COMPLICATIONS AFTER NON-SURGICAL RHINOPLASTY: A SYSTEMATIC LITERATURE REVIEW

LEAL, Ana Paula; LUCAS, Carolina; MARTINELLI, Katrini; DIAS, Heloisa.
GREEHOF- ACADEMIA BRASILEIRA DA FACE

INTRODUCTION

Surgical rhinoplasty is still the main treatment to improve the shape of the nose. Although it has disadvantages such as being an invasive procedure that requires considerable recovery time and has a high cost. However, it has been gaining popularity over the years of being less traumatic and painful, with the advent of synthetic fillers based on hyaluronic acid, calcium hydroxyapatite, absorbable polydioxanone (PDO) threads and non-absorbable threads. The biggest advantage is that it can provide immediate and visible results, as well as be performed at a clinic (KANG et al., 2019; MAIO, 2004).

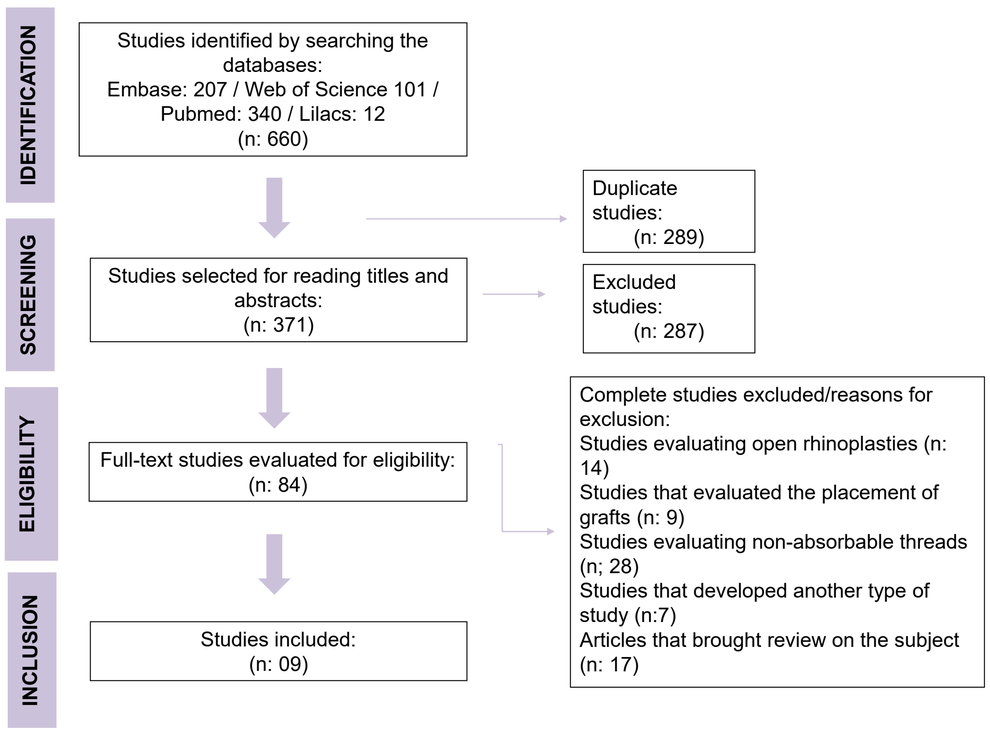
OBJECTIVE

This systematic review aimed to analyze the main complications after nonsurgical rhinoplasty using hyaluronic acid and/or polydioxanone (PDO) threads.

DATA SOURCES

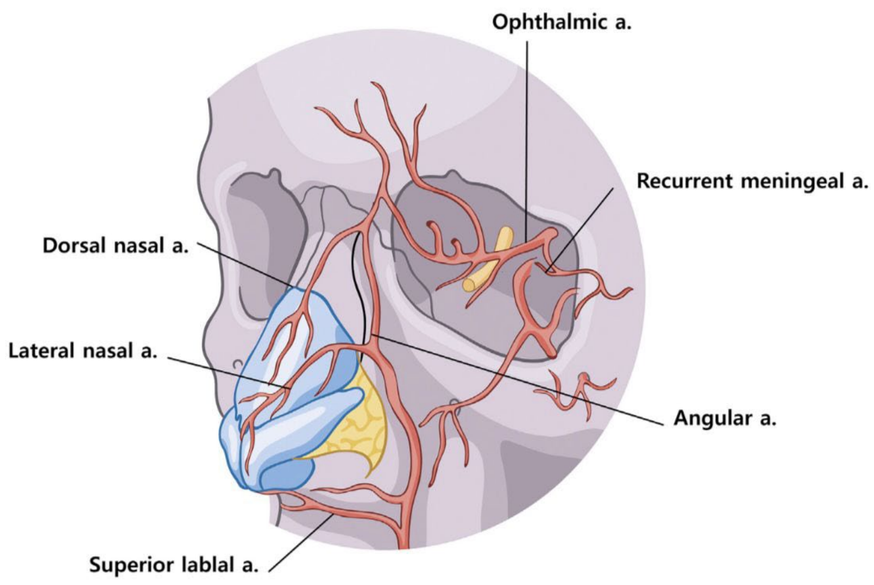
EMBASE, LILACS, PUBMED and WEB OF SCIENCE databases were used to select articles in any language, from 2004 to 2022. The keywords used were: “Non-surgical Rhinoplasty”, “rhinoplasty”, “polydioxanone threads”, “filler” and “necrosis”. Studies on human nonsurgical rhinoplasty using injectable fillers or PDO threads were included. Among the nine studies included, four performed nonsurgical rhinoplasties with hyaluronic acid only, three with PDO thread only, and two with a combination of both.

STUDIES SELECTION



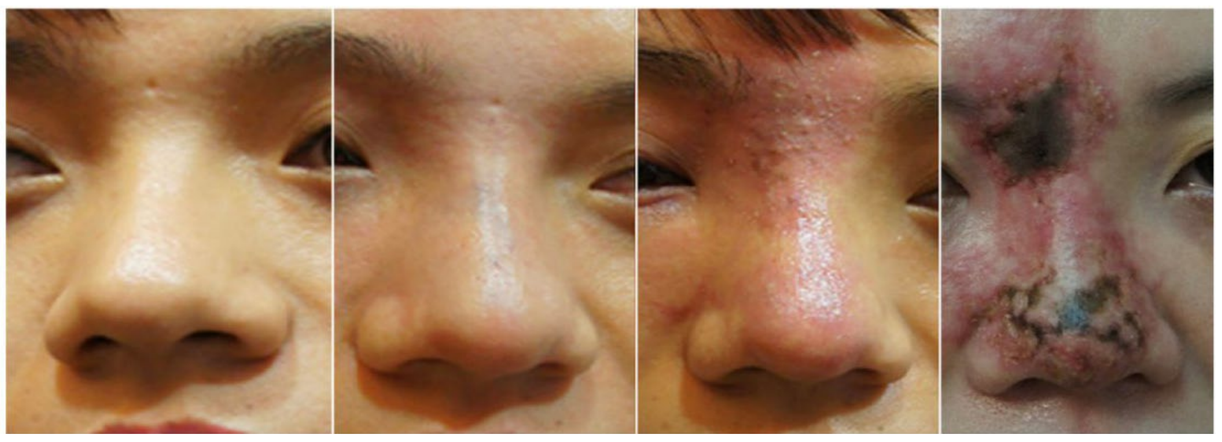
RESULTS & DISCUSSION

Erythema and edema were the most frequent complications when hyaluronic acid was used, however, despite being considered safe, serious complications such as necrosis and blindness also occurred; as for PDO threads, thread extrusion and infection predominated in nonsurgical rhinoplasty. Understanding the anatomy and application techniques, as well as the materials used for nose procedures, is essential to avoid complications, but if they occur, it is primordial to know the management and protocols for the reversal of intercurrences.



COMPLICATIONS WITH HYALURONIC ACID

The prevalent complications after a non-surgical rhinoplasty are hematoma or ecchymosis; erythema of the nasal skin, hypersensitivity, infection, filling migration, asymmetry and local reaction in the injection region (BERTOSSI et al., 2019; WILLIAMS et al., 2020; HARB et al., 2020). Skin necrosis is an early severe complication, often associated with prolonged bleaching and possibly pain at the injection local, lesions with a spotted and lacy appearance of the skin, with evolution of blisters, bedsores and followed later by a dark discoloration (BERTOSSI et al., 2019; FURTADO et al., 2020). De Victor et al. (2021) and Daher et al. (2020) agree that hyaluronic acid has a safe profile among synthetic fillers. Part of the safety profile with the use of hyaluronic acid is the ability to use hyaluronidase in case of vascular involvement. For vision loss, it can become irreversible if managed properly (THANASARNAKSORN et al., 2018). This can occur when used to treat any local on the face, due to the rich supply of vascular anastomoses that connect to the ophthalmic artery. Retrobulbar hyaluronidase injection should be administered when retinal artery occlusion is suspected, as well as other immediate actions to decrease adverse effects: discontinuation of hyaluronic acid injection, eye massage to aid in vasodilation, and transfer of the patient to the specialist as soon as possible (THANASARNAKSORN et al., 2018).



COMPLICATIONS WITH PDO THREADS

The most common adverse events with the use of PDO treads in the nose are pain, bruising, dimpling, thread extrusion, and foreign body granuloma (LEE; Yang, 2018; HELMY, 2018; KANG et al., 2020; JIN et al., 2022). Kim et al. (2020) and Helmy (2018) stated that infection after non-surgical rhinoplasty with PDO is rarely reported. The factors that contribute to the infection are the insertion of many threads, absence of aseptic preparation, anatomical features and high absorption of the PDO threads that increases inflammation around the threads (HELMY, 2018; JIN et al., 2022).). Kang et al. (2019) state that the threads have limitations because they do not provide expressive volumetric changes. They recommend that PDO threads be associated with fillers in the correction of the nasal dorsum in non-surgical rhinoplasty. The advantages of this association of techniques are that the amount of filler required is smaller when combining with the PDO threads and there is a greater increase in the nasolabial angle.

CONCLUSION

Any type of complication should be avoided after non-surgical rhinoplasty, using correct injection techniques and in-depth knowledge of anatomy. If complications happen, you need to be prepared to reverse them for the patient's well-being. Common complications of nonsurgical rhinoplasty with hyaluronic acid are hematoma, erythema, pain, infection, filling migration and asymmetries, and serious complications such as blindness and skin necrosis. common complications after nonsurgical rhinoplasty with PDO threads are pain, dimples, and visible threads. Further studies are needed to build a protocol for the treatment of complications after nonsurgical rhinoplasty using hyaluronic acid, PDO threads or the association of both.

REFERENCES

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