

Introduction

Glaucoma, the second leading cause of vision loss in Europe, affects over 70 million people globally, with the primary goals of treatment being to minimize progression and maintain quality of life. This is achieved by reducing intraocular pressure (IOP) through various forms of treatment, including surgeries like trabeculectomy and the less invasive micro-invasive glaucoma surgery (MIGS).

However, there is a lack of solid evidence to evaluate the comparative effectiveness and safety of different surgical options for glaucoma, and MIGS. The aim of this study is to review and describe outcomes reporting in glaucoma studies evaluating surgical innovations, including MIGS. The outcomes were separated into primary and secondary and their respective domains

Objective

This study aimed to review and describe the outcomes reporting in glaucoma studies evaluating surgical innovations, with a focus on MIGS

Methods

- ❖ This study identified publications reporting outcomes in MIGS and other novel glaucoma surgery.
- ❖ We collected information regarding outcomes and their characteristics or domains. The outcomes were separated into primary and secondary as well as their respective domains.
- ❖ Primary outcome is defined as the main outcome reported by each study in which the success rate of the study depends on.
- ❖ Secondary outcomes are elements that amplify the main objective reported.
- ❖ The domains considered for each outcome were method of aggregation, data dispersion, and time and duration of follow up.

Results

Table 1: Number of studies and percentage of reported primary outcomes (N= 2450), out of the total number of studies (n=16).

Primary outcomes	
IOP only	13(81%)
IOP + adverse events + meds	1(6%)
IOP+Meds	2(13%)

Table 2: Number of studies reported in percentage (N=2450) of secondary outcomes and safety outcomes out of the total number of studies (n=16)

Secondary outcomes	
IOP	2(13%)
VF	3(19%)
Success rate	2 (13%)
Medication	8(50%)
CD ratio	3(19%)
No outcome reported	3(19%)
Peripapillary mean RNFL	1(6%)
Secondary outcomes not clearly stated	5(31%)

Table 3: Presentation of cases among 16 studies reported in number of studies and percentage

Presentation of Cases	
Number of patients but not number of eyes stated	1(6%)
Both number of eyes and patients stated equivalent	10(63%)
Both number of eyes and patients stated but not equivalent	5(31%)

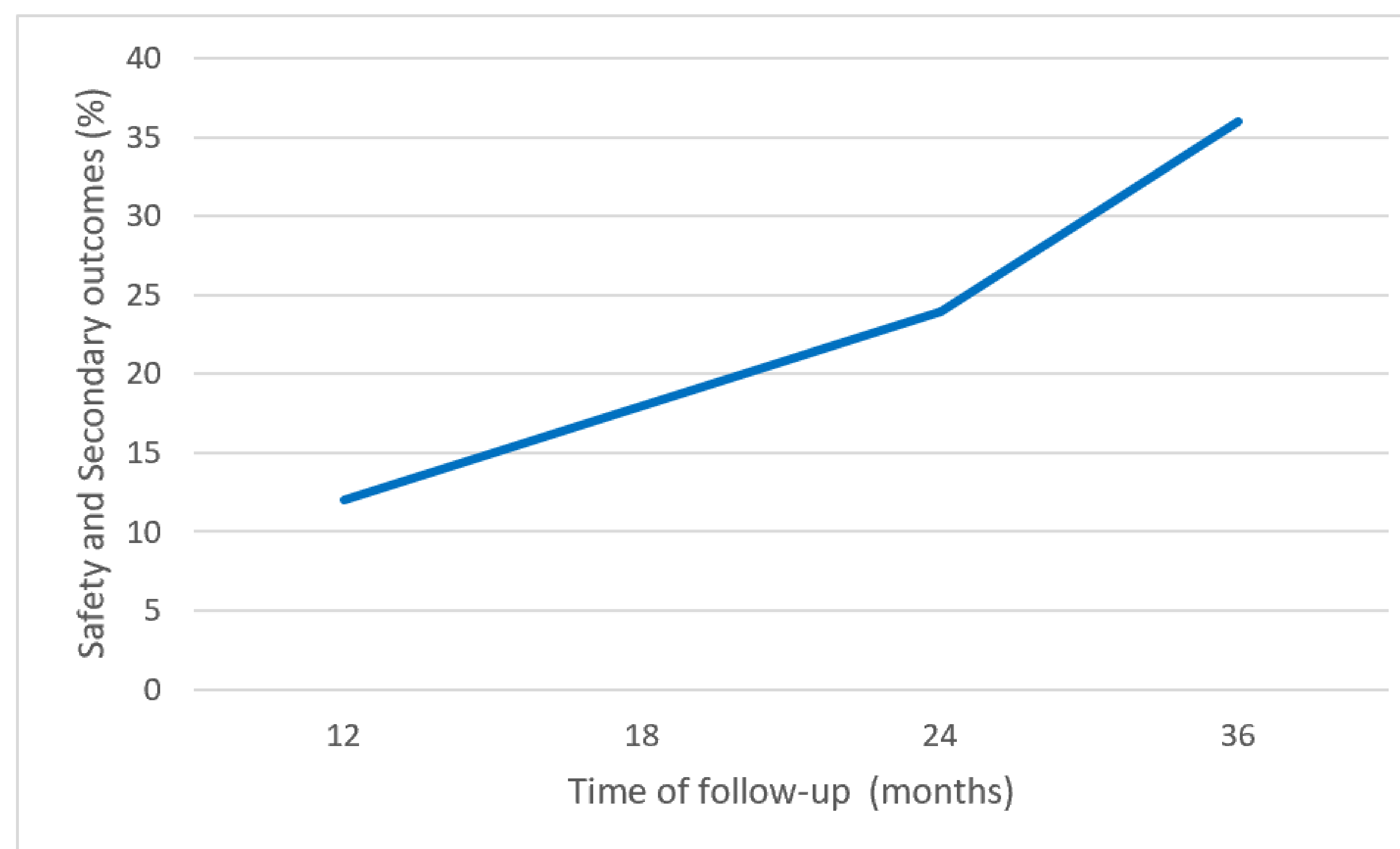


Figure 1: Graphical representation of trend of time of follow-up (months) in correspondence with the number secondary outcomes in percentage (%).

Discussion

This overview of reviews has identified variabilities in the outcomes and domains reporting evaluations of MIGS and glaucoma surgical innovations.

The most common primary outcome was IOP, but the method of aggregation, data dispersion and time a differed among the studies.

Secondary outcomes listed included elements necessary for the proper evaluation of success through surgical interventions. 5 studies did not clearly describe the secondary outcomes, it was assumed that the additional testing listed to support the objective was a secondary outcome.

Safety outcomes have been recorded differently. If the surgical intervention proved to be more harmful than benefit this would lower the efficacy of the study greatly. The most common way of reporting safety outcomes was by listing the adverse events and complications by 12 studies.

Conclusion

This systematic review recognizes the variability within outcomes reporting in surgical interventions in MIGS studies released within the last 5 years. The most common primary outcome amongst studies was IOP, but the method of aggregation, data dispersion and time a differed among the studies. Overall, among all the outcomes and domains analyzed there was variability found in reporting outcomes in studies.

References

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