



Evidence-Based Resource

[← Back To Topic](#)

Bauman B, Stephens D, Gershone H, Bongiorno C, Osterholm E, Acton R, Et Al. Management Of Giant Omphaloceles: A Systematic Review Of Methods Of Staged Surgical Vs. Nonoperative Delayed Closure. Journal Of Pediatric Surgery 2016;51(10);1725-30.

The goal of the systematic review was to examine the existing therapies available to treat the giant omphalocele (GO) and to determine superiority of either staged surgical procedures or nonoperative delayed closure. There were 14 included studies: 10 on nonoperative delayed closure and 4 on staged surgical management.

Five different techniques were reported for nonoperative delayed closure: silver-based, iodine-based, manuka honey, 2% aqueous eosin, and negative pressure wound therapy. For staged surgical closure, there were 3 different methods: proline silo, silastic silo, and interposition mesh. Thirty-five patients undergoing silver-based treatment had length of stay (LOS) ranging from 20 to 78 days, time to full feeds ranging from 6 to 8 days, and 3 deaths. In 3 studies that used iodine-based treatment with 65 patients, tissue closure was performed at 6 to 12 months of age and no thyroid dysfunction occurred; the range of LOS was 14 to 34 days, time to enteral feeding was 8.5 to 33 days, and there were 15 deaths. Alternative methods of dissodic 2% aqueous eosin and manuka honey (one study each) resulted in median LOS of 21 and 66 days and mortality of 25% and 20% respectively. Manuka honey was associated with a 13 day median time to full feedings. One study of 8 patients with negative-pressure wound therapy reported a long hospital stay (median 70 days) but no wound infections, fistulas, or sac ruptures.

Of 4 studies utilizing staged surgical closure, 3 studies used silo construction and one used interposition mesh placement. For studies using silo, the LOS was a median of 42 days; for patients who underwent interposition mesh closure the median was 11.3 days.

Conclusions: The authors concluded that nonoperative delayed management with topical silver followed by delayed closure of the fascial defect should be considered as the primary strategy for giant omphalocele.

Quality Assessment – AMSTAR

	Item Description	Score
1	Was an 'a priori' design provided?	Yes = 1
2	Was there duplicate study selection and data extraction?	CA = 0
3	Was a comprehensive literature search performed?	Yes = 1
4	Was the status of publication (i.e. grey literature) used as an inclusion criterion?	Yes = 1
5	Was a list of studies (included and excluded) provided?	No = 0
6	Were the characteristics of the included studies provided?	Yes = 1
7	Was the scientific quality of the included studies assessed and documented?	No = 0
8	Was the quality of the included studies used appropriately in formulating conclusions?	N/A = 0
9	Were the methods used to combine the findings of studies appropriate?	N/A = 0
10	Was the likelihood of publication bias assessed?	No = 0
11	Was the conflict of interest included?	No = 0
Total		4/11

CA: can't answer; N/A: not applicable

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