

PEER-REVIEW REPORT

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Title: Platelet rich plasma effectiveness in bowel anastomoses: A systematic review

Reviewer's code: 05846802

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Japan

Author's Country/Territory: United States

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input type="checkbox"/> Anonymous <input checked="" type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

In this article, the authors have reported the effect of platelet rich plasma (PRP) by systematic review. This well described manuscript will give us the role of PRP on the healing mechanism of intestinal anastomoses. Many papers were published regarding this research, and a variety of results have been reported. As the authors state, the effect of PRP on healing of intestinal anastomoses is acceptably for improving the various factors. However, description of context is immature and should be revised to become instructive to readers. Questions and comments to authors: Comments; 1. As the authors state, it is still unclear what is actually effect of PRP on anastomosis site healing. According to the previous reports, evaluating factors were anastomotic burst pressure, tissue hydroxyproline, collagen deposition, and inflammatory cells deposition. If possible, please show the figure which factors in the healing process PRP may act on. It can make it easier for the reader to understand the effect of PRP. 2. Aydin et al (2020)¹ reported the effect of PRP, and they focused on its concentration. Low level PRP was effective, on the contrary, high level PRP is more likely to inhibit healing. It is very important factors about this research, so please mention about it in the discussion. 3. As the authors pointed out, further research is needed to confirm the safety and effectiveness of PRP on human bowel anastomoses, and to transfer the human clinical study. How much blood sample is needed to obtain the required PRP? 4. Although platelets aggregation occur early in the healing process of bowel anastomosis in inflammation period, thrombocytopenia becomes a risk factor for anastomosis leak? Reference 1. Aydin MA, Guler EM, Demiroz AS, et al. Comparison of Platelet-Rich Plasma-Impregnated Suture Material with Low and High Platelet Concentration to Improve Colonic Anastomotic Wound Healing in Rats. *Gastrointerol Res Pract*. 2020; 2020: 7386285.