

Letter to Editor

Medication Considerations in a Cancer Patient with a Jejunostomy Tube (J-tube)

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Dear Sir,

Alimentation is a significant concern in patients with aerodigestive tract cancers. They frequently require gastric tube feeds and sometimes post-pyloric tube feeds. A post-pyloric feeding tube can be an endoscopically placed nasoduodenal/nasojejunal tube or a surgically placed jejunostomy tube (J-tube). In either situation, the clinician needs to be aware of the consequences of a change in the absorption site of the medications that the patient is receiving. Some medications cannot be administered through the tube because gastric acid may be needed for their absorption, the medication may get bound to the feed or tubing and the site of drug absorption is not the intestine.^[1] However, information on the intestinal absorption of orally administered drugs is not readily available. Clinicians often prescribe oral drugs through feeding tubes without much thought about the prospect of treatment ineffectiveness.

When confronted with a patient on jejunostomy feeds, with poorly controlled cancer pain on a high dose of immediate release (IR) morphine tablets and phenytoin for seizure disorder, a lack of analgesic efficacy was suspected. Enteral feeds, morphine, and phenytoin were administered through the J-tube by the caregivers. Oral morphine is absorbed mostly in the upper intestine.^[2] While liquid morphine can be given through the J-tube, crushed IR morphine tablets do not disperse completely in solution. Phenytoin, on the other hand, binds to the feeds and achieves only sub-therapeutic levels in the body.^[3] If a regular opioid like morphine does not provide adequate analgesia, methadone is a suitable alternative, especially in a low-resource setting. In theory, methadone is absorbed in the acidic environment of the stomach and absorption is negligible beyond the pylorus.^[4] While methadone can

be administered through a nasogastric/J tube, there is no published data on the efficacy of methadone through a feeding tube, and clinical judgement is advised.^[1]

Therefore, in this patient two problems needed to be addressed. The first is the administration of methadone through the J-tube and the second is phenytoin, an inducer of the cytochrome P-450 enzyme system, known to interact with methadone.^[4] Given that levetiracetam can be given in a J-tube and does not interact with methadone, a rapid transition was made from phenytoin to levetiracetam based on a prior study demonstrating the safety of the switch.^[5]

The patient had no breakthrough seizures until his death. Methadone replaced IR morphine as per previously published protocol using the standard equianalgesic table.^[4] Thereafter, IR morphine was used to manage only breakthrough pain. Analgesia improved significantly within 2–3 weeks.

This case study demonstrates that close attention has to be paid to manage medications in patients with a J-tube. It also showcases that methadone administered through a J-tube is clinically effective and that levetiracetam could be safely substituted for phenytoin. Further studies are warranted to confirm the clinical efficacy of liquid methadone administered through a J-tube.

Declaration of patient consent

Patient's consent was not required as there are no patients in this study.

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Conflicts of interest

There are no conflicts of interest.

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Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The author confirms that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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