

# AB021. SOH22ABS206. Perineal complications following abdominoperineal resection with flap reconstruction: rectus abdominis versus gluteal myocutaneous versus gluteal fasciocutaneous flaps—a systematic review and meta-analysis

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**Background:** Abdominoperineal resection (APR) results in a large perineal defect. Flap reconstruction is a commonly advocated approach to reduce rates of perineal complications associated with primary closure. Several techniques can be employed including vertical rectus abdominis (VRAM), gluteal artery perforator myocutaneous (GAM) and gluteal artery perforator fasciocutaneous (GAP) flaps. The aim of this systematic review is to compare perineal complication rates between the techniques.

**Methods:** A systematic review was conducted following PRISMA guidelines. Databases were searched for studies reporting perineal complications following flap reconstruction post APR. Demographic data for each study was extracted along with overall perineal complication rate, infectious complication, flap necrosis, dehiscence, and failure.

**Results:** In total 41 studies with 987 patients were included. Six hundred and seventy-seven patients (68.59%) underwent surgery for rectal cancer, 215 (21.78%) for anal cancer with smaller proportions for other indications. Data was available for each flap: VRAM (n=614), GAM (n=152) and GAP (n=221). Overall perineal complication rates were similar between the groups (38.29% vs. 36.84% vs. 35.29%,

$\chi^2=0.64$ ,  $P=0.73$ ). No statistically significant difference in infectious perineal complications was seen (16.63% vs. 19.09% vs. 10.24%,  $\chi^2=5.62$ ,  $P=0.06$ ). Dehiscence was seen less frequently in the GAM group (22.17% vs. 13.16% vs. 21.72%,  $\chi^2=6.02$ ,  $P=0.049$ ), while flap necrosis was seen more commonly in the VRAM group (6.75% vs. 1.32% vs. 0%,  $\chi^2=21.36$ ,  $P<0.0001$ ).

**Conclusions:** While perineal outcome data for flap reconstruction following APR is available, it is of poor quality, largely retrospective in nature and not comparative. A large prospective randomized controlled trial is needed to conclusively address this question.

**Keywords:** Abdominoperineal resection (APR); gluteal fasciocutaneous flap; gluteal myocutaneous flap; perineal wound; rectus abdominis myocutaneous flap

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## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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