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OBSIDIO™ Conformable Embolic | PUBLICATION SUMMARY

Early Experience Using Tantalum-Loaded Nanocomposite Hydrogel Conformable Embolic for Upper Gastrointestinal Bleeding: Open-Sandwich Technique

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STUDY BACKGROUND & METHODOLOGY

- Upper gastrointestinal bleeds (UGIBs) resulting from peptic ulcers, gastric malignancies, and vascular abnormalities are associated with high mortality
- In UGIBs treated by embolization, the gastroduodenal artery (GDA) is the most common target vessel
- This retrospective study reports results from 10 consecutive gastroduodenal artery embolization (GDA) procedures performed using Obsidio Embolic
- Data was included for consecutive patients at the institution from January 2023 to June 2024
- Patients were followed at 4 weeks and 6 months post-embolization

PROCEDURAL & TECHNIQUE DETAILS

- The majority of cases in this study were performed using an open-sandwich technique, a technique adapted from the established sandwich technique
- In the described open sandwich technique, retrograde sources of blood flow, namely the right gastroepiploic artery (RGEA) are embolized distal to the extravasation site using a single coil prior to Obsidio Embolic delivery
- Following distal coiling, the Obsidio Embolic was injected continuously while withdrawing the microcatheter to near the origin, allowing it to embolize past the proximal branches of the GDA
- Finally, the microcatheter is removed and confirmatory angiography is performed through the base catheter
- 24-48 hours after the procedure, CTA was performed to assess occlusion and non-target embolization

RESULTS

- Patient cohort included 8 males and 2 females with a mean age of 67.3 years
- Duodenal/gastric ulcers were the most common cause of bleeding (6/10)
- Of the embolization procedures, 6 were performed empirically and 4 were for active extravasation
- 6/10 patients were hemodynamically unstable at time of embolization
- Mean hemoglobin levels increased 1.47 g/dL ($p = 0.0001$) 24 h post-embolization
- **100% Technical success** (10/10), defined as complete stasis on angiography, was achieved
- **80% Clinical success** (8/10), defined as absence of rebleeding for 30 days, with the 2 rebleeds resulting from collateral or other feeding vessels
  - One GDA was not occluded past the SPDA which later bled
  - One patient developed a rebleed due to collateral flow from the pancreatoduodenal arcade (inadequate distal placement of coil)
- **No significant adverse events** were observed

DISCUSSION

- This study demonstrates high technical and clinical success using the “open sandwich” technique for GDA embolization with Obsidio Embolic
- This technique may eliminate the need for a terminal or proximal coil, streamlining the procedure and potentially lowering the risk of ischemic complications and additional bleeding after embolization.
- Other technical considerations include injection speed and catheter size, with slower injections and smaller catheters resulting in more distal travel of Obsidio Embolic
- GDA embolization using a single coil and Obsidio Embolic may provide time and cost-efficiency advantages compared to coil embolization alone

CONCLUSION

- In this initial experience, GDA embolization with Obsidio Embolic had high rates of technical success and long-lasting treatment effectiveness
- Obsidio Embolic can be effectively combined with coils to achieve desired embolization outcomes

Read the full study here: https://doi.org/10.3390/jcm14072345

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