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馬尾症候羣和腰椎間盤突出症

鍾進燈 周崇頌 徐道昌*

腰椎間盤突出引起下背痛,在臨床上相當常見,但是因它引起馬尾壓迫則相當少見,典型的馬尾症候羣有複雜性下背痛,單側或雙側坐骨神經痛,鞍部麻木,下肢無力,進而肛門和膀胱失禁。馬尾症候羣需要儘快診斷和手術治療,否則會造成永久性的後遺症。臨床檢查包括病史,理學檢查,脊髓造影,電腦斷層攝影,膀胱功能檢查,神經傳導速度和肌電波檢查。一年半中本科共發現三例,本文就其病史,誘因,檢查過程,手術發現,門診追蹤,參考文獻加以分析討論。

Key wards: cauda equina syndrome, H.I.V.D., urodynamic study, myelogram.

前言

馬尾症候羣(Cauda equina syndrome, CES) 是一種少見的疾病,導因於馬尾受到侵犯。引起的原 因包括外傷,脊椎骨折,原發性腫瘤,惡性腫瘤轉移 , 感染發炎, 血管異常, 手術不當, 手術後黏連, 放 射性傷害,脊髓造影檢查和腰椎間盤突出[1,4,8, 10)。因爲腰椎間盤突出(Herniated intervertebral disc, HIVD)引起更少,但是後果相當嚴重,是一 種外科急症,需要馬上手術治療〔1-5〕。依據 Scott 統計 CES 病人約佔 HIVD 手術病人的 6%,位置以 L5 至 S1 間最多。臨床上有複雜性下背痛,單側或 雙側坐骨神經痛,下肢肌肉無力,鞍部肛門周圍,和 大腿後側感覺遲鈍麻木,排便排尿困難或失禁。成人 脊髓約止於第二腰椎體上緣,稱爲脊髓圓錐(Conus Medullaris),以下為鞘內神經根,解剖上稱為馬尾 [4 , 5]。臨床上檢查包括病史,誘因,理學檢查, 脊椎造影(myelogram),電腦斷層檢查(computed tomography, CT,),膀胱功能檢查(Urodymamic study),神經傳導速度和肌電波檢查。理學檢查包括直腿抬高測試(Straight leg raising test, SLRT)肌力徒手測試(manual muscle test, MMT),大拇趾肌力測試(Big toe test, BTT),感覺功能檢查(Dermatome),深部肌腱反射(Knee jerk, KJ),(Ankle jerk, AJ),球體海綿肌反射(Bulbocavernosus reflex, BCR),門鈴徵候(Door bell sign),肛門括約肌張力檢查(Anal tone)和脊椎活動範圍檢查(Range of motion, ROM)

材料與方法

自75年3月1日起至76年9月30日止,一年 半期間,本科共收集5例馬尾症候羣,原因和腰椎間 盤突出有關,其中3例因急性腰椎間盤突出,1例因 手術後,1例因使用造影劑做脊髓造影檢查後引起。 本文就三位急性腰椎間盤突出病人的病史,誘因,理 學檢查脊髓造影,電腦斷層攝影,外科手術發現,膀 胱功能檢查,手術後評估,門診追蹤,加以分析討論 。 (1)病例一,劉先生,33 歲,已婚男性,慢性下背痛約 10 年,75 年 4 月 10 日接受中醫傷科牽引治療,對疼痛症狀略有改善,因此取得信任繼續治療,5 月 20 日,在牽引時加上下背推拿,方法是病人俯臥,背部微曲,上身固定,下身固定骨盆,並用繩索連接絞盤,用人工旋轉絞盤控制牽引力量大小,牽引同時以木塊加壓於下背,病人當時感到一陣劇痛,當晚排尿困難,轉送私人醫院住院,5 月 28 日到本科求診,理學檢查如表(一),脊髓造影在 L4-5 間完全阻塞,CT 顯示 disc 在 L4-5 和 L5-S1,如圖(一,二),手術發現 L5-S1 間 disc 破裂,向上游離到 L4-5之間,手術後腰痛消失,感覺運動功能皆有進步,排尿仍然困難,經膀胱訓練,4 個月後能自解小便,恢復上班,性功能受影響,病人感到陰莖感覺遲鈍,延遲射精,一年後仍如此。

(2)病例二,廖先生,28 歲已婚男性,喜愛慢跑運動,有四年慢性下背痛病史,75 年 10 月 26 日慢跑後開始腰痛加劇,在私人醫院接受藥物和物理治療無效,11 月 5 日到本科求診,當時病人已經感覺到小便困難,理學檢查如表(二),脊髓造影檢查顯示 L4 -5 間完全阻塞,CT 顯示 L4-5 間 disc 破裂突出,手術發現如 CT 所見,如圖(三,四)。手術後背痛消失,運動感覺功能改善,但是排尿困難,經膀胱訓練三個月後,病人能自解小便,但是膀胱功能檢查,仍爲無反射性膀胱,如圖(五)。病人恢復上班,有性功能減低現象,半年後檢查無腰痛,運動感覺功能

約90%恢復,性功能較前恢復,一年後檢查沒有太 . 多改變。

(3)病例三,王先生,59 歲已婚男性勞工,下背痛 30 年,76 年 8 月 13 日,搬運工作中,忽然感覺下背痛加劇,3 天後小便困難,住省立醫院治療,25 天後轉送本院神經外科住院,理學檢查如表(三),病人無明顯背痛,兩側坐骨神經痛,myelogram 顯示 L3—4間有外來壓迫,L4—5間完全阻塞,CT 顯示 L3—4 有骨刺,脊椎管狹窄和 disc,L4—5 間有 disc 突出,如圖(六,七),手術如 CT 所見,手術後坐骨神經痛消失,運動感覺功能僅少許改善,病人無法站立行走,必須使用輪椅,三個月後仍是排尿困難,下肢無力,感覺麻木,病人感覺較前進步,六個月後能自解小便,會陰麻木並有陽萎現象,下肢仍然無力,麻木,此時病人可藉拐杖行走,行動仍不方便,九個月後檢查,病人仍在進步中,但是恢復較前二病例差,病人仍然無法恢復正常工作。

討 論

依據文獻報告,因 HIVD 造成 CES 病發率約 1%至16%[1,2,7],本院一年半來因 HIVD 手術共 169 例,年齡自 19 歲至 78 歲,平均 51 歲,其中經 神經外科手術 126 例,骨科手術 43 例,共發現 3 例 CES 約佔 2.5%。本院 HIVD 手術仍以神經外科為 主約 74%,骨科為輔約 26%。發作前三位皆有慢性

表(一) 病例1 的臨床表徵

	pre – op		post – op lw.		post – op 3ms.		post – op 6ms.		post – op ly.	
	Rt	Lt	Rt	Lt	Rt	Lt	Rt	Lt	Rt	Lt
1. SLRT:	30	80	45	80	50	80	60	80	60	80
2. BTT:	F	N	F^{+}	N	G	N	G+	N	G+	N.
3. K.J:	+	+	+	+	+	+	+	+	+	+
4. A.J:		+		+	_	+		+		+
5. Dermatome:	S123	3. S23.	Impre	oved	Impr	oved	Di	itto	Di	tto
6. Anal tone:	(-	 	(+	-)	(-	+)	Consti	ipation	Ditto	
7. B-C. R:	(-)		(+)	(+)		(-	(+)		+)	
8. Door-bell:	(+)	(-	-)	(-	-)	(-	-)	(-	-)

BTT: Big toe test, B-C. R: Bulbocavernosus relfex.

Muscle power grading, N: Normal, grade 5,95-100%, G: Good, grade 4, 70-90%, G: 90%, G: 80%, G: 70%, F: Fair, grade 3, 40-60%, F: 60%, F: 50%, F: 40%.

表仁) 病例2 的臨床表徵

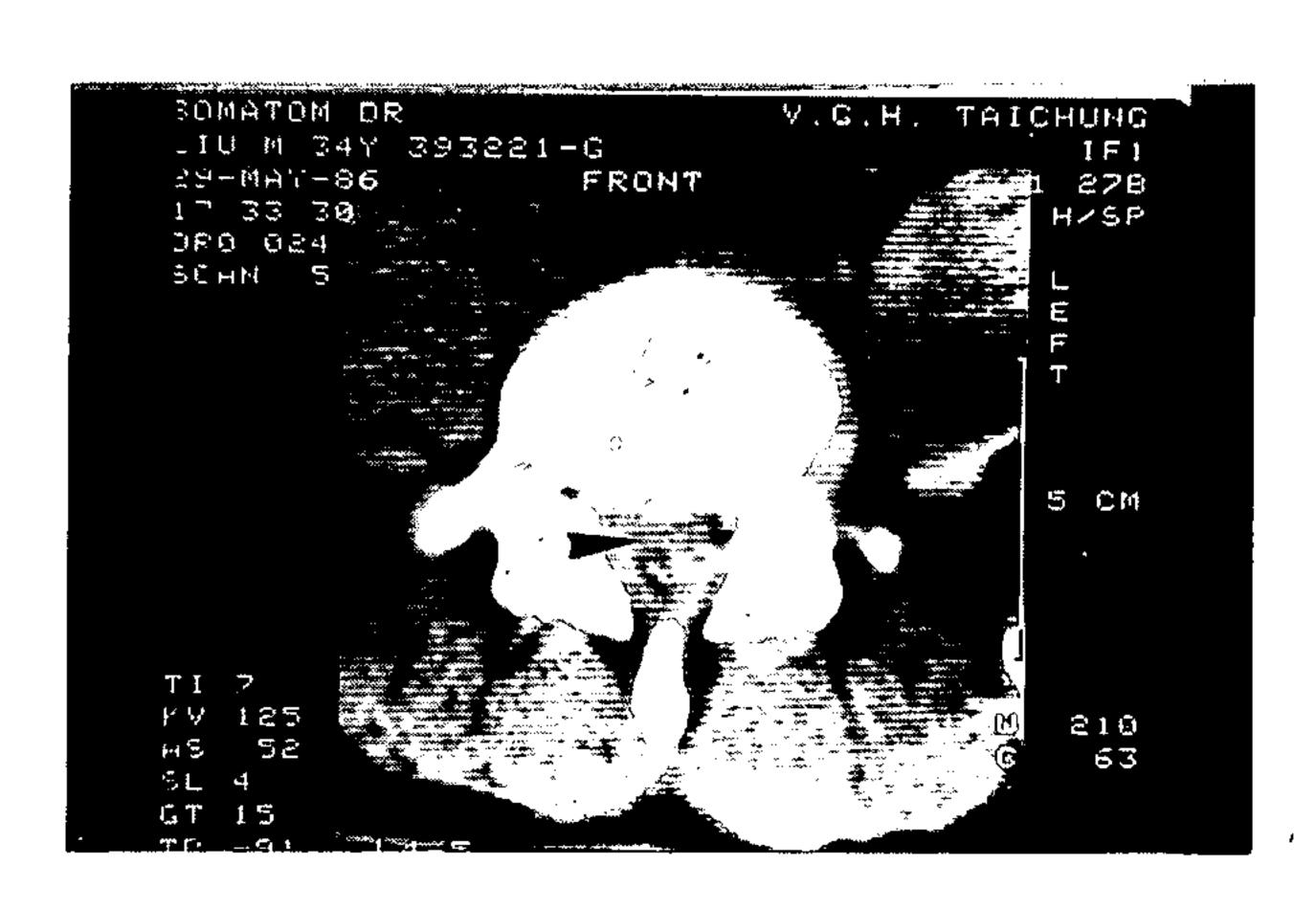
	pre – op		post – op lw.		post – op 3ms.		post – op 6ms.		post – op ly.	
	Rt	Lt	Rt	Lt	Rt	Lt	Rt	Lt	Rt	Lt
1. SLRT:	80	60	80	60	80	70	80	75	80	75
2. BTT:	F	F-	F+	F	G	F+	N	G+	N	G+
3. K.J:	++	++	++	++	++	++	++	++	++	++
4. A.J:	+-	_	+	_	+	+	+	+-	+	+-
5. Dermatome:	S234. S1234. (+-) (+-)		Improved		Improved		Improved		Improved	
6. Anal tone:			(+)		(+)		(+)		(+)	
7. B–C. R:			(+)		(+)		(+)		(+)	
8. Door-bell:	(+)	(–)	(-	-)	(-	-)	(-	-)

表仨) 病例3 的臨床表徵

	pre – op		post – op lw.		post –	post – op lm.		post – op 3ms.		post – op бms.	
	Rt	Lt	Rt	Lt	Rt	Lt	Rt	Lt	Rt	Lt	
1. SLRT:	40	40	50	50	50	60	50	70	60	70	
2. BTT:	F-	\mathbf{F}^{-}	F	F+	F	F ⁺	\mathbf{F}^{+}	G-	G-	G	
3. K.J:	_	_			_		_	+	_	+	
4. A.J:	_	_		_			_	+	_	· +-	
5. Dermatome:	L5 S	\$1234.	L5 S	1234.	Impi	roved.	Impi	oved	Di	tto	
6. Anal tone:	(-)	(-	-)	(+)	(+	· -)	Constipation		
7. B–C. R:	(-)	(+	–)	(+	- —)	(+	_)		_)	
8. Door–bell:	(-)	(-)	(–)	(-	-)	,	-)	



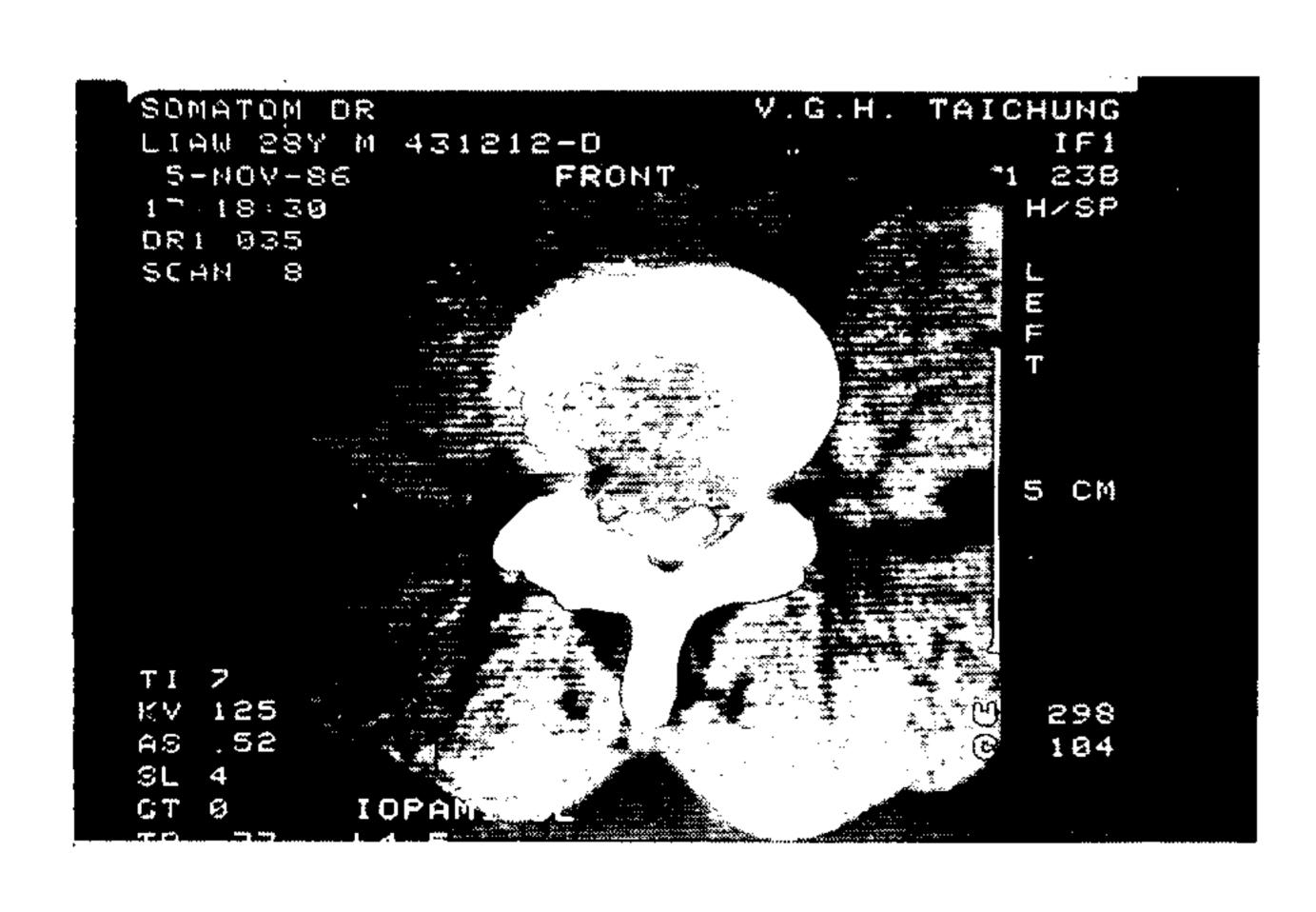
。圖(一)病例 1 造影劑在 L4-5間完全阻塞。



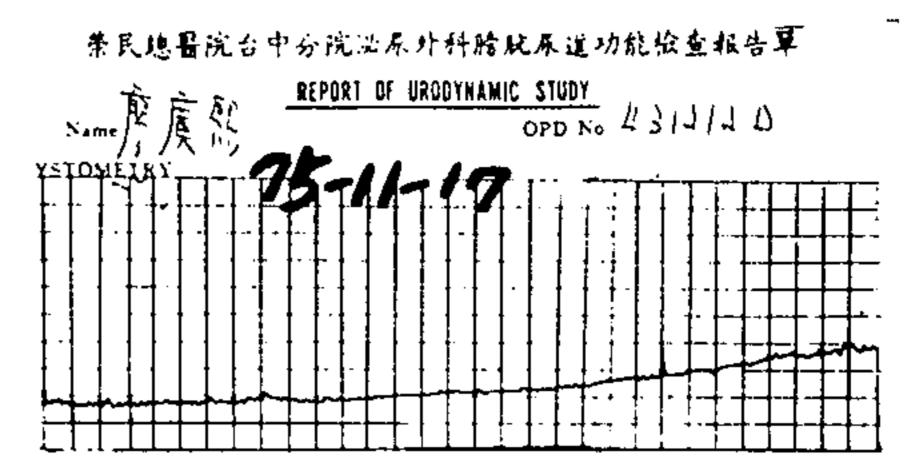
圖(二)病例 1 在 L5 上緣脊椎管內顯示椎間盤,無法看見造影劑。



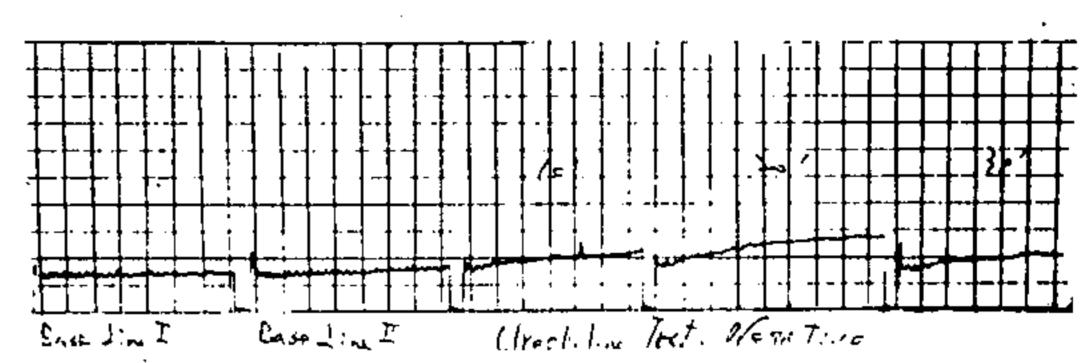
圖(三)病例 2 造影劑在 L4-5 間完全阻塞。



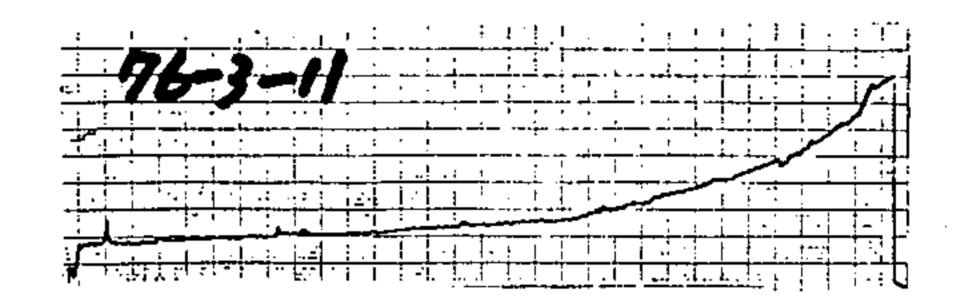
圖四病例 2 L4-5 間椎間盤突出壓迫 dural sac.



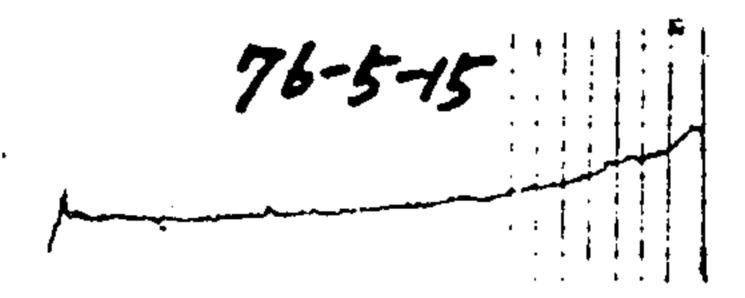
Detrusor areflexia.



urecholine test: negative.

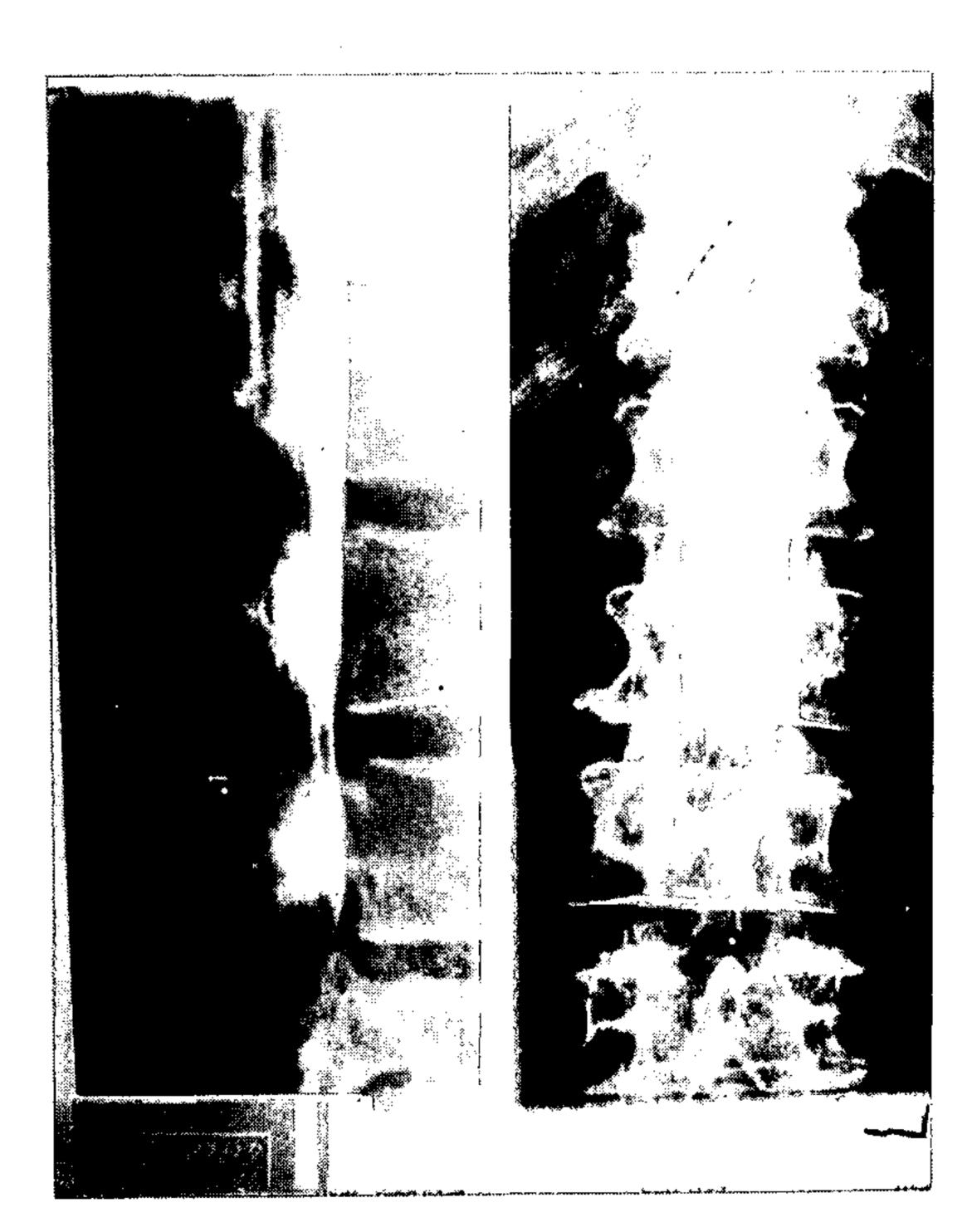


Poor compliance of urinary bladder.



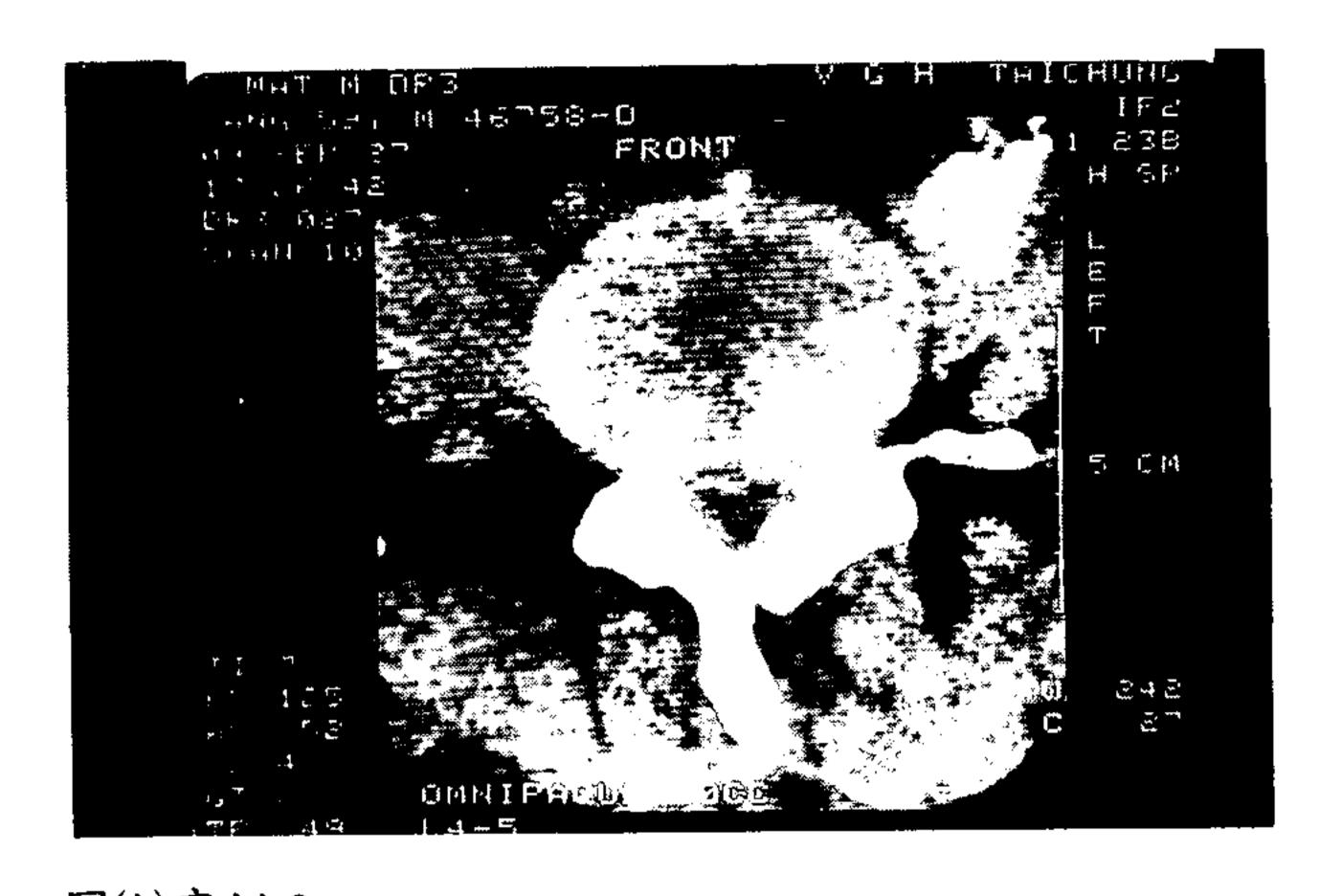
Poor compliance of urinary bladder.

圖(五)病例(二)



圖(六)病例 3 造影劑在 L3-4 間受壓迫, L4-5 間完全阻塞。

劑。



圖(七)病例 3 在 L4-5 間椎間盤突出脊椎管狹窄,無法看見造影

下背痛,二位有明顯外力引起,病例一因不當推拿所造成,所以治療下背痛病人,不能隨便推拿,應由專業人員施行,並把 CES 牢記在心。病例二無明顯和外力有關,病程是漸近性的,最後才有小便困難。早期的肛門週圍感覺檢查非常重要,常可因此及早診斷出來。病例三年紀較大,原有脊椎退化性關節炎,L3-4間有骨刺,脊椎管狹窄,因搬運重物而急性發作,在求診過程中沒有正確診斷,以致發生至手術時間近一個月,手術後的運動感覺功能恢復也最差。依據 Hellstrom 等報告,CES 手術 2 至 3 年後,尚有40% 小便異常,膀胱功能檢查 18% 沒有逼尿肌收縮[7][8],我們三位病人 6 個月內皆能自解小便,但偶

而有小便困難,病例二膀胱功能檢查,6個月後逼尿 肌仍收縮不好。三位手術後仍有不同程度的運動,感 覺和性功能障礙。三位病人從發生到診斷平均14天 ,顯示一般醫師疏忽此症,希望本文能夠提醒大家注 意。

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Cauda Equina Syndrome and Lumbar Disc Herniation

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Hearniation of lumbar disc (HIVD) causing compression of the cauda equina is rare but needs urgent diagnosis and surgical treatment. Cauda equina syndrome (CES) has been described as a complex of low back pain, bilateral or unilateral sciatica, saddle anesthesia and motor weakness in the lower extremities that may progress to paraplegia with bowel and urinary bladder incontinence. The onset of bladder and rectal paralysis with saddle anesthesia should be viewed with a high index of suspicion in a patient with backache and sciatica. Three C.E.S. cases out of 169 H.I.V.D. cases who had been operated in our hospital were seen over a period of one and a half year. The clinical examination included history, physical examination and special examinations

that were myelogram, C-T scanning, Urodynamic study, NCV and EMG study. All three cases had history of chronic relapsing low back pain for four to thirty years. Two out of three had oblivious traumatic injury and the other case did not.

The backache and sciatia showed dramatic improvement in all three cases after operation but saddle hypesthesis, motor weakness and areflexic bladder were still present. The bladder control recovered within six months after operation in all three cases even though urinary bladder showed poor compliance in urodynamic study. However, recovery of sensory, motor and sexual functions was incomplete one year after operation.