CHAPTER 8

Diseases and Disorders of the Musculoskeletal System and Connective Tissue

INTERMEDIATE HEALTH RECORD

Discharge Summary Notes

All notes

Author	Service	Author Type	Filed	Note Time
MD	(none)	Physician	05/26/2008 0918	05/22/2008 1341

HOSPITAL DISCHARGE SUMMARY

Patient Name:
Date of Birth: Age: 43 y.o.
Medical Record Number:
Primary Physician:
Phone:
Admission Date: 5/22/2008
Discharge Date: 5-26-2008

She will be discharged from Hospital to home.

PRINCIPAL DIAGNOSIS CAUSING ADMISSION: DEGENERATION L4-S1

Patient Active Hospital Problem List:
* No active hospital problems. *

DISCHARGE MEDICATIONS
Medications prior to admission that will be resumed at discharge:

Medication	Sig
• CELEBREX ORAL	TAKE 1 TABLET DAILY
• DIAZEPAM 5 MG TAB	AS NEEDED
• LORTAB 10 ORAL	TAKE 1 TABLET 3-4 TIMES A DAY

No new medications prescribed at discharge.

Medication	Sig

FOLLOW-UP: She should see dr in 6 weeks.

Additional followup: None

Special instructions: None

BRIEF HOSPITAL COURSE: This 43 y.o. female with uneventful postop

PROCEDURES PERFORMED DURING HOSPITALIZATION: Anterior fusion and posterior instrumentation fusion L4-S1

COMPLICATIONS IN HOSPITAL: None

IMPORTANT PENDING TEST RESULTS: None

PERTINENT FINDINGS/RESULTS AT DISCHARGE: None

CONDITION AT DISCHARGE: Improving

Physician(s) in addition to primary physician who should receive a copy:
CC1:

Additional Information: Comments: CSC Progress Note

Author	Service	Author Type	Filed	Note Time
NP	(none)	PHYS- Nurse Practitioner	05/22/2008 1606	05/22/2008 1542

Related Notes
Cosigned by :

Consult Orders:
1. IP CONSULT TO PAIN MANAGEMENT

CONSULTATION NOTE

43 y.o. female
Admission Date/Time: 5/22/2008 6:05 AM
Primary Care Provider:

Consults continued

I was asked to see this patient by Dr. for post operative pain management.

HPI: Ms is a 43 years old patient with a long history of low back pain. She is s/p AP fusion L4-S1.This is her third back surgery, 1st in 1992 and then in 2002. She has experienced on and off leg pain and nimbleness and most recently weakness in her L leg. She has used narcotics for pain since high school. This was described as sporadic use, over the last few months she had been using Lortab 4-5 day. She is being evaluated in the PACU. She has been placed on a dilaudid PCA and has received incremental fentanyl and dilaudid boluses. She currently rates her pain at an 8/10. She continues to have the L leg pain and associated numbness. She denies dyspnea or nausea.

REVIEW OF SYSTEMS: A comprehensive review of systems was negative except for items noted in HPI/Subjective.

There are no active problems to display for this patient.

Past Medical History

Diagnosis	Date
• NERVE ROOT AND PLEXUS DISORDER *lumbar 5-sacral 1*	

Past Surgical History

Procedure	Date
• Hx of tubal ligation *1993*	
• Hx of laminectomy *1992*	
• Hx of laminectomy *2002*	
• Hx of bil carpal tunnel *2004*	
• Hx of hysterectomy *2005*	
• Hx of cholecystectomy *2001*	

No family history on file.

History

Social History Narrative

- No narrative on file

Consults continued

History
Social History Main Topics

- Tobacco Use: Not on file
- Alcohol Use: Not on file
- Drug Use: Not on file
- Sexually Active: Not on file

Current hospital medications

Medication	Dose	Route	Frequency	Provider	Last Rate
• acetaminophen 325-650 mg = 1-2 x 325 mg tablet (TYLENOL)	325-650 mg	Oral	Q 4H PRN		
• aluminum-magnesium hydroxide-simethicone suspension (MAALOX PLUS; MYLANTA) 30 mL	30 mL	Oral	QID PRN		
• bisacodyl 10 mg = 1 suppository (DULCOLAX)	10 mg	Rectal	ONE TIME PRN		
• cefazolin 1 g in D5W 50 mL (ANCEF,KEFZOL)	1 g	Intravenous	Q 8H		
• cefazolin 2 g in D5W 50 mL (ANCEF, KEFZOL)	2 g	Intravenous	PRE		
• D5 in NaCl 0.45% with Potassium Chloride 20mEq 100 mL/hr infusion	100 mL/hr	Intravenous	CONTINUOUS		
• diazepam 2 mg = 1 tablet (VALIUM)	2 mg	Oral	Q 6H PRN		
• diazepam 2-5 mg injection (VALIUM)	2-5 mg	Intravenous	Q 6H PRN		
• diazepam 5 mg = 1 tablet (VALIUM)	5 mg	Oral	Q 6H PRN		
• diphenhydrAMINE 25 mg = 0.5 mL x 50 mg/mL injection (BENADRYL)	25 mg	Intravenous	Q 6H PRN		

Consults continued

Allergen	Reactions
• Morphine	Hives
• Latex	

Allergy to Kiwi, associated with alllergy to latex

PHYSICAL EXAM:

General Appearance: Awake, appears uncomfortable, lying on cart.
BP 128/67 | Pulse 80 | Temp 98.2 °F (36.8 °C) | Resp 20 | Ht 1.626 m (5' 4") | Wt 69 kg (152 lb 1.9 oz) | SpO2 99%
Body mass index is 26.11 kg/(m^2).

RESPIRATORY:Lungs clear to auscultation, no wheezing or dyspnea.
CARDIOVASCULAR: Normal heart tones, no edema, ppp.
ABDOMEN: Silent, pincushion intact.
MUSCULOSKELETAL: Posterior incision intact, hemovac in place, lower extremity strength R>L.
NEUROLOGIC: Alert, oriented. Normal sensation LE.

ADDITIONAL COMMENTS: I discussed the patient's condition with Dr. .

CONSULTATION ASSESSMENT:Chronic back pain, s/p AP fusion L4-S1.
PLAN: PCA adjusted, Dilaudid 1 mg bolus ordered. Will follow, call if pain not well controlled.

CNP

Author	Service	Author Type	Filed	Note Time
, MD	(none)	Physician	05/25/2008 0917	05/25/2008 0915

OPERATIVE REPORT

PATIENT: ., MRN: , DOB:

DATE OF SERVICE: 05/22/2008

ATTENDING: , MD, PhD

SURGEON: , MD, PhD

CO-SURGEON: MD

1st ASSISTANT: , PA-C
2nd ASSISTANT: MD, Spine Fellow

PREOPERATIVE DIAGNOSES

1. Degenerative disc disease, L4-L5, L5-S1.
2. Spinal stenosis, L4-L5, L5-S1.
3. Recalcitrant back and lower extremity radicular pain.

POSTOPERATIVE DIAGNOSES

1. Degenerative disc disease, L4-L5, L5-S1.
2. Spinal stenosis, L4-L5, L5-S1.
3. Recalcitrant back and lower extremity radicular pain.

OPERATIVE PROCEDURE

1. Anterior spinal fusion L4-L5, L5-S1.
2. Insertion of interbody fusion device (Stryker PEEK AVS and InFuse bone morphogenetic protein sponges) anterior L4-L5, L5-S1.

COMPLICATIONS: None.

INDICATIONS

is a 43 y.o. female with the history of recalcitrant back and right

Procedure Notes continued

lower extremity pain related to spondylosis at the L4-L5 and L5-S1 levels. After failure of appropriate nonoperative measures, she has elected to proceed with revision surgical intervention. Risks, benefits, and expected outcomes of the procedure were discussed in detail. Informed consent was provided.

DESCRIPTION OF PROCEDURE

The patient was brought to the operating room after placement of intravenous antibiotics. After general endotracheal anesthesia was induced without apparent complications, she was positioned supine on the operating table with the bony prominences well-padded. The anterior spine was exposed as described separately by the co-surgeon. After exposing and positively identifying the intended L4-L5 and L5-S1 levels, subtotal discectomy was carried out. This was accomplished by incising the anterior longitudinal ligament and anterior annulus at each level. Disc material was elevated from the respective endplates with a Cobb elevator. Distraction was maintained while the remaining disc material was retrieved. Attention was then turned to endplate preparation for fusion. This was accomplished using a high-speed bur to produce parallel punctate bleeding cortical surfaces. A Stryker PEEK AVS device was then selected for each level. The centers of the devices were filled with cortico-cancellous allograft bone. Each device was positioned within a distracted disc space between L4 and S1. Additional cancellous allograft bone and InFuse bone morphogenetic protein sponges were positioned bilaterally adjacent to each device. Visual inspection confirmed satisfactory position of the implants and restoration of appropriate disc height. The surrounding soft tissues were then inspected and found to be satisfactory. Closure was then carried out as described separately by the co-surgeon.

All sponge and needle counts were correct. There were no apparent complications.

MD, PhD

Author	Service	Author Type	Filed	Note Time
, MD	(none)	Physician	05/25/2008 0919	05/25/2008 0917

OPERATIVE REPORT

PATIENT: , MRN: , DOB:

DATE OF SERVICE: 05/22/2008

ATTENDING: , MD, PhD

SURGEON: , MD, PhD

PREOPERATIVE DIAGNOSES

1. Degenerative disc disease, L4-L5, L5-S1.
2. Spinal stenosis, L4-L5, L5-S1.
3. Recalcitrant back and lower extremity radicular pain.

POSTOPERATIVE DIAGNOSES

1. Degenerative disc disease, L4-L5, L5-S1.
2. Spinal stenosis, L4-L5, L5-S1.
3. Recalcitrant back and lower extremity radicular pain.

OPERATIVE PROCEDURE

1. Posterior spinal fusion L4-L5, L5-S1.
2. Revision laminotomy, partial medial facetectomy and foraminotomy for neural decompression, bilateral L5-S1.
2. Segmental pedicle instrumentation, L4-L5, L5-S1 (Stryker Xia).

1st ASSISTANT: PA-C
2nd ASSISTANT: , MD, Spine Fellow

COMPLICATIONS: None.

Procedure Notes continued

INDICATIONS

. is a 43 y.o. female with the history of recalcitrant back and lower radicular extremity pain. After failure of nonoperative measures, she has elected to proceed with revision surgical intervention. Risks, benefits, and expected outcomes of the procedure were discussed in detail. Informed consent was provided.

Anterior spinal fusion and placement of interbody fusion materials has been completed under the current anesthetic. The following describes the staged posterior lumbar procedure.

DESCRIPTION OF PROCEDURE

The patient was positioned prone on a Jackson table with the bony prominences well-padded. The skin of her back was prepped and draped in the usual sterile manner. A longitudinal incision was placed in the midline at the lumbosacral junction using anatomical landmarks. Subcutaneous tissue was dissected sharply to reach the deep fascia. This was split longitudinally in line with the skin incision. Metallic markers were placed and an intraoperative crosstable x-ray was obtained. Once we had positively identified the intended L4-S1 levels and confirmed satisfactory position of the anterior interbody graft, attention was turned to pedicle instrumentation.

Sub-periosteal dissection was carried out over the spinous processes, lamina and facet joints bilaterally from L4 to S1. In each case, the dorsal cortex over the pedicle was opened with a high-speed bur. A firm probe was used to cannulate the pedicle. A flexible probe was then used to confirm satisfactory position of the screw tract within the pedicle. Stryker XIA polyaxial pedicle screws were positioned bilaterally at L4 through S1. The screws were introduced and intraoperative PA and lateral x-rays were obtained. This did confirm satisfactory position of the instrumentation.

Attention was then turned to the neural decompression procedure. This was completed bilaterally at L5-S1. In each case, the laminar elements were resected with a combination of high speed burs, osteotomes and Kerrison punches. The ligamentum flavum and facet capsular tissues were similarly resected , along with the medial aspect of the ascending articular process of the facet. The decompression was then extended into the neural foramen in a similar manner until the neural elements were visualized and found to be adequately decompressed.

Longitudinal rods were then connected to the polyaxial screw heads bilaterally. Set screws were placed and tightened to the appropriate torque. The posterior elements, including the facet joints and lamina, were decorticated bilaterally. Cortical cancellous allograft bone was combined with local autogenous bone and distributed over the fusion bed.

Closure was then carried out in layers. The deep fascia was closed with a #1 Vicryl in a running manner. Subcutaneous tissues were closed with a 2-0 Vicryl, and skin edges were reapproximated using a 3-0 Monocryl in a running subcuticular manner. Steri-Strips and sterile bandages were applied. The patient was returned to the supine position, awakened, extubated, and transported to the post-anesthesia care unit in stable condition. All sponge and needle counts were correct. There were no apparent complications.

Author	Service	Author Type	Filed	Note Time
, MD	(none)	Physician	05/23/2008 0636	05/23/2008 0635

SPINE SURGERY PROGRESS NOTE
5/23/2008

SUBJECTIVE
Good pain control. No leg pain or paresthesia. No chest pain or SOB or dizziness

OBJECTIVE
BP 114/59 | Pulse 90 | Temp 98 °F (36.7 °C) | Resp 16 | Ht 1.626 m (5' 4") | Wt 69 kg (152 lb 1.9 oz) | SpO2 99%
+I/O+ Urine: 600 ml

+I/O+ Hemovac Drain # 1 Vol (ml): 150 ml

+I/O+ Hemovac Drain # 2 Vol (ml): (not recorded)

+I/O+ CT Collect # 1 Dng Vol (ml): (not recorded)

Physical Exam:
Incision: covered

Quad/Tib Ant/Gastroc Soleus/EHL 5/5
L4-S1 intact to light touch

LABORATORY
Recent Labs

Basename	5/22/08 1445
• HGB	11.1L

S/P Procedure(s):
FUSION ANTERIOR POSTERIOR SPINE LEVEL 01 on 05/22/2008

PLAN
Good early progression. Mobilize today

Author	Service	Author Type	Filed	Note Time
, MD	(none)	Physician	05/24/2008 2200	05/24/2008 2157

PROGRESS NOTE
May 24 08

SUBJECTIVE: Back pain
the patient Is doing better today. She is still not eating

OBJECTIVE:
BP 115/56 | Pulse 100 | Temp 98.3 °F (36.8 °C) | Resp 16 | Ht 1.626 m (5' 4") | Wt 69 kg (152 lb 1.9 oz) | SpO2 97%

Temp (24hrs), Avg:98.5 °F (36.9 °C), Min:98.3 °F (36.8 °C), Max:99 °F (37.2 °C)

Patient Wt. in the past 72 hrs:

	Wt.
05/22/08 0600	69 kg (152 lb 1.9 oz)

Intake/Output Summary (Last 24 hours) at 05/24 2157
Last data filed at 05/24 1400

	Gross per 24 hour
Intake	2500 ml
Output	1980 ml
Net	520 ml

PHYSICAL EXAM:

EYES: Normal
HEAD, EARS, NOSE, MOUTH, AND THROAT: Normal
RESPIRATORY: Normal
CARDIOVASCULAR: Normal
ABDOMEN: Normal
MUSCULOSKELETAL: Normal
LYMPHATIC: Normal
SKIN/HAIR/NAILS: Normal
NEUROLOGIC: Normal

No results found for this basename:
SODIUM:2,POTASSIUM:2,CHLORIDE:2,CO2TOTAL:2,BUN:2,CREATININE:2,CALCIUM:2
in the last 720 hours Recent Labs

Basename	5/24/08 0602	5/23/08 0625
• INR	--	--
• ALKPHOSPH	--	--
• MAGNESIUM	--	--
• WBC	--	--
• HGB	9.6L	10.0L
• PLT	--	--

Chroinc Pain syndrome
Chronic pain Patient
S/Pantpost fusion
Chronic Opioid use

ASSESSMENT & PLAN:

Start weaning continuous qtt with The goal of transitioning to oral medications tomorrow?

Author		Service	Author Type	Filed	Note Time
	MD	(none)	Physician	05/24/2008 0809	05/24/2008 0808

SPINE SURGERY PROGRESS NOTE
5/24/2008

SUBJECTIVE
Doing well. Good pain control. Sat yesterday in the chair. No gas. No leg pain

OBJECTIVE
BP 113/63 | Pulse 94 | Temp 98.3 °F (36.8 °C) | Resp 16 | Ht 1.626 m (5' 4") | Wt 69 kg (152 lb 1.9 oz) | SpO2 97%
+I/O+ Urine: 750 ml

+I/O+ Hemovac Drain # 1 Vol (ml): 20 ml

+I/O+ Hemovac Drain # 2 Vol (ml): (not recorded)

+I/O+ CT Collect # 1 Dng Vol (ml): (not recorded)

Physical Exam:
Incision: healing well

Quad/Tib Ant/Gastroc Soleus/EHL 5/5
L4-S1 intact to light touch

Abdomen slightly distended but supple

LABORATORY
Recent Labs

Basename	5/24/08 0602	5/23/08 0625	5/22/08 1445
• HGB	9.6L	10.0L	11.1L

Author	Service	Author Type	Filed	Note Time
, MD	(none)	Physician	05/25/2008 1021	05/25/2008 1020

SPINE SURGERY PROGRESS NOTE
5/25/2008

SUBJECTIVE
Doing well. Ambulating. Eating, gas+. No leg pain or paresthesia

OBJECTIVE
BP 113/55 | Pulse 106 | Temp 98.4 °F (36.9 °C) | Resp 18 | Ht 1.626 m (5' 4") | Wt 69 kg (152 lb 1.9 oz) | SpO2 96%
+I/O+ Urine: 900 ml

+I/O+ Hemovac Drain # 2 Vol (ml): (not recorded)

+I/O+ CT Collect # 1 Dng Vol (ml): (not recorded)

Physical Exam:
Incision: healing well

Quad/Tib Ant/Gastroc Soleus/EHL 5/5
L4-S1 intact to light touch

LABORATORY
Recent Labs

Basename	5/24/08 0602	5/23/08 0625	5/22/08 1445
• HGB	9.6L	10.0L	11.1L

S/P Procedure(s):
FUSION ANTERIOR POSTERIOR SPINE LEVEL 01 on 05/22/2008

PLAN
ADAT and walking. Possible dc tomorrow vs Tuesday

Author	Service	Author Type	Filed	Note Time
MD	(none)	Physician	05/26/2008 0919	05/26/2008 0918

SPINE SURGERY PROGRESS NOTE
5/26/2008

SUBJECTIVE
Doing well. Wants to go home. No leg pain or paresthesia. Had a BM. Eating and ambulating well

OBJECTIVE
BP 115/56 | Pulse 92 | Temp 98.1 °F (36.7 °C) | Resp 16 | Ht 1.626 m (5' 4") | Wt 69 kg (152 lb 1.9 oz) | SpO2 98%
+I/O+ Urine: 650 ml

+I/O+ Hemovac Drain # 2 Vol (ml): (not recorded)

+I/O+ CT Collect # 1 Dng Vol (ml): (not recorded)

Physical Exam:
Incision: healing well

Quad/Tib Ant/Gastroc Soleus/EHL 5/5
L4-S1 intact to light touch

LABORATORY
Recent Labs

Basename	5/24/08 0602	5/23/08 0625	5/22/08 1445
• HGB	9.6L	10.0L	11.1L

S/P Procedure(s):
FUSION ANTERIOR POSTERIOR SPINE LEVEL 01 on 05/22/2008

PLAN
Dc today

All Progress Notes

Progress Notes

All notes

Author	Service	Author Type	Filed	Note Time
, RN	(none)	NURS-Registered Nurse	05/26/2008 1317	05/26/2008 1308

Discharge Note

Data:

nas been discharged home at 1300 via wheelchair accompanied by Registered Nurse.

Action:

Discharge/follow-up instructions were provided to patient. Prescriptions were filled and sent with patient.. Belongings sent with patient. Equipment brace, type: soft tech, was sent with the patient/family.

Response:

Patient verbalized understanding of discharge instructions, reason for discharge, and necessary follow-up appointments.

Patient was instructed not to take celerex until sees Dr also not to take Lortab while taking oxycontine and oxycodone.

Coding Clarification Request

CCR

All notes

Author	Service	Author Type	Filed	Note Time
, MD	(none)	Physician	07/04/2008 1137	06/14/2008 1850

Dear Doctor

Patient: admission date: 5/22/2008 6:05 AM

Patient had spinal fusion with Hgb levels of 10.1 and 9.6. EBL was 400 cc.
Please document below, **if this patient had anemia and what it was due to** (ex; acute blood loss, chronic blood loss).

Physician Response: Postoperative anemia was due to intraoperative blood loss and postoperative blood loss from the hemovac drain

Thank you, , Coding Specialist
This question and your response will become a permanent part of the patient's medical record.

Laboratory Results

Results

Hemoglobin - Daily x 2
Status: Completed

Component	Value	Units	Flag	Collected
HEMOGLOBIN	9.6	g/dL	**L**	05/24/2008 6:02 AM
MCV	97	fL	(none)	05/24/2008 6:02 AM

Hemoglobin - Daily x 2
Status: Completed

Component	Value	Units	Flag	Collected
HEMOGLOBIN	10.0	g/dL	**L**	05/23/2008 6:25 AM
MCV	97	fL	(none)	05/23/2008 6:25 AM

Hemoglobin - PACU
Status: Completed

Component	Value	Units	Flag	Collected
HEMOGLOBIN	11.1	g/dL	**L**	05/22/2008 2:45 PM
MCV	96	fL	(none)	05/22/2008 2:45 PM

Result Summary for BLOOD BANK EXTRA LAVENDAR TOP

Result Information

Status	Provider Status
Final result (5/22/2008 6:45 AM)	Ordered

Lab and Collection Information BLOOD BANK EXTRA LAVENDAR TOP on 5/21/08 - Lab and Collection

Result Summary for XR SPINE 1 VIEW PORTABLE

Result Information

Status		Provider Status
Normal	Final result (5/22/2008 6:10 PM)	Open

Result Narrative

LUMBAR SPINE, 05/22/08

CLINICAL HISTORY: Localization.

FINDINGS: Cross-table lateral view of the lumbar spine obtained portably at 0855 hours demonstrates an instrument anteriorly at the level of the L5-S1 intervertebral disk space.

M.D.
Radiologist

Lab and Collection XR SPINE 1 VIEW PORTABLE on 5/22/08 - Lab and Collection Information

Result History XR SPINE 1 VIEW PORTABLE on 5/22/08 - Order Result History Report

Result Summary for XR SPINE 1 VIEW PORTABLE

Result Information

Status		Provider Status
Normal	Final result (5/23/2008 7:06 AM)	Open

Result Narrative

LUMBAR SPINE, 5/22/08