

Clinical Outcomes and Experiences With Prefilled Syringes Versus Vials for Intravitreal Administration of Anti-VEGF Treatments: A Systematic Review

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SUPPLEMENTARY MATERIAL

Search Strategy

MEDLINE and The Cochrane Library

1) Prefilled syringe terms

Free text: “prefill”, “prefilled”, “pre-fill”, “pre-filled”, “PFS”, “ready to administer”, “ready to use”

2) Intravitreal injection terms

MeSH: “eye”, “injections, intraocular”, “intravitreal injections”, “vitreous body”

Free-text: “eye”, “intraocular”, “intravitreal”, “ocular”, “vitreous”

Search string

((“prefill”[Title/Abstract] OR “prefilled”[Title/Abstract] OR “pre-fill”[Title/Abstract] OR “pre-filled”[Title/Abstract] OR “PFS”[Title/Abstract] OR “ready to administer”[Title/Abstract] OR “ready to use”[Title/Abstract]) AND (“eye”[MeSH Terms] OR “injections, intraocular”[MeSH Terms] OR “intravitreal injections”[MeSH Terms] OR “vitreous body”[MeSH Terms] OR “eye”[Title/Abstract] OR “intraocular”[Title/Abstract] OR “intravitreal”[Title/Abstract] OR “ocular”[Title/Abstract] OR “vitreous”[Title/Abstract])) NOT (“progression free”[Title/Abstract] OR “progression-free”[Title/Abstract] OR “posterior fixation suture*”[Title/Abstract] OR “parafoveal scotoma”[Title/Abstract] OR “postural fluctuation*”[Title/Abstract] OR “postparalytic facial synkinesis”[Title/Abstract] OR “physician fee schedule”[Title/Abstract] OR “parallel fiber*”[Title/Abstract] OR “punctate fluorescein staining”[Title/Abstract] OR “pollen food syndrome”[Title/Abstract] OR “Parkinson* fatigue scale”[Title/Abstract])

EMBASE

1) Prefilled syringe terms

Free text: “prefill”, “prefilled”, “pre-fill”, “pre-filled”, “PFS”, “ready to administer”, “ready to use”

2) Intravitreal injection terms

EMTREE: “eye”, “intraocular drug administration”, “intravitreal drug administration”, “vitreous body”

Free-text: “eye”, “intraocular”, “intravitreal”, “ocular”, “vitreous”

Search string

((((prefill or prefilled or pre-fill or pre-filled or PFS or “ready to use” or “ready to administer”) AND (eye or intraocular or intravitreal or ocular or vitreous or eye or intraocular drug administration or intravitreal drug administration or vitreous body)) NOT (“progression free” or “progression-free” or “posterior fixation suture*” or “parafoveal scotoma” or “postural fluctuation*” or “postparalytic facial synkinesis” or “physician fee schedule” or “parallel fiber*” or “punctate fluorescein staining” or “pollen food syndrome” or “Parkinson* fatigue scale”))

Table S1 Joanna Briggs Institute critical appraisal checklist for cross sectional studies

First author, year	Were the two groups similar and recruited from the same population?	Were the study subjects and the setting described in detail?	Was the exposure measured in a valid and reliable way?	Were objective, standard criteria used for measurement of the condition?	Were confounding factors identified?	Were strategies to deal with confounding factors stated?	Were the outcomes measured in a valid and reliable way?	Was appropriate statistical analysis used?
Michaud 2014 [16]	Unclear	Unclear	NA	NA	Unclear	Unclear	Unclear	Unclear
Woodcock 2014 [17]	Unclear	Unclear	NA	NA	Unclear	Unclear	Unclear	Unclear
Souied 2015 [18]	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes
Subhi 2016 [19]	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes
Ayan 2017 [20]	Unclear	No	NA	NA	No	No	Yes	Unclear
Antoszyk 2018 [41]	NA	Yes	NA	NA	Yes	No	Yes	NA
Baudin 2018 [21]	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes
Tauqeer 2018 [22]	Unclear	Yes	NA	NA	Unclear	Unclear	Yes	Yes
Loewenstein 2019 [23]	Yes	Yes	NA	NA	No	No	Yes	Yes
Storey 2019 [24]	Yes	Yes	NA	NA	Yes	No	Yes	Yes
Dhoot 2021 [25]	Yes	Yes	NA	NA	Yes	No	Yes	Yes
Karatsai 2021 [26]	Yes	Yes	NA	NA	No	No	Yes	Unclear
Krauthammer 2021 [27]	Yes	Yes	NA	NA	Yes	No	Yes	Yes
Pancholy 2021 [28]	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes
Ugurlu 2021 [29]	Unclear	No	NA	NA	No	No	Yes	Unclear
Ulaş 2021 [30]	Unclear	Yes	NA	NA	No	No	Yes	Unclear
Aparicio Carreno 2022 [31]	Unclear	No	NA	NA	No	No	Unclear	Unclear

First author, year	Were the two groups similar and recruited from the same population?	Were the study subjects and the setting described in detail?	Was the exposure measured in a valid and reliable way?	Were objective, standard criteria used for measurement of the condition?	Were confounding factors identified?	Were strategies to deal with confounding factors stated?	Were the outcomes measured in a valid and reliable way?	Was appropriate statistical analysis used?
Dingerkus 2022 [32]	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes
Finkelstein 2022 [33]	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes
Lee 2022 [48]	Yes	Yes	NA	NA	Yes	No	Yes	Unclear
Feng 2023 [34]	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes
Klaas 2023 [35]	Yes	Yes	NA	NA	Yes	No	Yes	Yes
Louis 2023 [36]	Yes	Yes	NA	NA	Yes	Yes	Yes	Yes
Rana 2023 [37]	Yes	No	NA	NA	No	No	Yes	Unclear
Rosanky 2023 [38]	Yes	No	NA	NA	No	No	Yes	Unclear
Russel 2023 [39]	Yes	Yes	NA	NA	Yes	No	Yes	Yes
Schmidt-Ott 2023 [40]	Yes	Yes	NA	NA	Yes	No	Yes	NA

NA not applicable

Table S2 Joanna Briggs Institute critical appraisal checklist for case series

First author, year	Were there clear criteria for inclusion in the case series?	Was the condition measured in a standard, reliable way for all participants included in the case series?	Were valid methods used for identification of the condition for all participants included in the case series?	Did the case series have consecutive inclusion of participants ?	Did the case series have complete inclusion of participants ?	Was there clear reporting of the demographics of the participants in the study?	Was there clear reporting of clinical information of the participants ?	Were the outcomes or follow up results of cases clearly reported?	Was there clear reporting of the presenting site(s)/clinic(s) demographic information?	Was statistical analysis appropriate ?
Gallagher 2021 [44]	Yes	Unclear	Unclear	Yes	Yes	Yes	Yes	Yes	No	NA
Scruggs 2021 [45]	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Yes	NA
Lee 2022 [48]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA

NA not applicable

Table S3 Joanna Briggs Institute critical appraisal checklist for expert opinion

First author, year	Is the source of the opinion clearly identified?	Does the source of opinion have standing in the field of expertise?	Are the interests of the relevant population the central focus of the opinion?	Does the opinion demonstrate a logically defended argument to support the conclusions drawn?	Is there reference to the extant literature?	Is any incongruence with the literature/sources logically defended?
Couturier 2021 [47]	Yes	Yes	Yes	Yes	No	NA
Raevis 2022 [49]	Yes	Unclear	Yes	Yes	Yes	NA

NA not applicable