

4th Global Meeting on

Plastic, Aesthetic and Reconstructive Surgery

November 07-08, 2019 | Frankfurt, Germany

The best technique for microsurgical ear replantation in children: A systematic review

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Background: Whilst there have been studies reviewing the various techniques available for auricle reattachment, no systematic review has specifically focussed on the paediatric population. The aim of this systematic review was to examine the best microsurgical technique for successful ear replantation in children.

Methods: A literature search of all children undergoing microsurgical ear replantation was performed between 1980 and 1st June 2018 using the MEDLINE and Cochrane databases. Two independent researchers assessed each study for inclusion and performed the data extraction. Data items extracted for each article included: the type of microsurgical technique used for ear replantation; age of the patients; survival rate of the ear replant; and complications attributed to the procedure.

Results: A total of three articles were included in the final analysis, all of which were case reports. Two reported on artery-only and one reported a combined artery and venous replantation.

All replantations survived until the end of the follow up period (range 8 months – 4 years). Arterial thromboses occurred in one artery-only and one artery and venous anastomosis. However, the artery-only anastomoses resulted in more complications overall, including areas of partial necrosis requiring debridement and reconstruction, and the need for blood transfusion with the use of medicinal leeches.

Conclusions: From the cases examined, techniques involving both arterial and venous anastomoses seem the most effective, with the fewest complications. However, it has been demonstrated that successful replantation in the absence of venous anastomosis is still possible, as long as postoperative venous congestion is managed adequately. These findings appear to be in keeping with those of studies in adults, but there is a relative lack of data at present and more cases must be examined in order for firmer conclusions to be made

Biography:

Georgina Wellstead is a core surgical trainee in the UK with an interest in head and neck reconstruction and microsurgery. She is currently completing an MSc in Reconstructive Microsurgery at Barts and The London School of Medicine and Dentistry

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