

# The Use of Tranexamic Acid in Sleeve Gastrectomy

A. Hussain<sup>1</sup> · I. AL-Shoek<sup>2</sup> · S. El-Hasani<sup>3</sup>

Published online: 7 October 2016  
© Springer Science+Business Media New York 2016

We read with interest this article [1] and totally agree with the conclusion of the use of tranexamic acid (TA) in sleeve gastrectomy. We think it is a simple and economical option for the effective reduction of staple line bleeding.

We would like to share our experience of using TA in bariatric surgery.

National Institute of Clinical Excellence (NICE), UK, recommended the use of TA in operations when the expected blood loss is more than 500 ml [2]. Although sleeve gastrectomy does not fit NICE recommendation, a personal experience after the use of TA has proved the benefits.

Since January 2013, we have routinely been using TA in all our stapled bariatric surgeries including gastric bypass, sleeve and all revisional surgeries (total number of 750 patients).

All these patients had a dose of 1 g of TA at induction of anaesthetic and an additional 1 g 8 h after the procedure. This practice is coupled with 1-min waiting before firing the stapler and has reduced our post-operative transfusion rates dramatically close to zero. We do not know which one of these two parameters is more efficacious than the other. Previous experience of more than 1000 bariatric operation without the use of TA showed a transfusion rate of 1 % and a re-exploration rate for staple line bleeding in 0.15 %.

The type of stapler and the cartridge height is also a crucial factor for staple line bleeding. If the closed staple height is too high, then it may inadequately appose the

tissues and result in leakage, bleeding and/or dehiscence. Conversely, if the staple height selected is too low, then ischemia [3]. The selection of correct height is the ideal solution to avoid or reduce bleeding and leakage; this was highlighted by Gagner's recent study [4].

The authors provided a well-matched group of patients in both arms of the study. JAMA study confirmed the association of aspirin to increasing incidence of bleeding [5]. Aspirin and nonsteroidal anti-inflammatory medication are therefore expected to contribute to the bleeding episodes after bariatric surgery and these medications may need consideration in matching patients.

## Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no competing interests.

**Ethical Approval** This article does not contain any studies with human participants or animals performed by any of the authors. For this type of study formal consent is not required.

**Informed Consent** Does not apply.

**Financial Support Used for the Study** No financial support for this study.

## References

1. Chakravarty S, Sarma DR, Chang A, Patel A. *Obes Surg*. 2016;26:1422–8.
2. <https://www.nice.org.uk/guidance/ng24/chapter/Recommendations>. Date of access 07/09/2016
3. Chekan E, Whelan RL. Surgical stapling device–tissue interactions: what surgeons need to know to improve patient outcomes. *Med Devices (Auckl)*. 2014;7:305–18.

---

✉ A. Hussain  
azahrahussain@yahoo.com

<sup>1</sup> Bariatric Unit, Doncaster Royal Infirmary, Doncaster DN25LT, UK

<sup>2</sup> Frimley Park NHS Foundation Trust, Frimley, UK

<sup>3</sup> King's College Hospital, London, UK

4. Huang R, Gagner MA. Thickness calibration device is needed to determine staple height and avoid leaks in laparoscopic sleeve gastrectomy. *Obes Surg*. 2015;25:2360–7.
5. De Berardis G, Lucisano G, D’Ettorre A, et al. Association of aspirin use with major bleeding in patients with and without diabetes. *JAMA*. 2012;307:2286–94.