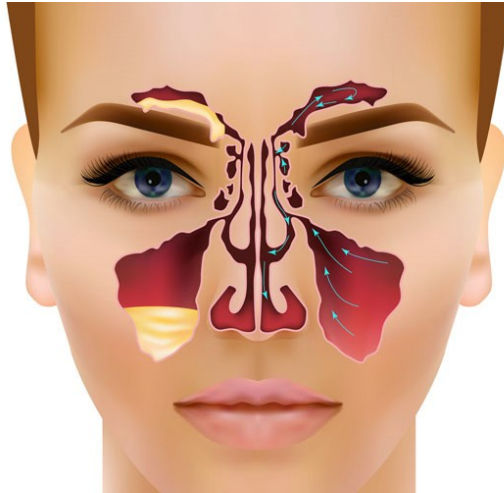


Στρογγυλή τράπεζα: Επίκαιρα θέματα στις λοιμώξεις της κοινότητας

Ρινοκολπίτιδες

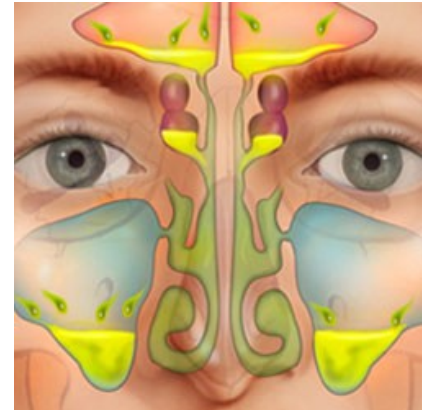


Άννα Σταυριανάκη, Διευθύντρια ΩΡΛ

Γενικό Νοσοκομείο Ηρακλείου «Βενιζέλειο-Πανάνειο»

Εισαγωγή

- Χαρακτηρίζεται ως η φλεγμονή της ρινός και των παραρρινίων κόλπων
- Ο όρος που θα πρέπει να χρησιμοποιείται είναι «**ρινοκολπίτιδα**», δεδομένου ότι σχεδόν πάντα πάσχει και το κύτος της ρινός
- Αποτελεί συχνή φλεγμονή του ανωτέρου αναπνευστικού συστήματος
- Σπανιότερα πάσχει ένας μεμονωμένος παραρρινίος κόλπος (π.χ. οδοντογενής ιγμορίτιδα)



Ορισμοί: ρινοκολπίτιδα

- **Ενήλικες**

Φλεγμονή της ρινός και των παραρρινίων κόλπων που χαρακτηρίζεται από δύο ή περισσότερα συμπτώματα, με ένα εξ αυτών είτε δυσχέρεια ρινικής αναπνοής / απόφραξη / ρινική συμφόρηση ή καταρροή (ορθορινική / οπισθορινική)

± προσωπαλγία / αίσθημα πίεσης

± υποσμία ή ανοσμία

και είτε

Ενδοσκοπικά ευρήματα

Ρινικοί πολύποδες, και/ή

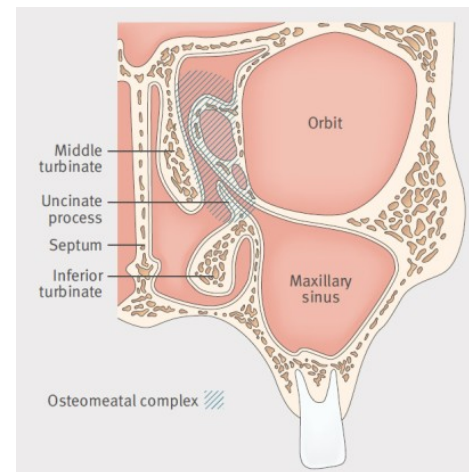
Βλεννοπυώδεις εκκρίσεις από το μέσο ρινικό πόρο και/ή

Οίδημα / απόφραξη του βλεννογόνου κυρίως στο μέσο ρινικό πόρο

και/ή

Ευρήματα στην αξονική τομογραφία

Βλεννογονικές αλλοιώσεις στο σύμπλεγμα των στομίων των παραρρινίων κόλπων (osteomeatal complex) και/ή τους παραρρινίους κόλπους



Ορισμοί: ρινοκολπίτιδα

- **Παιδιά**

Φλεγμονή της ρινός και των παραρρινίων κόλπων που χαρακτηρίζεται από δύο ή περισσότερα συμπτώματα, με ένα εξ αυτών είτε αίσθημα δυσχέρειας ρινικής αναπνοής / απόφραξη / ρινική συμφόρηση ή καταρροή (ορθορινική / οπισθορινική)

± προσωπαλγία / αίσθημα πίεσης

± βήχας

και είτε



Ενδοσκοπικά ευρήματα

Ρινικοί πολύποδες, και/ή

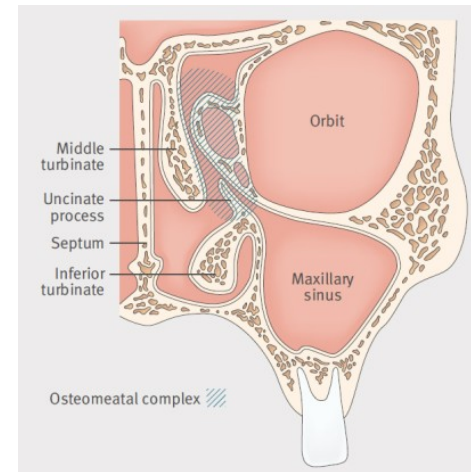
Βλεννοπυώδεις εκκρίσεις κυρίως από το μέσο ρινικό

Οίδημα / απόφραξη του βλεννογόνου κυρίως στο μέσο ρινικό πόρο

και/ή

Ευρήματα στην αξονική τομογραφία

Βλεννογονικές αλλοιώσεις στο σύμπλεγμα των στομίων των παραρρινίων κόλπων (osteomeatal complex) και/ή τους παραρρινίους κόλπους



Ορισμοί: οξεία ρινοκολπίτιδα

Ενήλικες

- Οξεία έναρξη δύο ή περισσότερων συμπτωμάτων, με ένα εξ αυτών είτε αίσθημα δυσχέρειας ρινικής αναπνοής / απόφραξη / ρινική συμφόρηση ή καταρροή (ορθορινική / οπισθορινική)
 ± προσωπαλγία / αίσθημα πίεσης
 ± υποσμία ή ανοσμία
- Διάρκεια συμπτωμάτων **< 12 εβδομάδες**
- Επί υποτροπών, ο ασθενής παραμένει ασυμπτωματικός στα μεσοδιαστήματα (*)

Παιδιά

- Οξεία έναρξη δύο ή περισσότερων συμπτωμάτων:
 αίσθημα δυσχέρειας ρινικής αναπνοής / απόφραξη / ρινική συμφόρηση
 ή
 κεχρωσμένες ρινικές εκκρίσεις
 ή
 βήχας (πρωινός ή νυχτερινός)
- Διάρκεια συμπτωμάτων **< 12 εβδομάδες**

* Υποτροπιάζουσα οξεία ρινοκολπίτιδα: ≥ 4 επεισόδια οξείας ρινοκολπίτιδας κατ' έτος, με μεσοδιαστήματα ελεύθερα συμπτωμάτων



Ορισμοί: χρόνια ρινοκολπίτιδα

Ενήλικες

- Με ή χωρίς ρινικούς πολύποδες
- Παρουσία δύο ή περισσότερων συμπτωμάτων, με ένα εξ αυτών είτε αίσθημα δυσχέρειας ρινικής αναπνοής / απόφραξη / ρινική συμφόρηση ή καταρροή (ορθορινική / οπισθορινική)
 - ± προσωπαλγία / αίσθημα πίεσης
 - ± υποσμία ή ανοσμία
- Διάρκεια συμπτωμάτων **≥ 12 εβδομάδες**



Παιδιά

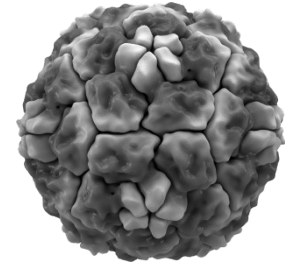
- Με ή χωρίς ρινικούς πολύποδες
- Παρουσία δύο ή περισσότερων συμπτωμάτων, με ένα εξ αυτών είτε αίσθημα δυσχέρειας ρινικής αναπνοής / απόφραξη / ρινική συμφόρηση ή καταρροή (ορθορινική / οπισθορινική)
 - ± προσωπαλγία / αίσθημα πίεσης
 - ± βήχας
- Διάρκεια συμπτωμάτων **≥ 12 εβδομάδες**



Συνήθη παθογόνα ρινοκολπίτιδας

- Ιοί

- Ρινοϊός, ιός παραϊνφλουένζας



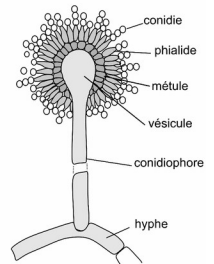
- Βακτήρια

- Αερόβια: Streptococcus, Staphylococcus, Haemophilus influenzae, Moraxella catarrhalis
- Αναερόβια: Peptostreptococcus, Prevotella

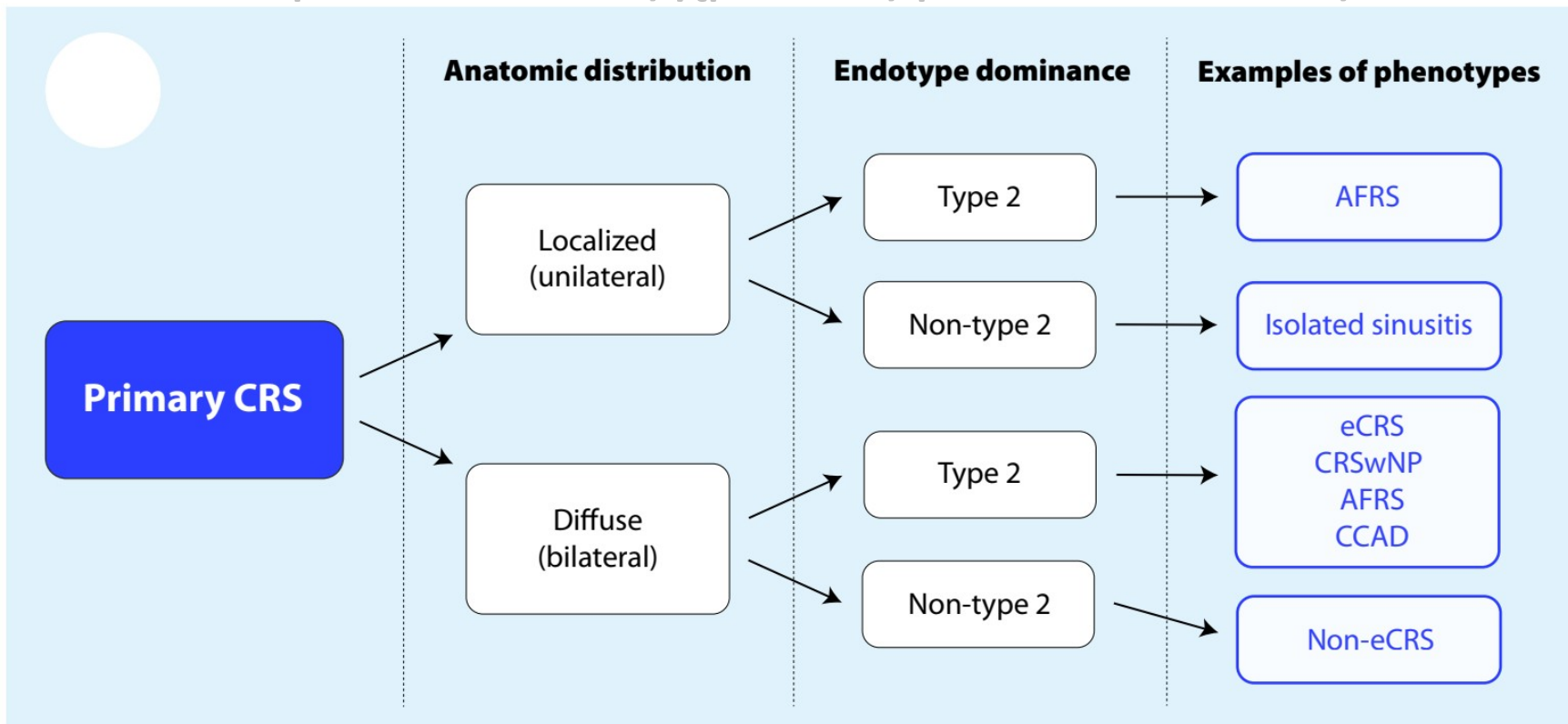


- Μύκητες

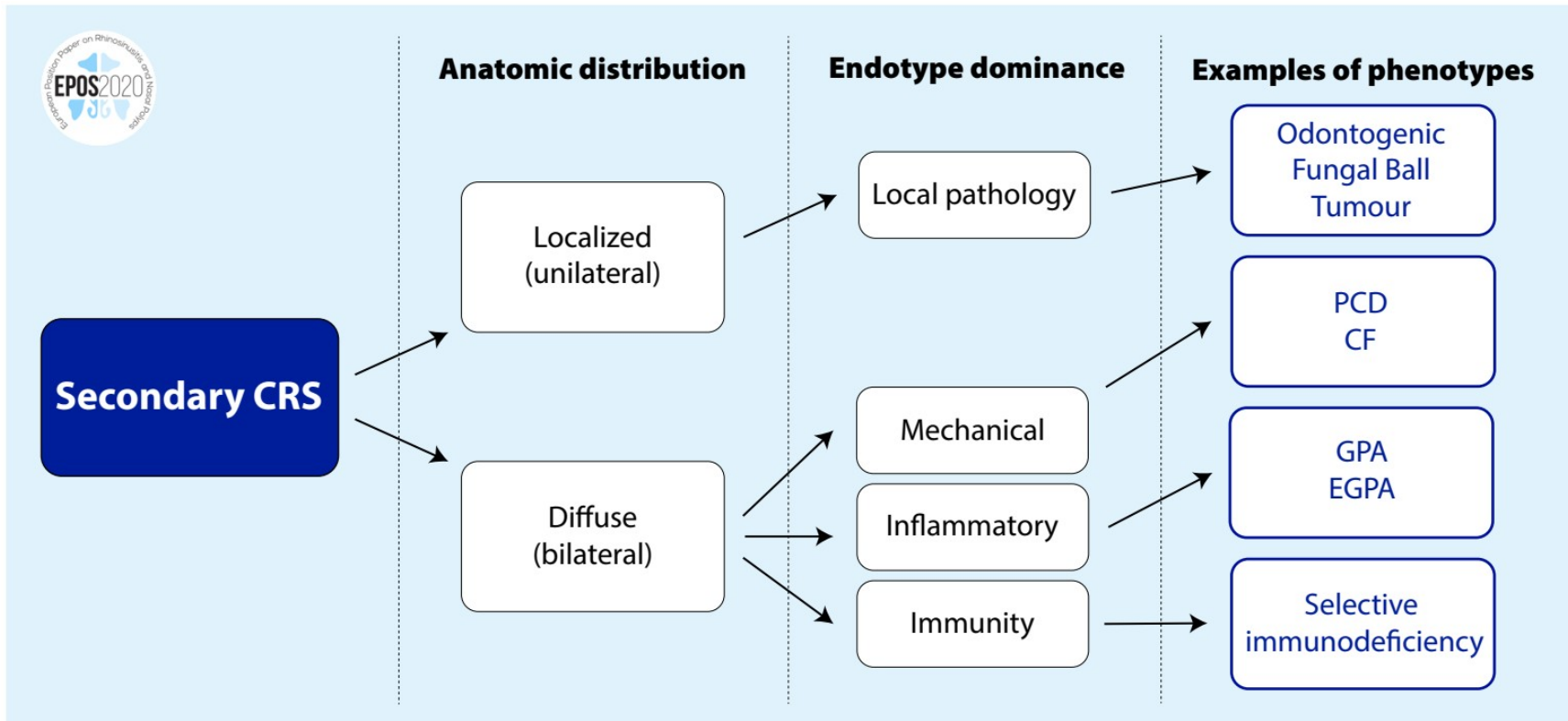
- Aspergillus, Rhizopus (Mucorales), Candida, Fusarium



Ταξινόμηση πρωτοπαθούς χρόνιας ρινοκολπίτιδας



Ταξινόμηση δευτεροπαθούς χρόνιας ρινοκολπίτιδας



CF, cystic fibrosis; EGPA, eosinophilic granulomatosis with polyangiitis (Churg-Strauss disease); GPA, granulomatosis with polyangiitis (Wegener's disease); PCD, primary ciliary dyskinesia.

Χρόνιας ρινοκολπίτιδα: αξιολόγηση του επιπέδου ελέγχου της νόσου



EPOS 2020: Assessment of current clinical control of CRS (in the last month)

| | Controlled (all of the following) | Partly controlled (at least 1 present) | Uncontrolled (3 or more present) |
|---|---|--|---|
| Nasal blockage¹ | Not present or not bothersome ² | Present on most days of the week ³ | Present on most days of the week ³ |
| Rhinorrhoea / Postnasal drip¹ | Little and mucous ² | Mucopurulent on most days of the week ³ | Mucopurulent on most days of the week ³ |
| Facial pain / Pressure¹ | Not present or not bothersome ² | Present on most days of the week ³ | Present on most days of the week ³ |
| Smell¹ | Normal or only slightly impaired ² | Impaired ³ | Impaired ³ |
| Sleep disturbance or fatigue¹ | Not present ² | Present ³ | Present ³ |
| Nasal endoscopy (if available) | Healthy or almost healthy mucosa | Diseased mucosa ⁴ | Diseased mucosa ⁴ |
| Rescue treatment (in last 6 months) | Not needed | Need of 1 course of rescue treatment | Symptoms (as above) persist despite rescue treatment(s) |

¹ Symptoms of CRS; ² For research VAS ≤ 5; ³ For research VAS > 5; ⁴ Showing nasal polyps, mucopurulent secretions or inflamed mucosa

Επιδράσεις στην ποιότητα ζωής και οικονομικό κόστος

- Τόσο η οξεία αλλά κυρίως η χρόνια ρινοκολπίτιδα επιδρούν αρνητικά στην ποιότητα ζωής, όπως αυτή αξιολογείται με ερωτηματολόγια (Eq-5D, SF-36, SNOT-16/22)
- Κυρίως επηρεάζουν την αποδοτικότητα στην εργασία και την κοινωνική λειτουργικότητα των ασθενών
- Το άμεσο ετήσιο κόστος ανά ασθενή υπολογίζεται σε 2500 ευρώ, το έμμεσο κόστος (απουσία από την εργασία ή μειωμένη παραγωγικότητα) εκτιμάται ότι είναι σημαντικά μεγαλύτερο
- Στις ΗΠΑ η συνολική ετήσια έμμεση δαπάνη υπολογίζεται σε 20 δισ. δολάρια



Αντιμετώπιση οξείας ιογενούς ρινοκολπίτιδας (κοινό κρυολόγημα)

| Therapy | Level of evidence | GRADE recommendation |
|--------------------------------|-------------------|---|
| Antibiotics | 1a (-) | There is no evidence of benefit from antibiotics for the common cold or for persisting acute purulent rhinitis in children or adults. There is evidence that antibiotics cause significant adverse effects in adults when given for the common cold and in all ages when given for acute purulent rhinitis. Routine use of antibiotics for these conditions is not recommended. |
| Nasal corticosteroid | 1a (-) | The current evidence does not support the use of nasal corticosteroids for symptomatic relief from the common cold |
| Antihistamines | 1a | Antihistamines have a limited short-term (days 1 and 2 of treatment) beneficial effect on severity of over-all symptoms in adults but not in the mid to long term. There is no clinically significant effect on nasal obstruction, rhinorrhoea or sneezing |
| Decongestant (oral / nasal) | 1a | The current evidence suggests that multiple doses of decongestants may have a small positive effect on subjective measures of nasal congestion in adults with the common cold. Decongestants do not seem to increase the risk of adverse events in adults in the short term. |
| Paracetamol (Acetaminophen) | 1a | Paracetamol may help relieve nasal obstruction and rhinorrhoea but does not appear to improve other cold symptoms (including sore throat, malaise, sneezing and cough) |
| NSAIDs | 1a | NSAIDs do not significantly reduce the total symptom score, or duration of colds. However, for outcomes related to the analgesic effects of NSAIDs (headache, ear pain and muscle and joint pain) NSAIDs produce significant benefits , and malaise shows a borderline benefit, although throat irritation is not improved. Chills show mixed results. For respiratory symptoms, cough and nasal discharge scores are not improved, but the sneezing score is significantly improved. There is no evidence of increased frequency of adverse effects in the NSAID treatment groups. |

Αντιμετώπιση οξείας ιογενούς ρινοκολπίτιδας (κοινό κρυολόγημα)

| | | |
|---|--------|--|
| Antihistamine-decongestant-analgesic combinations | 1a | Antihistamine-analgesic-decongestant combinations have some general benefit in adults and older children with common cold. These benefits must be weighed against the risk of adverse effects . There is no evidence of effectiveness in young children. |
| Ipratropium bromide | 1a | The existing evidence suggests that ipratropium bromide is likely to be effective in ameliorating rhinorrhoea . Ipratropium bromide has no effect on nasal congestion and its use is associated with more side effects compared to placebo or no treatment although these appeared to be well tolerated and self-limiting. |
| Nasal irrigation with saline | 1b | Nasal saline irrigation possibly has benefits for relieving the symptoms of acute URTIs mainly in children and is considered an option by the EPOS steering group. |
| Steam / heated humidified air | 1a (-) | The current evidence does not show any benefits or harms from the use of heated, humidified air delivered for the treatment of the common cold. |
| Probiotics | 1a | Probiotics may be more beneficial than placebo for preventing acute URTIs . However, the quality of the evidence was (very) low . |
| Vitamin C | 1a | Given the consistent effect of vitamin C on the duration and severity of colds in regular supplementation studies , and the low cost and safety, it may be worthwhile for common cold patients to test on an individual basis whether therapeutic vitamin C is beneficial for them. |
| Vaccines | 1b (-) | There are no conclusive results to support the use of vaccines for preventing the common cold in healthy people. This is in contrast to influenza vaccines. |
| Exercise | 1a | Regular, moderate-intensity exercise may have an effect on the prevention of the common cold. |

Αντιμετώπιση οξείας ιογενούς ρινοκολπίτιδας (κοινό κρυολόγημα)

| | | |
|--|--------|---|
| Echinacea | 1a (-) | Echinacea products have not been shown to provide benefits for treating colds , although, there could be a weak benefit from some Echinacea products : the results of individual prophylaxis trials consistently show positive (if non-significant) trends, although potential effects are of questionable clinical relevance. |
| Zinc | 1a | Zinc administered as zinc acetate or zinc gluconate lozenges at a dose of ≥ 75 mg/day and taken within 24 hours of onset of symptoms significantly reduces the duration of common cold . For those considering using zinc it is advised to use it at this dose throughout the cold. Regarding prophylactic zinc supplementation, currently no firm recommendation can be made because of insufficient data. |
| Herbal medicine (excluding Echinaceae) | 1b | Some herbal medicines like BNO1016, Cineole and Andrographis paniculata SHA-10 extract have significant impact on symptoms of common cold without important adverse events . A formal systematic review is missing . |
| Fusafungine | 1a | Fusafungine is an effective treatment of common cold especially when administered early . However, serious allergic reactions involving bronchospasm although rare have occurred after the use of fusafungine. For that reason, the medication is no longer on the market . |

Αντιμετώπιση οξείας μετα-ιογενούς ρινοκολπίτιδας (ενήλικες)

| Therapy | Level of evidence | GRADE recommendation |
|--------------------------|-------------------|---|
| Antibiotics | 1a (-) | There is no benefit from prescribing antibiotics for post viral ARS in adults. There is no effect on cure or duration of disease and there are more adverse events. Based on the moderate level of evidence and the fact that acute post-viral rhinosinusitis is a self-limiting disease, the EPOS2020 steering group advises against the use of antibiotics for adults in this situation. |
| Nasal corticosteroids | 1a | Nasal corticosteroids are effective in reducing total symptom score in adults suffering from acute post-viral rhinosinusitis. However, the effect is small . Nasal corticosteroids have not been shown to have an effect on QOL . Acute post-viral rhinosinusitis is a self-limiting disease. Based on the moderate quality of the evidence and the small effect size the EPOS2020 steering group advises only to prescribe a nasal corticosteroid when reduction of the symptoms of the acute post-viral rhinosinusitis is considered necessary. |
| Systemic corticosteroids | 1a | Systemic corticosteroids, with or without antibiotics do not have a positive effect on recovery at 7-14 days . There is a small but significant effect of systemic corticosteroids versus placebo on facial pain at days 4-7 after start of the treatment. There are no studies comparing systemic corticosteroids to nasal corticosteroids. The quality of the evidence is low . Based on the evidence, the numbers needed to treat and the potential harm of systemic corticosteroids, the EPOS2020 steering group advises against the use of systemic corticosteroids in patients suffering from acute post-viral rhinosinusitis. |

Οξεία μετα-ιογενής ρινοκολπίτιδα:

εμμονή συμπτωμάτων της οξείας ιογενούς ρινοκολπίτιδας για > 10 ημέρες, αυτοπεριοριζόμενη

Αντιμετώπιση οξείας μετα-ιογενούς ρινοκολπίτιδας (ενήλικες)

| | | |
|------------------------------|----|---|
| Decongestant (oral / nasal) | Ib | Nasal decongestants may be effective in improving mucociliary clearance throughout the acute phase of the disease. No studies have been performed evaluating the effect on resolution or reduction of symptoms of postviral ARS. Based on the absence of clinically relevant data, the EPOS2020 steering group cannot advise on the use of decongestants in acute post-viral rhinosinusitis. |
| Nasal irrigation with saline | Ib | One small study did not find a difference between saline nasal spray versus no treatment. One very small study found a larger effect of high volume versus low volume saline rinsing on purulent rhinorrhoea and post-nasal drip. Based on the very low quality of the evidence no strong advice can be given about the use of nasal saline irrigation although on theoretical grounds saline can be expected to be beneficial rather than harmful. |
| Homeopathy | Ib | We found one study evaluating the effect of homeopathy (sinfrontal) showing a significant reduction of symptoms and radiographic improvement versus placebo. Based on the limited evidence the EPOS2020 steering group cannot give clear advice on the use of homeopathy in acute post-viral rhinosinusitis. |
| Herbal medicine | Ib | Some herbal medicines like BNO1016 tablets and Pelargonium sidoides drops and Myrtol (and other essential oil) capsules have significant impact on symptoms of acute postviral rhinosinusitis without significant adverse events. |

Οξεία μετα-ιογενής ρινοκολπίτιδα:

εμμονή συμπτωμάτων της οξείας ιογενούς ρινοκολπίτιδας για > 10 ημέρες, αυτοπεριοριζόμενη

Αντιμετώπιση οξείας μετα-ιογενούς ρινοκολπίτιδας (παιδιά)

| Therapy | Level of evidence | GRADE recommendation |
|-----------------------|-------------------|---|
| Antibiotics | 1a (-) | The use of antibiotics in children with acute post-viral rhinosinusitis is not associated with greater cure/significant improvement . Based on the moderate level of evidence and the fact that acute post-viral rhinosinusitis is a self-limiting disease, the EPOS2020 steering group advises against the use of antibiotics for children in this situation. |
| Nasal corticosteroids | 1a | Nasal corticosteroids seem to be effective in reducing total symptom score in children suffering from acute post-viral rhinosinusitis on top of (ineffective) antibiotics. Acute post-viral rhinosinusitis is a self-limiting disease. Based on the very low quality of the evidence the EPOS2020 steering group cannot advise on the use of nasal corticosteroids in children with acute post-viral rhinosinusitis. |
| Antihistamines | 1b (-) | There is one study evaluating antihistamines versus placebo in addition to (ineffective) antibiotics in children with post-viral ARS showing no additive effect of antihistamines over the treatment given. Based on the very low quality of the evidence, the EPOS2020 steering group cannot advise on the use of antihistamines in post-viral ARS. |
| Bacterial lysates | 1b | One study has shown benefit in the use of OM-85-BV for shortening the duration of illness. |

Οξεία μετα-ιογενής ρινοκολπίτιδα:

εμμονή συμπτωμάτων της οξείας ιογενούς ρινοκολπίτιδας για > 10 ημέρες, αυτοπεριοριζόμενη

Αντιμετώπιση οξείας βακτηριακής ρινοκολπίτιδας (ενήλικες)

| Therapy | Level of evidence | GRADE recommendation |
|------------------------------|-------------------|---|
| Antibiotics | 1a | Antibiotics are effective in a select group of patients with symptoms and signs suggestive of ABRS. From the limited data available (two studies versus one) it seems that amoxicillin/penicillin (beta-lactams) especially are effective and moxifloxacin (fluoroquinone) is not. The efficacy of beta-lactams is evident at day three where patients already experience better symptom improvement and continues with a higher number of cures at completion of treatment. However, careful patient selection for those with ABRS is needed to avoid unnecessary use of antibiotics and side effects. |
| Antihistamines | 1b (-) | There is one study evaluating antihistamines versus placebo in adults with allergic rhinitis and ABRS showing no effect. Based on the very low quality of the evidence, the EPOS2020 steering group cannot advise on the use of antihistamines in post-viral ARS and ABRS. |
| Nasal irrigation with saline | 1b (-) | One study comparing hypertonic saline nasal spray, isotonic saline nasal spray and no treatment in addition to antibiotics did not find a difference between the groups. Based on the very low quality of the evidence no advice can be given about the use of nasal saline irrigation. |
| Sodium Hyaluronate | 1b | One study evaluating sodium hyaluronate compared to placebo in a nebulizer ampoule for nasal douching in addition to levofloxacin and prednisone showed significantly fewer symptoms and better smell threshold in the sodium hyaluronate group. Based on the very low quality of the evidence no advice can be given about the use of sodium hyaluronate. |

Αντιμετώπιση οξείας βακτηριακής ρινοκολπίτιδας (παιδιά)

| Therapy | Level of evidence | GRADE recommendation |
|-------------|-------------------|--|
| Antibiotics | 1a (-) | Data on the effect of antibiotics on the cure/improvement of symptoms in ABRS in children are very limited. There are only two studies with limited numbers that do not show a significant difference over placebo but do show a significant higher percentage of adverse events. Larger trials are needed to explain the difference between adults where antibiotics in ABRS has been shown to be effective and this outcome. |
| Mucolytics | 1b (-) | Erdosteine as an adjunct to antibiotic was not more effective than placebo |

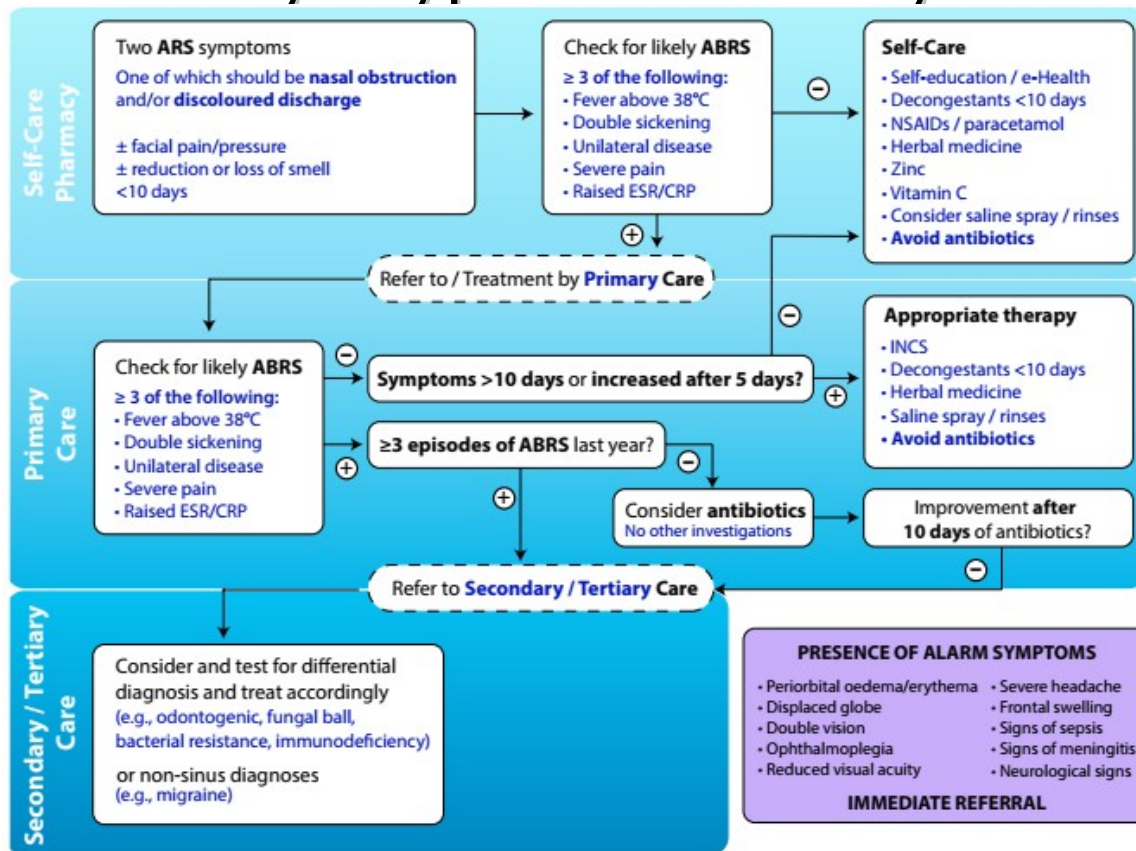
ABRS, acute bacterial rhinosinusitis.

Αντιβιοτικά

- Θεραπεία πρώτης γραμμής (εμπειρική)
 - Αμοξυκιλλίνη ή αμοξυκιλλίνη+κλαβουλανικό οξύ
 - Εναλλακτικά
 - Δοξυκυκλίνη
 - Κεφαλοσπορίνη 3^{ης} γενεάς ± κλυνδαμυκίνη
- Θεραπεία δεύτερης γραμμής (επί μη ανταπόκρισης)
 - Αναπνευστικές κινολόνες
 - Κεφαλοσπορίνη 3^{ης} γενεάς + κλυνδαμυκίνη
 - Δοξυκυκλίνη
- Θεραπεία τρίτης γραμμής (επιπλοκές/ανοσοκαταστολή)
 - Πενέμες
 - Παραπομπή σε ΩΡΛ !!!



Γενικός αλγόριθμος αντιμετώπισης οξείας ρινοκολπίτιδας



Αντιμετώπιση χρόνιας ρινοκολπίτιδας (ενήλικες)

| Therapy | Level of evidence | GRADE recommendation |
|--|-------------------|--|
| Short term antibiotics for CRS | 1b (-) | <p>There are only two small placebo-controlled studies, one in CRS and one in acute exacerbation of CRS. Both show no effect on symptomatology apart from significantly reduced postnasal drip symptom scores at week 2 in the CRS study. Seven studies evaluated two different antibiotics regimes, of which only one was placebo-controlled. One out of seven studies in patients with CRS showed a significant effect on SNOT at 2 and 4 weeks and also one study a significant improvement in symptoms of infection at day 3 to 5 in one antibiotic versus another in a mixed group of patients with CRS and with acute exacerbation. The other 5 studies showed no difference in symptomatology. Only two of these seven studies, both of which were negative, evaluated the effect after one month.</p> <p>The EPOS2020 steering group, is uncertain, due to the very low quality of the evidence, whether or not the use of a short course of antibiotics has an impact on patient outcomes in adults with CRS compared with placebo. Also, due to the very low quality of the evidence, it is uncertain whether or not the use of a short course of antibiotics has an impact on patient outcomes in adults with acute exacerbations of CRS compared with placebo. Gastrointestinal-related adverse events (diarrhoea and anorexia) are frequently reported.</p> |
| Short term antibiotics for acute exacerbation of CRS | 1b (-) | <p>The EPOS2020 steering group, is uncertain, due to the very low quality of the evidence, whether or not the use of a short course of antibiotics has an impact on patient outcomes in adults with acute exacerbations of CRS compared with placebo. Gastrointestinal-related adverse events (diarrhoea and anorexia) are frequently reported.</p> |
| Longterm antibiotics for CRS | 1a (-) | <p>The EPOS2020 steering group, due to the low quality of the evidence, is uncertain whether or not the use of long-term antibiotics has an impact on patient outcomes in adults with CRS, particularly in the light of potentially increased risks of cardiovascular events for some macrolides. Further studies with larger population sizes are needed and are underway .</p> |
| Topical antibiotics | 1b (-) | <p>Topical antibacterial therapy does not seem to be more effective than placebo in improving symptoms in patients with CRS. However, it may give a clinically non-relevant improvement in symptoms, SNOT-22 and LK endoscopic score compared to oral antibiotics. The EPOS2020 steering group, due to the very low quality of the evidence, is uncertain whether or not the use of topical antibiotic therapy has an impact on patient outcomes in adults with CRS compared with placebo.</p> |

Αντιμετώπιση χρόνιας ρινοκολπίτιδας (ενήλικες)

| | | |
|---------------------------------|----|--|
| Nasal corticosteroids | 1a | <p>There is high-quality evidence that long term use of nasal corticosteroids is effective and safe for treating patients with CRS. They have impact on nasal symptoms and quality of life improvement, although the effect on SNOT-22 is smaller than the minimal clinically important difference. The effect size on symptomatology is larger in CRSwNP (SMD -0.93, 95% CI -1.43 to -0.44) than in CRSsNP (SMD -0.30, 95% CI -0.46). The meta-analysis did not show differences between different kinds of nasal corticosteroids. Although in meta-analysis higher dosages and some different delivery methods seem to have a larger effect size on symptomatology, direct comparisons are mostly missing. For CRSwNP, nasal corticosteroids reduce nasal polyp size. When administered after endoscopic sinus surgery, nasal corticosteroids prevent polyp recurrence. Nasal corticosteroids are well tolerated. Most adverse events reported are mild to moderate in severity. Nasal corticosteroids do not affect intraocular pressure or lens opacity. The EPOS2020 steering group advises to use nasal corticosteroids in patients with CRS. Based on the low to very low quality of the evidence for higher dosages or different delivery methods and the paucity of direct comparisons the steering committee cannot advise in favour of higher dosages or certain delivery methods.</p> |
| Corticosteroid-eluting implants | 1a | <p>The placement of corticosteroid-eluting sinus implants in the ethmoid of patients with recurrent polyposis after sinus surgery has a significant but small (0.3 on a 0-3 scale) impact on nasal obstruction but significantly reduces the need for surgery and reduces nasal polyp score. Based on the moderate to high quality of the evidence the steering group considered the use of corticosteroid-eluting sinus implants in the ethmoid an option.</p> |
| Systemic corticosteroids | 1a | <p>A short course of systemic corticosteroid, with or without local corticosteroid treatment results in a significant reduction in total symptom score and nasal polyp score. Although the effect on the nasal polyp score remains significant up to three months after the start of treatment by that time there is no longer an effect on the symptom score. The EPOS2020 steering group felt that 1-2 courses of systemic corticosteroids per year can be a useful addition to nasal corticosteroid treatment in patients with partially or uncontrolled disease. A short course of systemic corticosteroid postoperatively does not seem to have an effect on quality of life. Systemic corticosteroids can have significant side effects.</p> |

Αντιμετώπιση χρόνιας ρινοκολπίτιδας (ενήλικες)

| | | |
|--------------------------|--------|--|
| Antihistamines | 1b | There is one study reporting on the effect of antihistamines in partly allergic patients with CRSwNP. Although there was no difference in total symptom score, the days with a symptom score ≤ 1 was higher in the treated group. The quality of the evidence comparing antihistamines with placebo was very low . There is insufficient evidence to decide on the effect of the regular use of antihistamines in the treatment of patients with CRS. |
| Anti-leukotrienes | 1b (-) | Based on the very low quality of the available evidence , the EPOS2020 steering group is unsure about the potential use of montelukast in CRS and does not recommend its use unless in situations where patients do not tolerate nasal corticosteroids. Also, the quality of the evidence comparing montelukast with nasal corticosteroid is low. Based on the evidence, the steering group does not advise adding montelukast to nasal corticosteroid but studies evaluating the effect of montelukast in patients that failed nasal corticosteroids are missing. |
| Decongestant | 1b | There is one small study in CRSwNP patients showing a significantly better effect of oxymetazoline combined with MFNS than MFNS alone without inducing rebound swelling. There was no effect of xylometazoline compared to saline in the early postoperative period. This review found a low level of certainty that adding a nasal decongestant to intranasal corticosteroids improves symptomatology in CRS. Although the risk of rebound swelling was not shown in this study, the EPOS2020 steering group suggests in general not to use nasal decongestants in CRS . In situations where the nose is very blocked, the temporary addition of a nasal decongestant to nasal corticosteroid treatment can be considered . |

Αντιμετώπιση χρόνιας ρινοκολπίτιδας (ενήλικες)

Nasal irrigation with saline

1a

There are a large number of trials evaluating the efficacy of nasal irrigation. However, the quality of the studies is not always very good which makes it difficult to give a strong recommendation. However, the data show: Nasal irrigation with **isotonic saline or Ringer's lactate has efficacy in CRS patients**. There is **insufficient data to show that a large volume is more effective than a nasal spray**. The **addition of xylitol, sodium hyaluronate, and xyloglucan** to nasal saline irrigation **may have a positive effect**. The addition of baby shampoo, honey, or dexpanthenol as well as higher temperature and higher salt concentration do not confer additional benefit. The steering group **advises the use of nasal saline irrigation with isotonic saline or Ringer's lactate with or without the addition of xylitol, sodium hyaluronate, and/or xyloglucan and advises against the use of baby shampoo and hypertonic saline solutions due to side effects**.

Aspirin treatment after desensitization (ATAD) with oral aspirin in N-ERD

1a

Oral ATAD has been shown to be significantly more effective and clinically relevant than placebo in improving QOL (measured with SNOT) and total nasal symptom score in patients with N-ERD. However, the change in SNOT from treating with oral ATAD compared to placebo did not reach the clinically important mean difference. ATAD reduced symptoms after six months compared to placebo. However, **ATAD is associated with significant adverse effects**, and the risks of not taking the medication strictly on a daily basis puts a burden on patient and caregiver. Based on these data, the EPOS2020 steering group suggests that **ATAD can be a treatment for N-ERD patients with CRSwNP whenever there is confidence in the patient's compliance**.

Aspirin treatment after desensitization (ATAD) with nasal lysine aspirin in N-ERD

1b (-)

ATAD with lysine aspirin and platelet inhibitors (like Pradugrel) **have not been shown to be an effective treatment** in CRSwNP patients with N-ERD and are not advised.

Low salicylate diet

1b

Diets, like low salicylate diet have been shown to improve endoscopic scores and may improve symptoms compared to a normal diet in patients with N-ERD. However, the **quality of the evidence at this moment is not enough to draw further conclusions**.

Αντιμετώπιση χρόνιας ρινοκολπίτιδας (ενήλικες)

| | | |
|---|--------|--|
| Local and systemic antifungal treatments | 1a (-) | Local and systemic antifungal treatments do not have a positive effect of QOL, symptoms and signs of disease in patients with CRS. The EPOS2020 steering group advises against the use of anti-mycotics in CRS. |
| Anti-IgE | 1b | Anti-IgE (omalizumab) therapy has been proposed as a promising biologic therapy for CRS. Two RCTs that evaluated anti-IgE monoclonal antibody (omalizumab) did not show impact on disease specific QOL but one study did show an effect on the physical domain of SF-36 and AQLQ. One study demonstrated lower symptom scores (change from baseline in anti IgE group) for nasal congestion, anterior rhinorrhoea, loss of sense of smell, wheeze and dyspnoea, a significant reduction of NPS on endoscopic examination, and Lund-MackKay scores on radiologic imaging. Due to the small study population in the existing studies, further studies with larger population sizes are needed and are underway. The available data are insufficient to advise on the use of anti-IgE in CRSwNP at this moment. |
| Anti-IL-5 | 1b | There is only one large sufficiently powered study with mepolizumab that showed a significant reduction in patients' need for surgery and an improvement in symptoms. Unlike in CRS, there is a significant experience with anti-IL5 in other type 2 driven diseases like asthma that do show a favourable safety profile so far. The EPOS2020 steering group advises use of mepolizumab in patients with CRSwNP fulfilling the criteria for treatment with monoclonal antibodies (when approved). |
| Anti IL-4/IL-13 (IL-4 receptor α) | 1a | At the moment the only anti-IL-4 treatment studied in CRS is dupilumab . Dupilumab is the only monoclonal antibody that is approved for the treatment of CRSwNP so far. When evaluating all trials with dupilumab, the drug seems to induce conjunctivitis in trials in patients with atopic dermatitis but not in trials with asthma and CRSwNP. No other adverse events have been reported in the literature until now. The EPOS steering group advises to use dupilumab in patients with CRSwNP fulfilling the criteria for treatment with monoclonal antibodies. |
| Probiotics | 1b (-) | Although probiotic therapies show theoretical promise, the two studies performed so far did not show any differences compared to placebo. For this reason, the EPOS2020 steering group advises against the use of probiotics for the treatment of patients with CRS. |

Αντιμετώπιση χρόνιας ρινοκολπίτιδας (ενήλικες)

| | | |
|---|--------|---|
| Muco-active agents | 1b | <p>Data on the effect of muco-active agents in CRS are very limited. The only DBPCT evaluating the addition of S-carboxymethylcysteine to clarithromycin showed a significantly higher percentage of patients with effective response and improved characteristics of nasal discharge at 12 weeks. The EPOS2020 steering group considered the quality of the data insufficient to advise on the use of muco-active agents in the treatment of patients with CRS.</p> |
| Herbal treatment | 1b | <p>Of five RCTs evaluating herbal treatment, a large DBPCT, using tablets, showed overall no effect, although a post-hoc sensitivity analysis, showed a significant benefit in major symptom score at 12 weeks of treatment over placebo in patients with a diagnosis of CRS for >1 year and a baseline MSS >9 (out of max 15). Of the four studies evaluating different local herbal treatment, three showed a favourable effect. However, not all studies were blinded and the quality of the studies was variable.</p> <p>The treatment does not show significantly more adverse events than placebo. The quality of the evidence for the local treatment is low. Based on the available data, the EPOS2020 group cannot advise on the use of herbal medicine in CRS.</p> |
| Acupuncture and traditional Chinese medicine | 1b (-) | <p>There is no evidence that traditional Chinese medicine or acupuncture is more effective than placebo in the treatment of CRS. The safety of Chinese medicine is unclear because most of the papers are not (easily) accessible. Minor and serious adverse events can occur during the use of acupuncture and related modalities, contrary to the common impression that acupuncture is harmless. For this reason, the EPOS2020 steering group advises against the use of traditional Chinese medicine or acupuncture.</p> |

Ενδείξεις χορήγησης θεραπείας μονοκλωνικών αντισωμάτων

Indications for biological treatment in CRSwNP

Presence of bilateral polyps in a patient who had ESS*

↓

THREE criteria are required

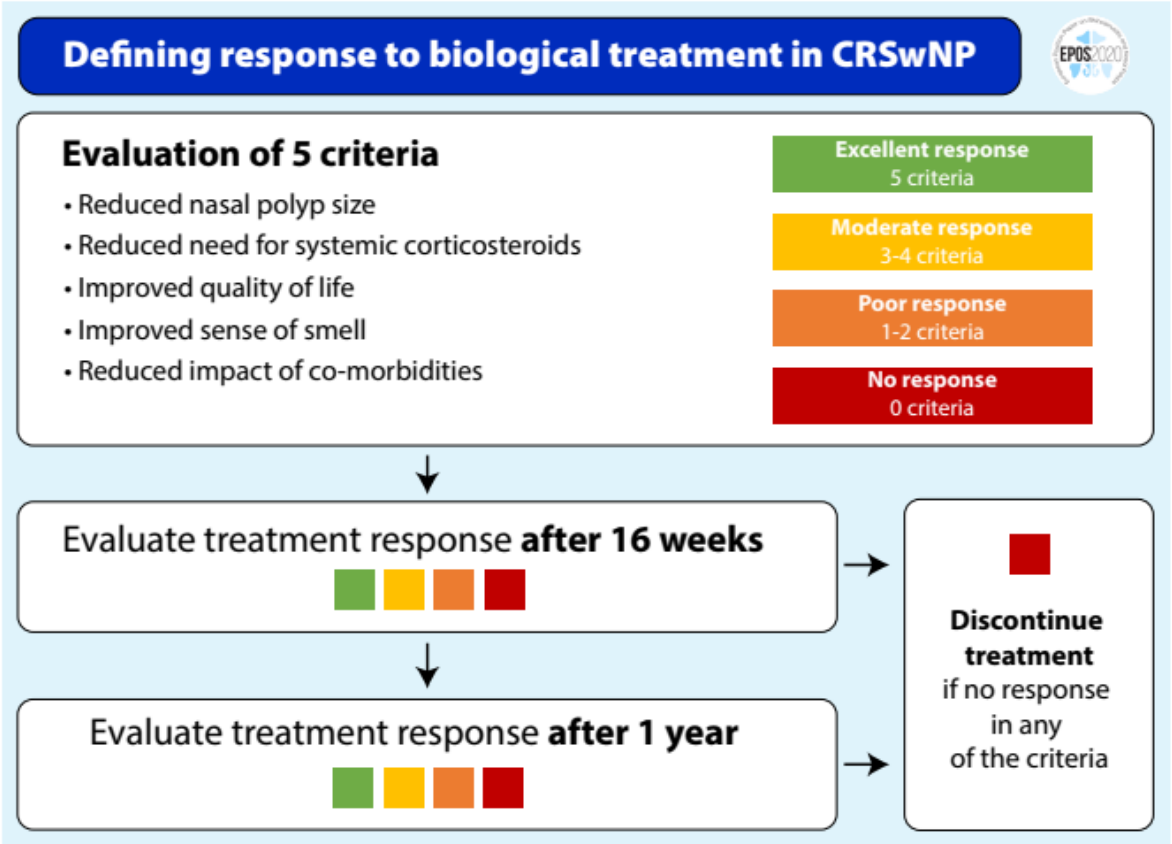
| Criteria | Cut-off points |
|--|---|
| • Evidence of type 2 inflammation | • Tissue eos ≥ 10 /hpf, OR blood eos ≥ 250 u/l, OR total IgE ≥ 100 IU/ml |
| • Need for systemic corticosteroids or contraindication to systemic steroids | • ≥ 2 courses per yr, OR long term (>3 months) low dose steroids |
| • Significantly impaired quality of life | • SNOT-22 ≥ 40 |
| • Significant loss of smell | • Anosmic on smell test (score depending on test) |
| • Diagnosis of comorbid asthma | • Asthma needing regular inhaled corticosteroids |

*exceptional circumstances excluded (e.g., not fit for surgery)

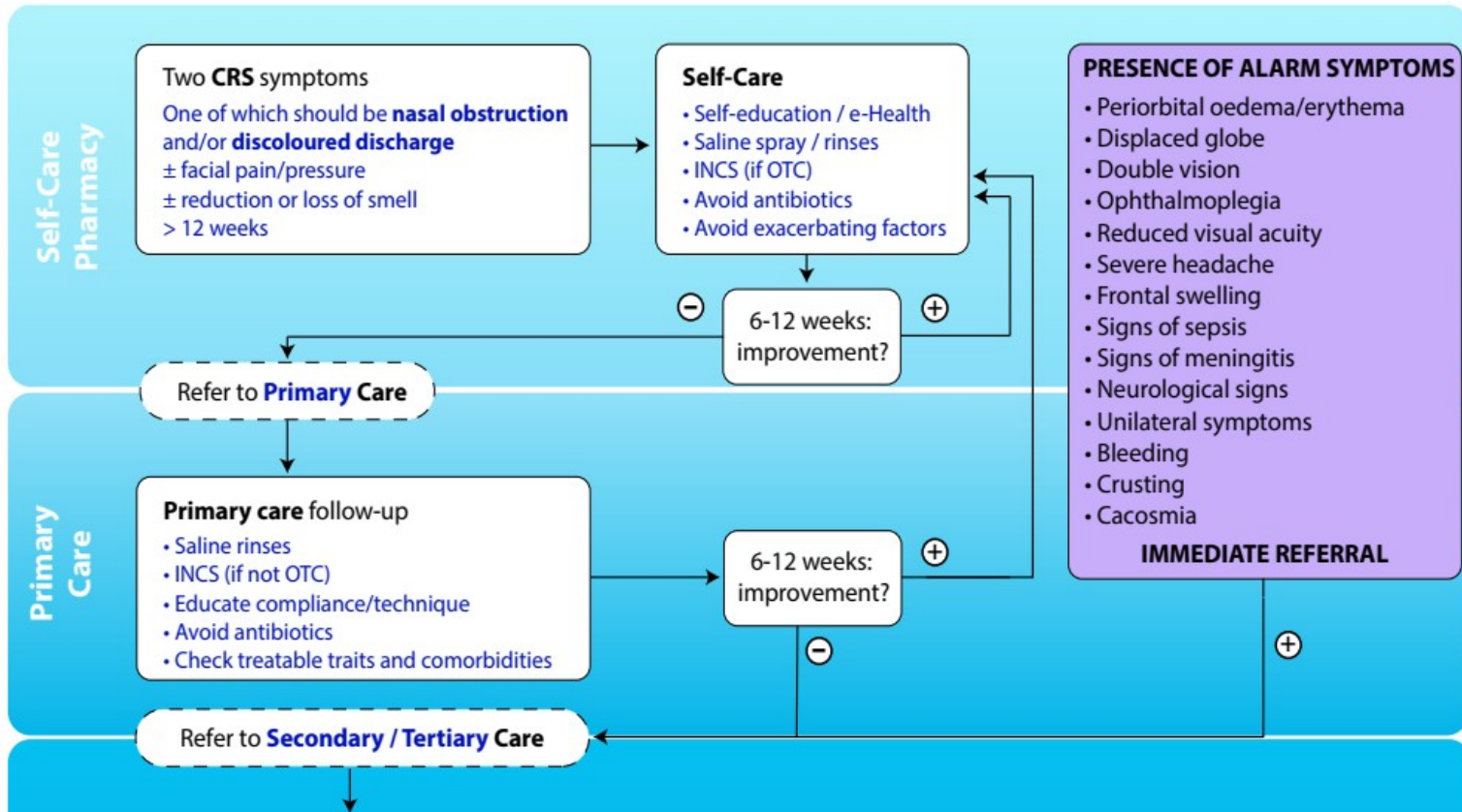
CRS, chronic rhinosinusitis; CRSwNP: chronic rhinosinusitis with nasal polyps; ESS, endoscopic sinus surgery; hpf: high power field (x400); SNOT-22, sino-nasal outcome test-22.

Adjustments in EPOS/EUFOREA criteria: The only change is the reduction of blood eosinophils to 150 cells/ μ l (EPOS 2023 update)

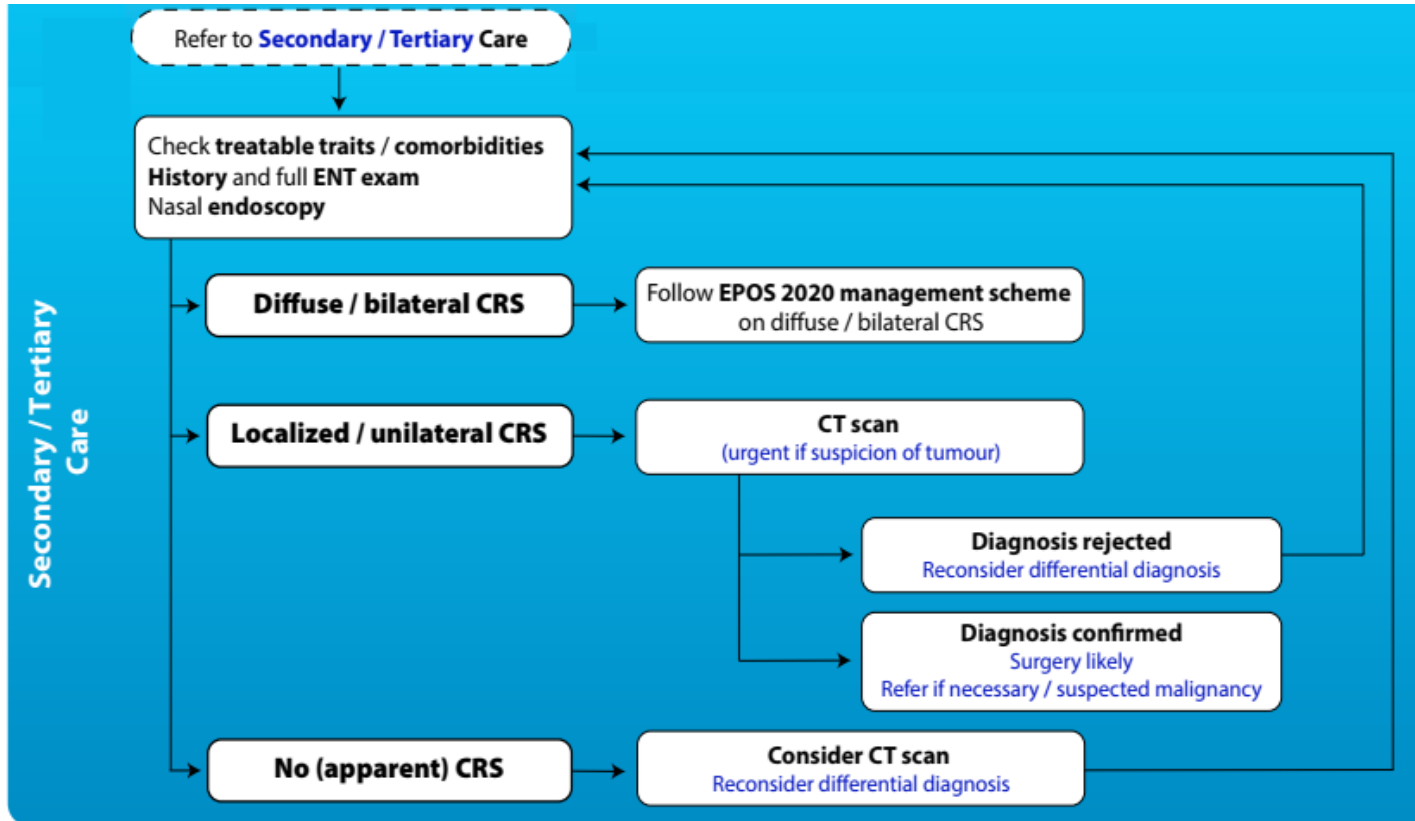
Ανταπόκριση στη θεραπεία μονοκλωνικών αντισωμάτων



Αλγόριθμος αντιμετώπισης χρόνιας ρινοκολπίτιδας (ενήλικες)



Αλγόριθμος αντιμετώπισης χρόνιας ρινοκολπίτιδας (ενήλικες)

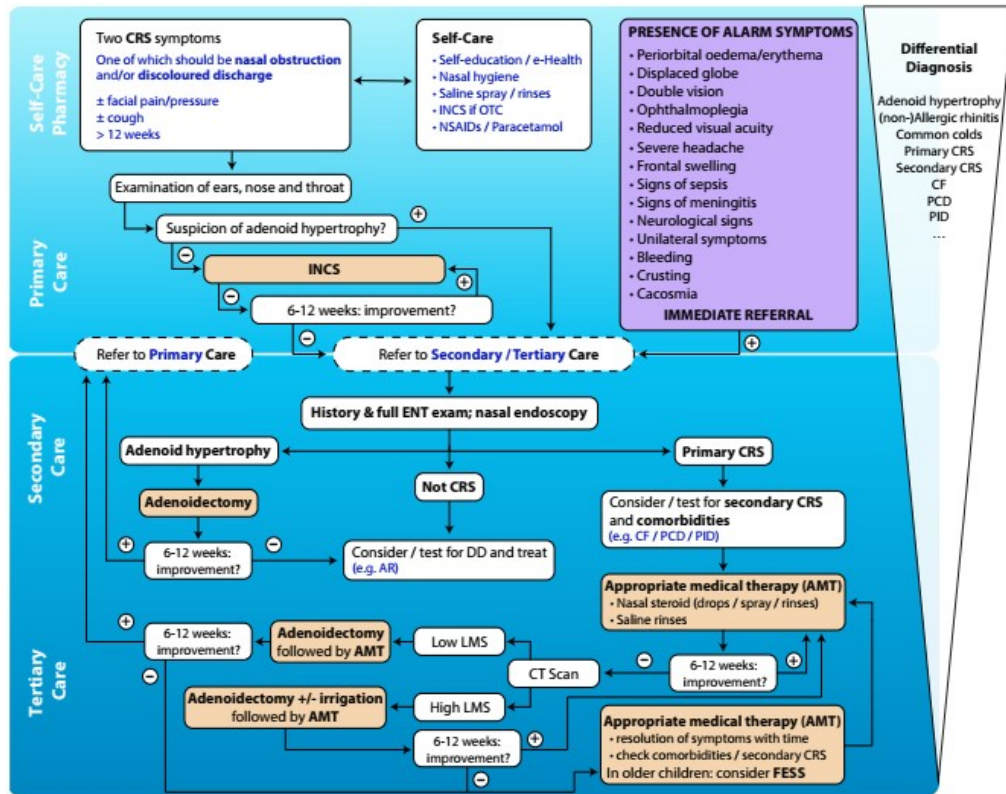


Αντιμετώπιση χρόνιας ρινοκολπίτιδας (παιδιά)

| Therapy | Level of evidence | GRADE recommendation |
|-----------------------|-------------------|--|
| Antibiotics | 1b (-) | There is no high level evidence to support the efficacy of either short or long term antibiotics for CRS in children. |
| Nasal corticosteroids | 5 | There is no evidence regarding the efficacy of intranasal steroids in the treatment of CRS in children. Nevertheless the EPOS steering group is supportive of their use in light of their anti-inflammatory effects and excellent safety record in children. |
| Systemic Steroids | 1b (+) | Adding a taper course of systemic steroids to an antibiotic (not effective on its own) is more effective than placebo in the treatment of paediatric CRS. Judicious use of this regimen is advised considering systemic side effects. |
| Saline Irrigation | 1b (+) | There are a few clinical trials demonstrating the efficacy of saline irrigations in paediatric patients with CRS. The EPOS steering group is supportive of the use of saline in light of the excellent safety record in children. |
| Adenoidectomy | 4 | Adenoidectomy is effective in younger children with symptoms of CRS. The EPOS steering group supports adenoidectomy in young children refractory to appropriate medical therapy. |
| FESS | 4 | FESS is safe and effective for the treatment of older children with CRS refractory to medical therapy or previous adenoidectomy. |

CRS, chronic rhinosinusitis; FESS, functional endoscopic sinus surgery.

Αλγόριθμος αντιμετώπισης χρόνιας ρινοκολπίτιδας (παιδιά)



AMT, appropriate medical treatment; CF, cystic fibrosis; CRS, chronic rhinosinusitis; CT, computed tomography; DD, differential diagnosis; INCS, intranasal corticosteroids; LMS, Lund-Mackay score; NSAIDs, non-steroidal anti-inflammatory drugs; OTC, over the counter; PCD, primary ciliary dyskinesia; PID, primary immune deficiencies.

Επιπλοκές

- Εξωκράνιες

- Ταξινόμηση κατά Chandler:

- Προδιαφραγματική κυτταρίτιδα
 - Κυτταρίτιδα κόγχου
 - Υποπεριοστικό απόστημα κόγχου
 - Ενδοκογχικό απόστημα
 - Θρόμβωση σφραγγώδους κόλπου

- Όγκος του Pott (Pott's puffy tumor)

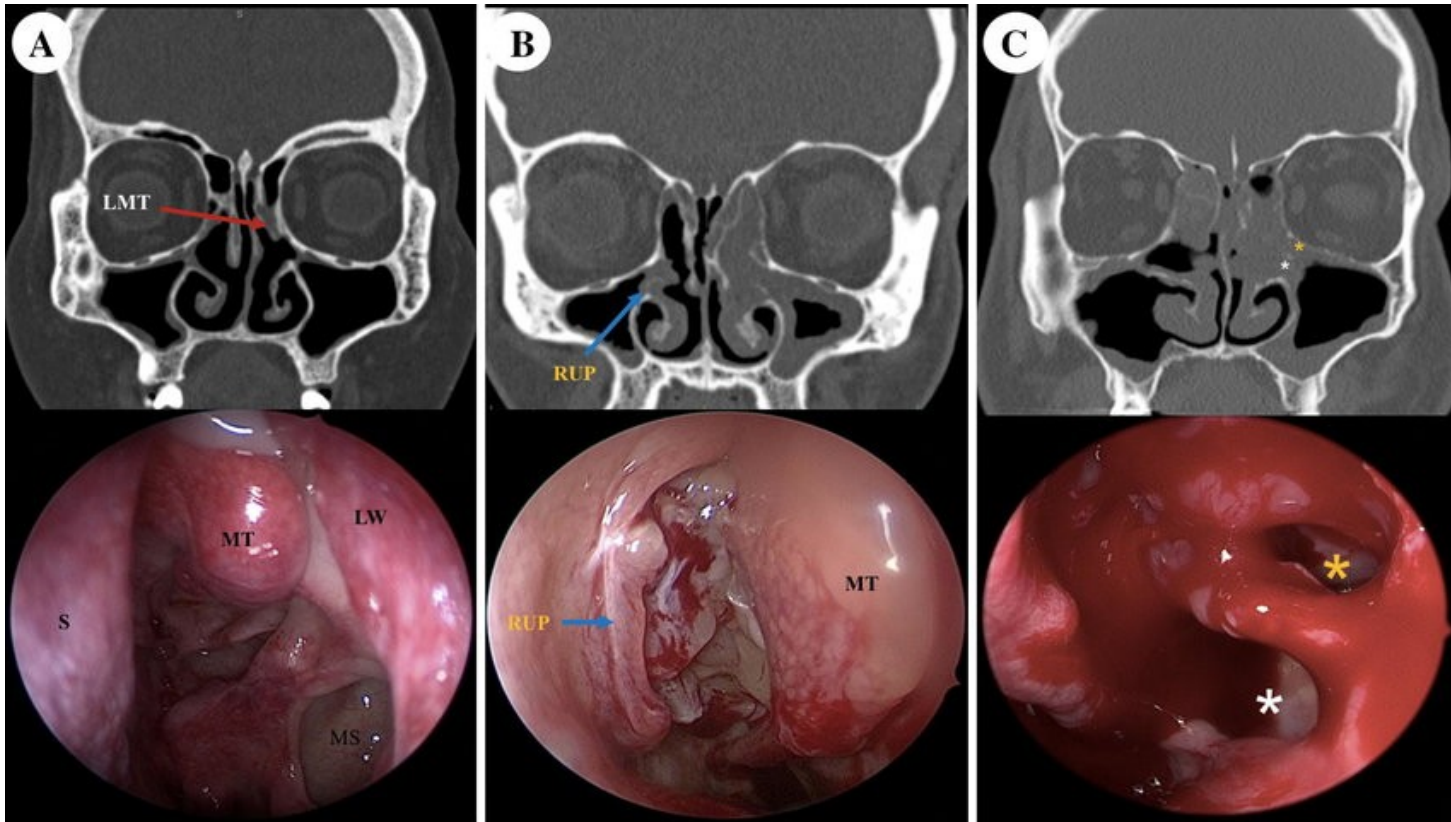
- Οστεομυελίτιδα μετωπιαίου οστού

- Ενδοκράνιες

- Μηνιγγίτιδα
 - Ενδοκράνια αποστήματα
 - Παρέσεις εγκεφαλικών συζυγιών

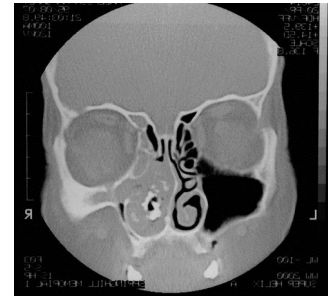


Λειτουργική ενδοσκοπική χειρουργική ρινός-παραρρινίων (FESS)



Μυκητιασική ρινοκολπίτιδα

- Μη διηθητική μορφή (μυκήτωμα)
 - Καλή πρόγνωση
 - Σχετίζεται συχνά με οδοντικά αίτια και επεμβάσεις
 - Αντιμετώπιση: ενδοσκοπική χειρουργική
- Διηθητική μορφή (ρινο-οφθαλμο-εγκεφαλική μουκορμύκωση)
 - Πτωχή πρόγνωση
 - Επέκταση σε παρακείμενες δομές (εξωτερική ρίνα, υπερώα)
 - Ευκαιριακή λοίμωξη (ανοσοκατεσταλμένοι – σακχαροδιαβητικοί)
 - Διήθηση και νέκρωση δομών του ΚΝΣ από σηπτικά έμβολα
 - Προσβολή εγκεφαλικών συζυγιών
 - Αντιμετώπιση: άρση του αιτίου (π.χ. αρρυθμιστος Σ.Δ.), αντιμυκητιασικά (αμφοτερικίνη Β), εκτεταμένος χειρουργικός καθαρισμός (ενίοτε απαιτείται εξεντέρωση του οφθαλμικού κόγχου)



Ευχαριστώ για την προσοχή σας...

