Cochrane Database of Systematic Reviews - - Cochrane Review

Surgery for nasal polyposis in cystic fibrosis

Code: CD014084 **Year:** 2023 **Date:** 2022 - updated 18 SEP 2022 **Author:** Ribeiro LA

Study design (if review, criteria of inclusion for studies)

Eligible studies are randomized controlled trials (RCTs) and quasiâ€•RCTs. (crossâ€•over trials not considered). Trials that randomize individual participants and also evaluate trials that use withinâ€•participant randomization, if authors find trials that randomize by nasal side.

Participants

Children and adults diagnosed with CF by genetic testing, sweat test or both will be eligible for inclusion. Participants must also be diagnosed with CRS with nasal polyposis, according to clinical findings in line with the European position paper on rhinosinusitis and nasal polyposis (EPOS), as follows: nasal blockage, obstruction, congestion or nasal discharge, facial pain, reduced sense of smell in adults and cough in children. Along with these symptoms, there must be endoscopic or tomographic signs of sinus inflammation (Fokkens 2020). The authors will consider studies including subsets of relevant participants and, if the authors consider these important and they are able to obtain data just for participants who are eligible for inclusion in this review, they will include these data

Interventions

sinus surgery alone or in combination with medical treatment (nonâ€•surgical) compared to medical treatment (nonâ€•surgical) alone

Outcome measures

Primary outcomes: 1) Change in QoL, measured using validated questionnaires (diseaseâ€•specific, such as SNOTâ€•22 (Habib 2015a), Rhinosinusitis Disability Index (RSDI) (Benninger 1997), Cystic Fibrosis Questionnaire Revised (CFQâ€•R) (Quittner 2005) and the Chronic Sinusitis Survey (CSS) (Macdonald 2012); and general questionnaires such as EuroQolâ€•5D (Balestroni 2012)). 2) Complications of surgery (cranial complications, orbital complications, hemostasis operations, blood transfusion, and toxic shock syndrome) 3) Change in lung function (forced expiratory volume in one second (FEV1) % predicted, FEV1 L, forced vital capacity (FVC) % predicted)

Main results

Authors identified 66 publications relating to 50 studies from electronic searches. Only one study fulfilled the inclusion criteria, and only limited information was available. In this study, 28 participants aged 19 to 28 years were randomized in equal numbers to either nasal irrigation alone or nasal irrigation with surgery (endoscopic polypectomy with extended sinusotomy). The certainty of the evidence was very low according to the GRADE approach. We are uncertain whether, compared to medical treatment alone, the addition of surgical intervention improves nasal symptoms, or reduces bacterial colonization, the use of antibiotics and pulmonary exacerbations. We are also uncertain whether the addition of surgery to medical treatment leads to changes in pulmonary function. There was one episode of bleeding during surgery that was corrected during the procedure with no further consequences. The study did not report on survival.

Authors' conclusions

Very lowâ€•certainty evidence means we are not certain if endoscopic sinus surgery to treat chronic rhinosinusitis with nasal polyposis in cystic fibrosis is effective. Future research should be multicentric to increase the number of participants and increase statistical power. Adequate randomization and allocation concealment are important to guarantee that the groups are similar. Blinding, however, may not be possible in an ethical trial; even without blinding, results can achieve highâ€•level evidence if the outcomes used are objective parameters. Future research should follow participants of all ages for at least 12 months to evaluate the evolution of nasal polyposis, its recurrence and how symptoms may return. We also consider mortality an important outcome to be assessed. Future clinical research should consider the effects of cystic fibrosis transmembrane conductance regulators, a new group of drugs that may affect the development of nasal polyps.

https://doi.org//10.1002/14651858.CD014084.pub2

See also

Almeida PRibeiro Lopes, Person OC, Puga MES, Atallah ÁN, Trevisani VFM. Surgery for nasal polyposis in cystic fibrosis. Cochrane Database of Systematic Reviews 2023, Issue 12. Art. No.: CD014084. DOI: 10.1002/14651858.CD014084.pub2. Accessed 16 December 2023

Keywords

Nasal Polyps; Respiratory Tract Diseases; non pharmacological intervention - surg;