Management of Patients with Narcotic Bowel Syndrome(1)

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Patients on chronic narcotics who have been diagnosed with narcotic bowel syndrome (NBS) benefit from the gradual but complete discontinuation of all narcotic medications. This can be accomplished successfully in the inpatient setting. However, the following points should be noted:

1. *Effective communication* with the patient is essential. The rationale/benefit of stopping the narcotics and the withdrawal program itself must be explained in detail prior to initiation of the detoxification protocol. This should include affirmation of the patient's pain and an explanation of the underlying pathophysiology of NBS (i.e. altered motility and/or visceral hypersensitivity).
2. The explanation should emphasize the substitution of *non-narcotic medications for pain management* (e.g. TCAs, SNRIs) and the treatment of withdrawal symptoms (e.g. with clonidine and benzodiazepines). The patient should be reassured that s/he will not be abandoned in pain.
3. A constant *plan for narcotic withdrawal* should be in place. The physician should be prepared for the patient that attempts to negotiate for additional narcotics above the protocol dose. This may require thoughtful inquiry into possible exacerbating factors (e.g. withdrawal symptoms or anxiety). Verbal reassurance and adjustment of ancillary medications may be necessary. In the motivated patient, the program very often proceeds successfully to completion if issues are properly addressed.
4. *Ongoing dialogue* is important as the detoxification process progresses. The patient's willingness to undergo the program is central to success. It often helps to involve family members prior to initiating the protocol as this provides added support for the patient.
5. *Follow up care* is essential. There is little benefit in instituting a narcotic withdrawal program unless there is continuity of care in the outpatient setting,
6. *The Functional GI and Motility Program is available to assist in the inpatient process as part of a research protocol.* If you and the patient are interested **please contact Christina Davis (Christina_davis@med.unc.edu or 966-0142) before you begin the detoxification and she will see and screen the patient for eligibility.** She will be able to track the patients progress, notify you if any difficulties. In addition the patient will receive compensation for participating in this observational study.

1. **Pain Management**
    a. A TCA (e.g. desipramine, nortriptyline @25-150 mg/qhs) or SNRI (e.g. duloxetine 30-90 mg. qd) should be started for immediate and long terms pain control and to help manage psychological co-morbidities(2). This can be initiated at a low dose with dose escalation over the duration of the detoxification process and afterwards. If possible this should be started at least a week prior to the detoxification program (i.e., started before hospitalization)and continued after discharge indefinitely for pain management.
    b. Mirtazepine (15-30 mg. qhs) can be considered instead of or in addition to a TCA or SNRI if nausea is a prominent feature.
    c. Quetiapine (Seroquel; 25-100 mg.)(3) can be used as a single night time dose (25-100 mg qhs) for adjunct treatment of pain either concurrently in house or after several weeks as an outpatient if the antidepressant is not sufficient for pain management. This agent is also helpful to treat sleep disturbance and anxiety as well as to augment the pain benefit(3;4) and can be continued after discharge.
2. **Narcotic Withdrawal**
    a. Total **narcotic daily dose** should be converted to morphine equivalents using an appropriate calculator (e.g. Globalrph or Epocrates, see also Table 1, or UNC pharmacy website: http://pharmacy.intranet.unchealthcare.org/opiatechart.pdf).

Opiate Conversion Table (Table 1)

Drug	IV/IM dosing	PO dosing	Equivalent IV Morphine	Equivalent IV Hydromorphone
Morphine (MS Contin, Roxanol)	10mg	30mg	10mg	1.5mg
Codeine (Tylenol #3)*	120mg	200mg	10mg	1.5mg
Fentanyl	0.1mg (100mCg)	-	10mg	1.5mg
Fentanyl Patch	25mCg/hr patch	-	10-22mg**	1.5-3.4mg**
Fentanyl Patch	50mCg/hr patch	-	23-37mg**	3.5-5.6mg**
Fentanyl Patch	75mCg/hr patch	-	38-52mg**	5.7-7.9mg**
Fentanyl Patch	100mCg/hr patch	-	53-67mg**	8-10mg**
Hydromorphone (Dilaudid)	1.5mg	7.5mg	10mg	1.5mg
Hydrocodone (Vicodin, Lortab, Norco)	-	30mg	10mg	1.5mg
Levorphanol	2mg	4mg	10mg	1.5mg
Meperidine (Demerol)	75mg	300mg	10mg	1.5mg
Oxycodone (Percocet, Oxycontin)	-	20mg	10mg	1.5mg
Oxymorphone (Opana)	1mg	10mg	10mg	1.5mg
Buprenorphine (Buprenex, Subutex)	0.4mg	-	10mg	1.5mg
Butorphanol	2mg	-	10mg	1.5mg
Nalbuphine (Nubain)	10mg	-	10mg	1.5mg
Pentazocine (Talwin)	-	50mg	10mg	1.5mg
Methadone±	5mg	10mg	10mg	1.5mg

* use caution in converting doses greater than 65mg due to decreasing efficacy at high dose; suggest making a dosage reduction
** Variable absorption with transdermal fentanyl. Most conversion data available for transdermal patchs underestimates patch strength. Therefore, converting from patch to iv morphine may give you a falsely elevated morphine dose. It is best to choose a number in the bottom 1/3 of the range.
± methadone has considerable interpatient variability and has a bi-phasic half life. Please consult a clinic pharmacist for conversion and correlate with clinical analgesic response

b. This should be administered on day #1 of detoxification. In the inpatient setting, intravenous morphine (or hydromorphone in the case of a morphine allergy) as a continuous drip should be used. Be sure to remove the fentanyl patch if present. Special attention should be paid to the conversion of fentanyl patches. The equivalence varies by patch strength and conversion is **not** done by changing the transdermal dose to and iv fentanyl dose then to morphine. Rather, each patch has variable absorption and has a range of iv morphine equivalencies, please see table 1. For outpatients, taper can occur using oral medications, i.e., reduce by one dose (about 10-20%) each week.
c. Giving the appropriate dose on day #1 is essential as a lower dose could lead to preliminary withdrawal symptoms, potentially sabotaging the process. THE NARCOTICS MUST BE ADMINISTERED CONTINUOUSLY, NOT PRN AND PREFERABLY NOT SCHEDULED. A PCA pump is used to minimize the likelihood of withdrawal symptoms.
d. The **narcotic dose** should be weaned gradually with a **reduction of 10 to 33% of the dose given on day #1 every 24 hours**. In general, slower tapers should be used for patients with more chronic and entrenched narcotic use. However it is not the initial dose but the continuity of the dosing that avoids "soar crash or withdrawal effects." The detoxification duration is between 4 and 11 days.
e. **Clonidine** acts to block withdrawal effects and reduce diarrhea, anxiety and bowel related pain. It should be initiated routinely when there is 50% reduction in narcotic dosage, or earlier to help control withdrawal symptoms. (e.g., anxiety, diaphoresis, pilorerction, diarrhea, muscle aches, shakiness).
    i. A reasonable starting dose is 0.1mg po BID or TID.
    ii. Alternatively this can be given as a patch which delivers the chosen daily dose (0.1, 0.2 or 0.3 mg and is replaced weekly)
    iii. The dose can be increased up to a total daily dose of 0.6mg (usually 0.2-0.4 mg) for desired effect. The patient should be monitored closely for hypotension and orthostasis.
    iv. Clonidine can be rapidly tapered off or continued for several weeks, or indefinitely, depending on the patient's perceived potential for relapse and the overall clinical benefit.

3. **Constipation**
    a. Polyethylene glycol (PEG solution) can routinely be used for opioid-induced constipation, 1-3 glasses a day as needed
    b. If there is severe constipation and a KUB shows a large amount of stool, a complete flush (e.g., colonoscopy prep) should be instituted prior to daily dosing.
    c. Methylnaltrexone (Relistor) given SQ 6 or 12 mg. q 2 days is an alternative treatment option if constipation is severe and not initially responsive to PEG solution.
4. **Anxiety reduction.**
    a. A **benzodiazepine** should be started on day #1 for anxiety. A reasonable option is lorazepam 1mg po q 6 hrs and if needed, IV is also permitted initially. This dose can be increased (e.g. for uncontrolled anxiety) or decreased (e.g. for unwanted sedation) as appropriate. The benzodiazepine should be discontinued at the end of the narcotic taper.
5. **Psychological Treatmen**t
    a. Ideally we would like to have concurrent psychological care during the detox program. The benefit would be to provide supportive care and to institute pain management strategies.
    b. Stephan Weinland PhD (Stephan_Weinland@med.unc.edu) can be available as a consultant and to work with the patient during the detox process on an as needed and availability basis with the approval of the GI consult service.

The main obstacles to successful detoxification are:

1. Poor physician-patient communication e.g. perceived lack of empathy, failure to validate pain, or poor explanation of rationale and benefits of detoxification.
2. An unmotivated patient (may need better education from physician).
3. Starting with too little narcotic on day #1 (make sure opiod-equivalence conversion is accurate).
4. Reducing dosage too fast or going up and down in negotiation.
5. Administering the narcotics PRN instead of scheduled (can precipitate withdrawal symptoms).
6. Failure to recognize and adequately address exacerbating factors e.g. anxiety and withdrawal symptoms.

It is important to note that the *sine qua non* for successful detoxification is the physician's relationship with the patient, and the patient's acceptance of the detoxification plan.

Reference List

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(6) Pereira J, Lawlor P, Vigano A, Dorgan M, Bruera E. Equianalgesic dose ratios for opioids: a critical review and proposals for long-term dosing. J Pain Symptom Manage 2001; 22:672-687.

Narcotic Bowel Syndrome Inpatient Detoxification Checklist

Communication strategies for successful detox

- ❑ Explain the rationale for the narcotic taper and provide realistic expections (i.e., some pain may continue)
- ❑ Explain the underlying pathophysiology (e.g., altered motility, visceral hypersensitivity).
- ❑ Explain substituting alternative medications (TCAs, SNRIs) for narcotics + treating withdrawal side effects.
- ❑ Establish firm plan up front.
- ❑ Involve family members in the plan.
- ❑ Keep open an ongoing dialogue.
- ❑ Affirm the patient's pain.

Preparation

- ❑ If severe constipation, obtain KUB. If large amount of stool, do a colonoscopy prep before narcotic taper.
- ❑ Start a TCA (e.g. desipramine, nortriptyline 25-150 mg/qhs) or SNRI (e.g. duloxetine 30-90 mg qd) ideally one week before detoxification for pain/psych comorbidity. Mirtazapine (15-30 mg. qhs) may be used instead if nausea is prominant. May start low and escalate. Start at time of admission if not already done.

Narcotic taper

- ❑ Calculate total narcotic daily dose in morphine equivalents using narcotic equivalence converter (http://www.medcalc.com/narcotics.html).
  - o **Total narcotic daily dose**: _____ mg morphine equivalents
- ❑ **On day #1 of detoxification, discontinue narcotics including any fentanyl patch**. Then administer IV morphine at 100% of the daily narcotic dose. Give as a continuous drip, NOT as prn or scheduled dosing. Hydromorphone may be used if there is morphine allergy.
- ❑ Every 24 hours, reduce the total narcotic dose by 10 to 33% of the dose given on day #1. Plan for 4 to 11 days of detoxification, with slower tapers reserved for patients with more chronic narcotic use.
  - o Planned **duration** of taper: _____ days
  - o **Daily dose reduction** = **Total narcotic daily dose (mg) / taper duration (days) = _____** mg/day
- ❑ For withdrawal effects (diarrhea, anxiety, bowel-related pain, diaphoresis, piloerection, muscle aches, shakiness), give clonidine after 50% reduction in daily narcotic dose, or sooner. Start 0.1 mg po BID or TID or as a transdermal dose (0.1, 0.2 or 0.3 mg) once weekly. Titrate as needed up to 0.6 mg daily staying alert to possible orthostasis or hypotension.
- ❑ For anticipated constipation, give polyethylene glycol 17 g bid to tid as needed.
- ❑ For anxiety, give lorazepam 1 mg po q 6 hrs. May start IV instead. Titrate per anxiety and sedation.
- ❑ The GI and Motility Program can assist if the patient would like to enroll in an observation study. Contact: Christina_davis@med.unc.edu or 966-0142. If eligible, patient gets compensation.

Possible problems

- ❑ Pain/anxiety/sleep disturbance: Increase TCA or SNRI. Can also add quetiapine 25-100 mg qhs.
- ❑ When using clonidine be alert to orthostasis or hypotension.
- ❑ Severe constipation: Give methylnaltrexone (Relistor) 6-12 mg SC q 2 days if resistant to PEG.
- ❑ Attempts to renegotiate taper: Give verbal reassurance and adjust ancillary medications, not narcotics.
- ❑ For additional supportive care and pain management: Stephan Weinland, PhD, can consult with the patient during the detox process with approval of GI consult team. (Stephan_Weinland@med.unc.edu)

Discharge – Arrange follow up care

- ❑ Continue TCA, SNRI, and/or quetiapine.
- ❑ Clonidine can be rapidly tapered off or continued for several weeks, or indefinitely, depending on the patient's perceived potential for relapse and the overall clinical benefit.
- ❑ Discontinue benzodiazepines.