Stakeholder views on treating pain due to dehorning dairy calves

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Abstract

A common and painful management practice undertaken on most dairy farms is dehorning young calves (also called ‘disbudding’) when done on calves less than about two months of age. Despite much evidence the practice is painful, and effective means available to mitigate this pain, it is frequently performed without pain relief. The overall aim of this study was to describe different stakeholder views on the use of pain mitigation for disbudding and dehorning. Using an interactive, online platform, we asked participants whether or not they believed that calves should be disbudded and dehorned with pain relief and to provide reasons to support their choice. Participant composition was as follows: dairy producer or other farm worker (10%); veterinarian or other professional working with the dairy industry (7%); student, teacher or researcher (16%); animal advocate (9%); and no involvement with the dairy industry (57%). Of 354 participants, 90% thought pain relief should be provided when disbudding and dehorning. This support was consistent across all demographic categories suggesting the industry practice of disbudding and dehorning without pain control is not consistent with normative beliefs. The most common themes in participants’ comments were: pain intensity and duration, concerns about drug use, cost, ease and practicality and availability of alternatives. Some of the participants’ reasoning corresponded well with existing scientific evidence, but other reasons illustrated important misconceptions, indicating an urgent need for educational efforts targeted at dairy producers and dairy industry professionals advising these producers.

Keywords: animal welfare, attitudes, calves, dehorning, disbudding, pain

Introduction

Disbudding and dehorning are common management practices on dairy farms performed to reduce the likelihood of injury to cattle and farm workers (AVMA 2012). The term ‘disbudding’ refers to the destruction or excision of horn-producing cells before skull attachment; ‘dehorning’ entails the excision of the horn after this tissue has attached to the skull. The time of attachment varies by breed and individual animal, but is thought to occur around eight weeks of age when the horn bud is approximately 5–10 mm long (Stafford & Mellor 2005).

Disbudding is usually achieved by destroying the innervated tissue immediately surrounding the bud either using a hot iron (~600°C) or caustic paste, while dehorning is typically done surgically, using a mechanical gouger, wire or saw. Since disbudding is performed at an earlier age and entails less tissue damage, it is generally considered less invasive and therefore preferable to dehorning (AVMA 2012). Several US studies have found a substantial proportion of calves are dehorned rather than disbudded (Fulwider et al 2008; USDA 2009).

Regardless of timing or method, there is considerable behavioural, physiological and cognitive research indicating that all forms of disbudding and dehorning are painful (Stafford & Mellor 2011). To address the pain caused by these procedures, a variety of pain management strategies have been investigated. The administration of local anaesthesia (eg lidocaine) in combination with non-steroidal anti-inflammatory drugs (eg meloxicam) has been shown to provide effective pain control throughout the intra- and post-operative periods (McMeekan et al 1999; Milligan et al 2004; Stewart et al 2009; Heinrich et al 2010; Stilwell et al 2012; Huber et al 2013). Distress associated with the handling and restraint required for administration of anaesthetics and analgesics can be mitigated with the use of a sedative (eg xylazine) administered before the procedure (Grondahl-Nielsen et al 1999).

These findings have informed a number of policies. The Council of Europe, that represents 47 member countries including all of the European Union member states, recommends the use of pain relief when disbudding calves more than four weeks of age (ALCASDE 2009). In Sweden, Denmark and The Netherlands pain relief is legally required when disbudding/dehorning regardless of age (ALCASDE 2009). There are no such legal requirements in the US or Canada. However, the recently revised US National Milk Producers Federation Farmers Assuring Responsible Management animal welfare programme (NMPF-FARM) recommends calves be disbudded before eight weeks of age