Lidocaine in hyaluronic acid gel fillers could be linked to lip complications

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The introduction of hyaluronic acid (HA) gel fillers in 1996 enabled aesthetic practitioners around the world to inject deeply, shape and augment the face, create and alter lip size, and develop more of an artistic licence. It opened our eyes to a whole new world of facial rejuvenation.

Interestingly, lidocaine was not incorporated within HA filler syringes until 13 years later, around 2009, before which anaesthesia was given via a topical cream or nerve infiltration for patients seeking lip augmentation. Since the introduction of lidocaine in HA fillers, the majority of practitioners have opted to use these products over standard non-lidocaine formulations, in order to enhance comfort levels for patients. And why wouldn't they? We want our patients to have a positive and painless experience when they visit us, and from a professional and ethical perspective, we have a duty of care to our patients to ensure their needs are met, including the relief of pain.

Although some studies have been carried out on patient comfort (e.g. Levy et al, 2009), these have been mainly related to the correction of nasolabial lines. Pain and patient experience during lip treatments, with or without lidocaine, has not been widely assessed, which is surprising given the soaring numbers of perioral and lip treatments over the past decade.

Recently, a number of experienced and respected clinicians have openly voiced their thoughts that there may be a correlation between the seemingly increasing numbers of adverse events we see reported (in lips particularly) and lidocaine being incorporated in HA fillers. With the reported rise in numbers of treatments carried out and more practitioners injecting, be they medical or non-medical, then it could be said that an increase in the number of complications is inevitable and that this is mainly due to the skills of the injectors. However, lidocaine is well known for its vasodilatory effect, and the perioral area and lips are highly vascular (Guinard et al, 1992). Labial arteries and veins anastomosing into vessels affecting other facial zones, plus a multitude of smaller vessels, are all equally prone to expansion with the introduction of lidocaine.

As an observer of and contributor to the Aesthetic Complications Expert Group Facebook forum, I have seen that the most common posts are about lip treatments, often relating to prolonged or excessive swelling, extreme bruising, impending or true necroses, and then the usual lumps, bumps and delayed inflammatory responses. Could some of these reported cases have been avoided with the use of an HA filler without lidocaine due to its less vasodilatory effect?

It could be postulated, with the wealth of evidence on lidocaine as a vasodilator, compared with the lack of any substantive research into patient tolerance with lidocaine/non-lidocaine HA in lips, that we could be subjecting our patients to additional risks by injecting lidocaine HA products for this indication. It is just something to think about given the numbers of adverse events we are seeing. We must remember that, as health professionals, non-maleficence comes first and we should always consider what each product we use is capable of. Think about the four themes of the Nursing and Midwifery Council (2015) Code: prioritise people, practise effectively, preserve safety, and promote professionalism and trust.

In terms of adverse events post dermal filler injections, there is disparity between what we know or hear about, and what gets reported to Medicines and Healthcare products Regulatory Agency (MHRA). Our evidence is therefore anecdotal and insufficient, and MHRA is keen to address this. Only through diligent reporting can we move from guessing numbers of adverse events to having a clearer picture. We must report the following adverse events using the Yellow Card system (https://yellowcard.mhra.gov.uk): anything that is serious or has the potential to be serious; anything that requires intervention; less serious events that are not expected, even if they are well recognised; and anything you are unsure of. If in doubt, report it.

Nurses have demonstrated leadership and vision for the last 30 years in aesthetics. The *Journal of Aesthetic Nursing* gives us a platform to be recognised, published and share our expertise with others. On behalf of the British Association of Cosmetic Nurses' board and its membership, I look forward to seeing more educated, vibrant and inspiring nurses continuing to lead the way in aesthetics. JAN

References

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