preoperative radiotherapy were assigned to the non-radiotherapy group (group nRT, N=247). We compared the demographic, intraoperative, and postoperative factors between these two groups.
Results: In terms of intra-operative factors, statistically significant differences were evident in operation time, extra-blood loss, and transfusion (RT vs nRT; 188.1±80,7 vs 231.2±106.1, 607.2±532.7 vs 830.1±1324.7, and 30.9% vs 43.3%, p= <0.001, 0.031, and 0.048, respectively). With regard to postoperative factors, the incidence of infection, wound problems and local recurrence were statistically higher in group RT (RT vs nRT; 6.2% vs 0.8%, 12.3% vs 0.8%, 23.4% vs 13.7%, p= 0.004, <0.001, and 18 0.038, respectively).
Conclusion: Preoperative radiotherapy has the intraoperative advantages of reducing bleeding and shortening the operating time, but postoperative caution is needed because of the possibility of infection, wound problem and local recurrence increases.

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000810
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Evaluation of neurological recovery in AIS and ULEMS scales in acute traumatic spinal cord injury patients related with surgical delay

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Introduction: Acute traumatic spinal cord injury is a major cause of disability. Neurological prognosis has been related with early decompression and stabilization. The aim of this study is to evaluate the improvement of the neurological outcome, and its relationship with surgical delay.
Materials and methods: Retrospective study. Patients admitted with acute traumatic spinal cord injury between June 2020 and October 2023. Demographic data, surgical delay, reoperation, existence of fracture, AO fracture classification, existence of spinal cord compression and neurological AIS and ULEMS (Upper & Lower Extremity Motor) scales at admission and discharge were collected. Multivariate and bivariate regression analysis were performed to determine factors associated with neurological improvement.
Results: 219 patients, 16 died and 3 were excluded due to double neurological injury. Mean age was 48.4. 85.5% were male. 82% had fractures. 63% had surgery in <48h and 48% <24h. 3% underwent reintervention. 34.9% presented improvement of AIS and 37.3% of neurological level. 51.1% had any type of neurological improvement. 65% showed better ULEMS. Significant differences were found between deceased and non-deceased in age (p<0.001), surgical delay (p=0.035), worse inicial AIS (p=0.009) and ULEMS (p<0.001). Improvement of AIS was related with initial AIS and cervical injury. In the bivariate analysis, only initial AIS was significant (p<0.0001). Related to ULEMS improvement were baseline ULEMS and AIS, affected cervical spine, fracture, and neurological compression. Only initial AIS (p<0.0001) and initial ULEMS (p=0.002) were significant in bivariate analysis. No significance between surgical delay and neurological parameter improvements was found. There is a trend towards better function with shorter surgical delay, without significance (within 48h p=0.055).
Conclusion: Traumatic spinal cord injury has higher in-hospital mortality in older patients. A clear impact on neurological recovery when decompression surgery was performed in <24h could not be observed, it begins to become apparent within 48h. ULEMS scale could be a more sensitive tool to assess neurological improvements than AIS. Although cervical injuries, no fracture and no compression could be predictors of better prognosis, initial neurological status is the main determinant of recovery and might also predict in-hospital mortality.

DATA	N	% / SD
Total number of patients	219	
Deceased patients	16	
Excluded due to neurologic lesion	3	
Mean Age (years)	48,4	18,8 (SD)
Median Age (years)	47,5	
Range Age (years)	77	
Male patients	171	85,50%
Associated fractures	164	82%
AO A (Compression)	55	33,50%
AO B (Distraction)	59	36%
AO C (Translation)	50	30,50%
Spinal cord compression (yes)	132	67%
Cervical spine injury	114	57%
Dorsal spine injury	62	31%
Lumbosacral spine injury	24	12%
Neurological level affected C1-C4	73	37,80%
Neurological level affected C5-C8	41	21,20%
Neurological level affected T1-T6	29	15%
Neurological level affected T7-T12	30	15,50%
Neurological level affected L1-S1	16	8,30%
Neurological level affected S2 or lower	4	2,10%
Initial AIS A	75	38,90%
Initial AIS B	20	10,40%
Initial AIS C	47	24,40%
Initial AIS D	51	26,40%
Mean operative delay (days)	3,1	8 (SD)
Surgery < 48 hours	97	63%
Surgery < 24 hours	96	48%
Reintervention	6	3%
AIS discharge A	56	29%
AIS discharge B	22	11,40%
AIS discharge C	30	15%
AIS discharge D	82	41%
AIS discharge E	3	1,60%
Improvement of AIS	66	34,90%
Mean ULEMS at admission	47,9	27,5 (SD)
Mean ULEMS at discharge	60,1	27,6 (SD)
Improvement in ULEMS	122	65%
Neurological Level improvement	69	37,30%
Neurological improvement independent of level	93	51,10%

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000857
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Hodgkin lymphoma presenting with spinal cord compression: A systematic review and clinical analysis

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Introduction: Hodgkin lymphoma (HL) typically involves lymph nodes but can rarely exhibit extra-nodal localization. Its incidence follows a bimodal age distribution, being common during childhood and peaking in young adulthood, with a second peak in the eighth decade. Regarding its extranodal presentation (10%), HL with Spinal Cord Compression (SCC) is extremely rare (4%) and is usually found in its late stage. Only occasionally do the symptoms of SCC manifest as the first and only expression of this disease.
Materials and methods: We conducted a systematic review of the literature, identifying 87 articles using the following keywords: "Hodgkin," "Spinal Cord Compression," "Epidural." We applied the following criteria: articles published after the year 2000 (49 articles were excluded), articles written in English (6 articles were excluded), articles specifically referring to HL (17 articles were excluded). The remaining 15 articles described 16 cases of SCC in HL.
Results: We identified 16 cases (10 male, 6 female), with a mean age of 28.5

years (range: 8-88 years). The reported symptoms varied from acute (paraplegia and cauda equina, sharp pain) to chronic (limb numbness, gait alterations, pain) associated with spinal cord compression at various levels and also systemic symptoms (fever, weight loss, pruritus, night sweats) typical of HL. In 11 patients, the SCC was in the lumbar, in 3 in the cervical, and in 2 in the thoracic spine. Biopsy was performed in all cases, confirming the diagnosis of HL. Decompressive laminectomy was performed in 11 cases. All patients underwent chemotherapy and/or radiotherapy rounds. Complete remission was achieved in all cases.

Conclusion: This literature review indicates that Hodgkin Lymphoma (HL) should be considered as a potential cause of any spinal cord compression. Particularly, the pediatric and adolescent population presenting with back pain and neurological symptoms requires timely investigation and referral, maintaining a broad differential diagnosis when assessing these patients. Surgery is the most effective treatment for SCC, with chemotherapy and radiotherapy associated with good functional outcomes and regression of neurological symptoms.

References	Year	N°. cases	Age (yrs) / Gender	Symptoms and Signs	Site	Surgery	Chemotherapy/ radiotherapy
Cagavi et al	2006	1	39/male	lumbar pain	L3	yes	radiotherapy
Al-Khayat et al	2007	1	42/female	bilateral hand weakness and parasthesia	C7-T1	no	chemotherapy and radiotherapy
Liao et al	2007	1	16/male	low back pain with radiation to right lower extremity, perianal numbness	L3-L5	yes	chemotherapy
Gupta et al	2009	2	10/male 11/male	fever and severe pain in back radiating to both lower limbs pain in lower limbs and back	T7-T9 T7	no no	chemotherapy and radiotherapy chemotherapy
Kasper et al	2012	1	88/female	upper back pain and difficulties ambulating	T1-T4	yes	radiotherapy
Baroni et al	2014	1	8/male	spastic paraplegia, difficulty in walking, sensory loss and autonomic dysfunction	T4-T6 T8-T10	yes	no
Anila et al	2015	1	19/male	paraplegia	T1	yes	chemotherapy
Abu-Bonsrah et al	2016	1	29/female	lower back pain andlower extremity numbness	T10	yes	chemotherapy
Toto et al	2016	1	12/female	neck pain	C3-C7	yes	chemotherapy and radiotherapy
Ahmadzai et al	2016	1	69/male	ataxia and reduced sensation in both lower limbs and trunk	T5-T6	yes	chemotherapy
Ghedira et al	2019	1	40/male	urinary leakage, constipation and numbness of the perineum area and left foot	L1-L2 and L3-L4	yes	chemotherapy
Salomone et al	2021	1	13/female	lower back pain and difficulties ambulating	T12 - L1	no	chemotherapy and radiotherapy
Bayram et al	2021	1	9/ male	abdominal and back pain, urinary incontinence and weight loss	L5-S1	no	chemotherapy and radiotherapy
Bloxham et al	2022	1	15/ female	hip pain	L4	yes	chemotherapy and radiotherapy
Patel et al	2023	1	37/male	neck pain, bilateral upper limb radiculopathy, bilateral upper limb weakness and gait disturbance.	C6-T1	yes	chemotherapy

Review of the literature

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000930

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Anterior column reconstruction using a modular carbon-peek device: 28-case study over 18 months

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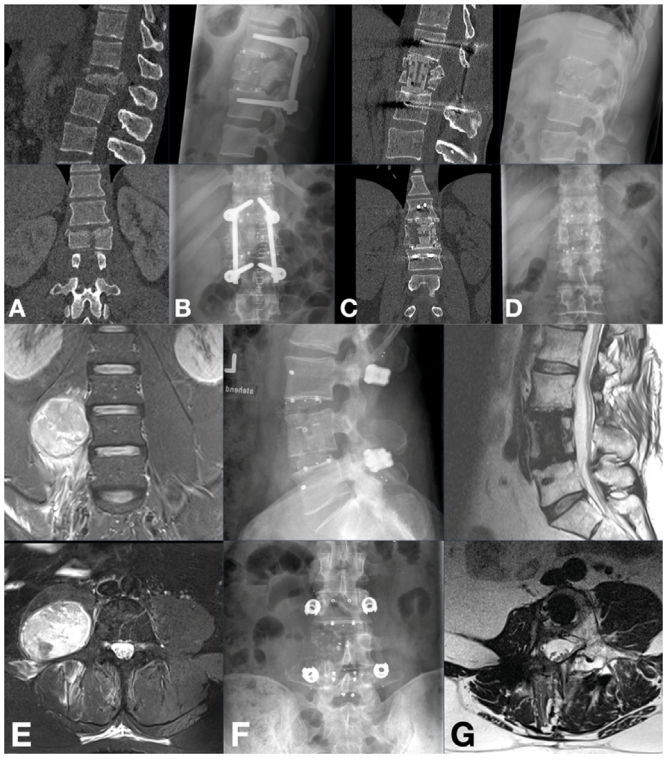
Introduction: Carbon fiber-reinforced poly-ether-ether-ketone (CFR-PEEK) vertebral body replacements (VBR) promise low subsidence, reduced artifacts, and improved radiation planning while maintaining fusion capabilities. This study evaluates the safety and efficacy of the Kong® modular, titanium-coated CFR-PEEK VBR in restoring sagittal alignment via anterior column reconstruction (ACR) of the thoracolumbar spine following high-energy trauma, osteoporotic fractures, or tumors.

Materials and methods: Retrospective analysis of 28 patients (15 high-energy and 7 osteoporotic fractures, 6 spinal tumors; mean age: 61 ± 19 years; 33% female; follow-up: 17.7 ± 7.7 months) undergoing ACR with the Kong® VBR at our institution from 2020 to 2021. Exclusions: incomplete records. Primary outcome was the bi-segmental kyphotic angle (BKA) correction measured with Cobb's method. Secondary outcomes were craniocaudal subsidence, a cage height coefficient to evaluate the cage expansion locking mechanism, sagittal tilt, screw loosening, and spinal fusion via Bridwell's criteria on radiographs and CT. Clinical outcomes were evaluated with Odom's criteria (all patients), Karnofsky Performance Status (tumors), and the AOSpine PROST-Score (trauma group). Complications were documented.

Results: Postoperative BKA correction was significant at 14.4° (± 23.8°, p = 0.01). At last follow-up, a correction loss of 2.7° (± 25.2°, p = 0.60) was observed, with correction from baseline maintained at 15.3° (± 30.3°, p = 0.04). At last follow-up, subsidence was 0.5 ± 0.71 mm (range 0-2 mm; p = 0.05), and no changes in cage height coefficient (0.02 ± 0.10, range 0.0-0.5; p = 0.11) or sagittal tilt (0.8 ± 4.4°, range 0-22°; p = 0.38) were observed. No screw loosening occurred. Fusion (Bridwell Grade I or II) was achieved in 95% (CT) and 93% (radiographs). Neurological function improved in 88% of patients with initial deficits. At last follow-up, Karnofsky Performance Status improved by 17.9 points (p = 0.01), AOSpine PROST-Score was 56.9, and 92% of patients were rated as "excellent" or "good" according to Odom's criteria. One early deep posterior infection (4%) occurred, treated with debridement.

Conclusion: Preliminary data suggest that the Kong® modular, expandable, titanium-coated CFR-PEEK VBR is a viable and effective option for ACR to restore sagittal alignment of the thoracolumbar spine for high-energy trauma, osteoporotic fractures, and spinal tumors.



A Preoperative CT of a L3 Burst fracture; AO Classification: A4 N1 MX B Postoperative X-ray C 1-year postoperative CT with Grade I bony fusion according to the Bridwell classification D 2-year follow X-ray up after posterior instrumentation removal. E Preoperative MRI (malignant peripheral nerve sheath tumor originating from the right L3 root) FPostoperative X-ray F 1.5-year follow up MRI with very low artifacts.

Group	Preoperative	Postoperative	Last follow up
Whole Sample	**-11.6 (±20.4)**	**3.2 (±16.7)[a]**	**2.3 (±18.3)[b, c]**
Trauma Group	-10.8 (±16.7)	0.1 (±16.4)	-1.6 (±18.0)
Osteoporotic Group	-16.3 (±23.8)	3.0 (±13.8)	1.0 (±13.4)
Tumor Group	-2.5 (±41.7)	14.8 (±22.9)	14.2 (±23.1)

[a]paired student's t test preoperative/postoperative: mean difference 14.4±23.8 [-32-52], p = 0.010;

[b]paired student's t test postoperative/last follow-up: mean difference -2.7±25.2 [-59-40], p = 0.599;

[c]paired student's t test preoperative/last follow-up: mean difference 15.3±30.3 [-37-65], p=0.036