–L4 and impingement on left L3 nerve root	1) Mild L femoral neuropathy 2) Mild L sciatic neuropathy 3) Left L5–S1 radiculopathy 4) Tarlov cysts present but without cauda equina compromise	Yes	Yes, sent to pelvic PT for her sacral/pelvic floor pain
5	61	F	2 yr	Gluteal/ischial/pelvic pain, constipation, prior L spine operation	1) Lumbosacral radiculopathy 2) Concern for lumbar stenosis or CES	No (MRI after MRN failed to reveal arachnoiditis)	1) Arachnoiditis at L4–L5 level 2) Enhancing soft-tissue thickening, right epidural space at L4–L5 level markedly compressing thecal sac to left, likely granulation tissue and scarring	Yes	Yes, chronic CES and neurosurgical decompression and resection of epidural lesion
6	59	F	~1.5 yr	Vaginal pain/numbness after Tarlov cyst operation, right gluteal pain/spasm	1) Bilateral sacral polyradiculopathies 2) PFD 3) Piriformis syndrome	Yes, outside MRI not in imaging system	1) Right piriformis syndrome with mild right sciatic neuropathy 2) No, Tarlov cyst remnants	Yes	Yes, medication management and PFPT for PFD and neuropathic pain and piriformis syndrome
7	39	F	25 yr, worsening for 4 mo	Pregnant with bilateral radiculopathies, history of unstable retrolisthesis L2–3	1) Bilateral L2–3 radiculopathy 2) CES 3) Meralgia paresthetica 4) SI pain and dysfunction	Yes, a remote postop MRI not available in imaging system	1) Small disc protrusion at L5–S1 2) Right meralgia paresthetica	No	None
8	44	M	8 mo	Pelvic pain, urinary symptoms, history of HIV with decreased sphincter tone and sacral nerve root deficits and PFD	1) CES 2) Infectious (discitis or epidural abscess) given HIV history 3) PFD	No	1) Extensive upper abdominal lymphadenopathy 2) Mild left ilioinguinal and left pudendal neuropathies	Yes	Yes, final diagnosis was Hodgkin lymphoma; nerve abnormalities were never treated given malignant diagnosis
9	53	M	7 mo	Defecatory and urinary symptoms with pelvic pain and numbness after spinal operation, PFD	1) Incomplete CES 2) Pelvic floor dysfunction	No	1) Moderate arachnoiditis 2) Moderate right genitofemoral neuropathy at the prior hernia site repair due to perineural fibrosis	Yes	Yes, CT-guided genitofemoral nerve block, referral to operation for GF neurectomy/re-implantation, spinal cord stimulator trial
10	61	F	Chronic, but worsened 2 yr ago	Buttock/perineal numbness, pelvic pain, constipation after spinal operation, sacral nerve root deficits and PFD	1) Incomplete CES 2) PFD	Yes, L5–S1 moderate central and bilateral neuroforaminal stenosis with nerve root impingements	1) Moderate arachnoiditis 2) Bilateral pudendal neuropathy with bilateral perineural scarring 3) Bilateral ischiofemoral impingements	Yes	Yes, pelvic PT to work on pudendal neuropathy and ischiofemoral impingement, referral to neurosurgery

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On-line Table: Continued

Patient No.	Age (yr)	Sex	Duration of Symptoms	Clinical History and Findings	Preimaging Clinical Differential	Prior MRI (Yes/No)? Pertinent Findings?	Pertinent MRN Findings	Change in Diagnostic Thinking	Change in Management
11	43	F	Severe worsening ×1 yr	Frequent urinary symptoms, history of known L3–4 calcified lesions of unclear etiology, PFD	1) PFD 2) Cauda equina compromise	Yes, heavily calcified intrathecal lesions at L3–4 level	1) Intradural mass likely representing benign partially cystic ependymoma, displacing CE nerve roots but with no abnormal signal changes in nerve roots	No	Yes, neurosurgery referral
12	72	F	15 mo	Vaginal pain, urinary retention, right more than left radiculopathy after spinal operation, PFD on exam	1) Incomplete CES 2) PFD	Yes, outside MRI 1 yr prior, not in imaging system	1) Moderate arachnoiditis at L4–L5, at the site of prior operation 2) Mild pudendal neuropathies, right>left	Yes	Yes, referred to neurosurgery, ganglion impar block, and offered spinal cord stimulator
13	58	M	2 yr	Urinary symptoms, constipation, leg weakness after spinal operation	1) CES	None since prior spine operation	1) Moderate arachnoiditis, worse at L4–L5 level 2) Downstream lumbosacral plexopathies and bilateral sciatic and femoral neuropathies, worse on right	Yes	Yes, referral to neurology and neurosurgery, offered spinal cord stimulator; referral to neurourology, learned to catheterize
14	29	F	6–12 mo	RLQ pain, constipation, history of MS, sacral nerve root deficits on right and PFD	1) MS-related symptoms 2) PFD 3) MS plaque in the conus	No, multiple cervical and thoracic MRIs to follow patient's known MS	1) Mild degenerative disease of the lower lumbar spine	No	No, continued pelvic PT and did well
15	56	F	6 mo	Defecatory and urinary symptoms, LLQ pain, left buttock/vaginal numbness after spinal operation and radiation for colorectal cancer, L>R sacral nerve root deficits	1) Incomplete CES 2) Radiation cystitis/proctitis	Yes, no pertinent findings	1) Mild-to-moderate arachnoiditis at the surgical level (L3–4) 2) Mild left sciatic neuropathy	Yes	Yes, referral to neurosurgery, less emphasis on radiation effects causing her symptoms (stopped urethral dilations and proctitis treatments)
16	44	F	Chronic, worsened 1–2 yr ago	Pelvic pain, known small sacral perineural cysts, history of multiple cancers and pelvic radiation, PFD	1) PFD 2) Sacral radiculopathy 3) Pudendal neuropathy 4) Radiation plexopathy	Yes, several small perineural cysts in sacral foramina bilaterally	1) Multiple lumbosacral neuropathies (left L5, bilateral S1, left S2, and right S3) 2) Multiple Tarlov cysts 3) Right pudendal neuropathy	Yes	Yes, referral to neurosurgical specialist regarding Tarlov cysts; treatment focused on LMN dysfunction
17	56	M	5 yr	Urinary symptoms that started in childhood, right groin/testicular pain after hernia repair, PFD	1) Pelvic floor dysfunction 2) Ilioinguinal or genitofemoral neuropathy 3) SBO/tethered cord or other cauda equina compromise	No	1) Findings compatible with R ilioinguinal and genitofemoral neuropathies	No	No, pain improved with pelvic PT alone, no explanation for urinary retention found
18	57	F	6 yr	Defecatory and urinary symptoms requiring catheterizations, severe PFD and sacral nerve root deficits	1) PFD 2) CES	No	1) Left S1 and S3 neuropathies 2) Bilateral pudendal neuropathies	Yes	Lost to follow-up

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On-line Table: Continued

Patient No.	Age (yr)	Sex	Duration of Symptoms	Clinical History and Findings	Preimaging Clinical Differential	Prior MRI (Yes/No)? Pertinent Findings?	Pertinent MRN Findings	Change in Diagnostic Thinking	Change in Management
19	57	F	12 yr, worsened ~3 mo ago	Rectal pain after spinal operation, bilateral radiculopathies and left piriformis tenderness on exam	1) Incomplete CES 2) Left piriformis syndrome 3) Left SIJ pain/dysfunction	No	1) Moderate canal stenosis and right neuroforaminal narrowing at L3–L4 2) Findings of tethered cord 3) Left piriformis muscle atrophy	No	Yes, stopped pelvic PT
20	50	F	4 yr	Urinary and fecal incontinence, low back and left leg pain after MVC, PFD and reduced anal sphincter tone	1) PFD 2) Myofascial back pain 3) CES or sacral radiculopathy after MVC	Yes, L5–S1, 3- to 4-mm posterior central disc herniation mildly indents the thecal sac	1) Mild left sciatic neuropathy	Yes	Yes, CT-guided diagnostic sciatic nerve block recommended
21	33	F	8 yr	Urinary retention after pelvic trauma, PFD	1) PFD 2) CES	No	1) Mild right S1 traction injury and right S2 neuroma in continuity 2) Downstream pudendal and sciatic neuropathies	Yes	lost to follow-up
22	79	F	10 yr	Left gluteal/rectal pain after spinal operation, constipation, urinary incontinence, and left sacral nerve root deficits	1) CES 2) Lumbar radiculopathy	Yes, no pertinent findings	1) CES with arachnoiditis and neuropathies of left-sided L4, S1, and S2 nerves	Yes	Yes, referred to interventional spine for injections
23	53	M	12 yr, worsened in recent mo	Rectal pain, history of paraplegia (complete T5 spinal cord injury), no movement or sensation below the level of injury, known lumbar arachnoiditis and possible discitis/osteomyelitis of the lumbar spine	1) Lumbar arachnoiditis 2) Vertebral discitis/osteomyelitis	Yes, clumping of intrathecal nerve roots at L5–S1 level, likely arachnoiditis	1) Moderate arachnoiditis 2) Bilateral pudendal and right inferior hemorrhoidal neuropathies	Yes	Yes, CT-guided pudendal nerve blocks ×3

Note:—PFPT indicates pelvic floor physiotherapy; PFD, pelvic floor dysfunction; PT, physical therapy; RLQ = right lower quadrant; SIJ, sacroiliac joint; SBO, small bowel obstruction; MVC, motor vehicle crash; postop, postoperative; SI, sacroiliac; CE, cauda equina; LLQ, left lower quadrant; R, right; L, left; LMN, lower motor neuron; GF, genitofemoral.