

# Procedural sedation: what would the patient like?

Gavin Lloyd,<sup>1</sup> Alasdair Gray<sup>2</sup>

Imagine breaking your ankle. Worse still having a fracture/dislocation of your ankle that you recognise needs manipulation. What are your thoughts preprocedure? How confident are you of a painless (and hopefully successful) reduction? Might we assume that deep down, you dread an uncomfortable experience and its recall? In similar circumstances what are patients' genuine experiences?

Analysis of the emergency medicine literature reveals widely varying recall rates: 7%,<sup>1</sup> 12%–13%,<sup>2</sup> 12%–16%,<sup>3</sup> 65%<sup>4</sup> and 90%.<sup>5</sup> More importantly, patients reporting *painful* recall of the procedure on return to baseline mental status has been recorded as 2%–6%,<sup>2</sup> 10%–14%<sup>3</sup> and 30%.<sup>4</sup> In a randomised controlled trial comparing sedation with ketamine versus propofol by Miner *et al*, patients recall of any pain during the procedure was 2% of those randomised to ketamine and 6% of those given propofol; all reported 100% satisfaction with the treatment they received during the procedure.<sup>1</sup> In an earlier randomised controlled trial targeting deep sedation, Miner *et al* recorded painful recall more often: in 9.9% of those patients given 1 mg/kg propofol and 10 µg/kg alfentanil, and in 13.5% in those given propofol alone.<sup>3</sup> All patients had been given titrated intravenous morphine up to 20 min prior to the procedure. Patient satisfaction was 94% in both groups. Six of 20 patients in a study by Freeston *et al*<sup>4</sup> were able to recall pain postprocedure. Two of these rated their pain as 9/10 and 10/10 and their satisfaction as 4/10 and 5/10, respectively. Both received midazolam/morphine combinations, the former widely regarded as reliably providing amnesia. In summary, painful recall does occur after procedural sedation, even when deeper levels of sedation are targeted. Painful recall

unsurprisingly correlates indirectly with patient satisfaction: lower levels of recall are associated with higher satisfaction rates.

Better communication with patients requiring procedural sedation is a key message from a recent report from the Royal College of Anaesthetists and Association of Anaesthetists of Great Britain and Ireland<sup>6</sup> (their fifth National Audit Project: NAP5). The study recommends avoiding terms such as 'we'll give you something to make you sleep', or 'you won't be aware of anything', since these terms describe the state of anaesthesia or total amnesia. It argues that we should stress that procedural sedation is not general anaesthesia; amnesia is a side effect of sedation and not a guarantee. The

report offers a useful table defining levels of sedation and analgesia with respect to patient response and intervention. It does not mention the unique effect of ketamine—we have added 'dissociative sedation' to the otherwise original table (table 1). In addition, we would advocate seeking informed consent and feedback when the patient regains full consciousness. We note patient dissatisfaction following sedation does not feature as an adverse event in an internationally accepted audit tool<sup>7</sup> we have previously endorsed on behalf of the Royal College of Emergency Medicine (RCEM).<sup>8</sup> Importantly, patient satisfaction will feature in the RCEM 2015 audit on procedural sedation and analgesia.

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**Table 1** Levels of sedation in patient terms (adapted from the fifth National Audit Project (NAP5)<sup>6</sup>)

	What will this feel like?	What will I remember?	What's the risk related to the sedation drugs?
Not sedated; awake	I am awake, possibly anxious. There may be some mild discomfort (depending on the what I am having done)	Everything	Nearly zero
Minimal sedation	I am awake and calm. There may be some mild or brief discomfort	Probably everything	Very low risk
Moderate sedation	I am sleepy and calm but remain in control. I may feel some mild discomfort	I might remember some things	Low risk
<i>Dissociative sedation</i>	<i>I am in a trance. I will not be in control. Any pain or sensations I feel may feel oddly remote, as if I am floating away from my body</i>	<i>I may remember being in a trance or may recall vivid dreams</i>	<i>I will need oxygen and special monitoring. I have a 1 in 10 chance of being sick</i>
Deep sedation	I am asleep. I will not be in control	Probably very little	Higher risk. My breathing may slow when I am asleep—and I may need help to breathe—a tube might be inserted into my nose, mouth or (rarely) windpipe. I will need oxygen and special monitoring
Anaesthesia	I am deeply 'asleep' and unable to respond	Very unlikely to remember anything	Higher risk (but the presence of an anaesthetist increases safety). My breathing may slow or stop and my blood pressure and heart rate may fall. I will need a specialist doctor to look after my breathing and support my blood pressure and heart rate I will need oxygen and special monitoring and equipment

<sup>1</sup>Emergency Department, Royal Devon & Exeter Hospital Wonford, Exeter, UK; <sup>2</sup>Emergency Department, Royal Infirmary of Edinburgh, Edinburgh, UK

**Correspondence to** Dr Gavin Lloyd L162, Emergency Department, Royal Devon & Exeter Hospital Wonford, Barrack Road, Exeter EX2 5DW, UK; [gavin.lloyd@nhs.net](mailto:gavin.lloyd@nhs.net)



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