

Dokumentegenskaber:	Version 2
Gældende for	Otorhinolaryngologi, hoved- og halskirurgi & audiologi
Udarbejdet af	Dansk Rhinologisk Selskab
Opdateringsdato	01.05.15
Faglig ansvarlig	Dansk Selskab for Otolaryngologi, Hoved og Halskirurgi
Nøgleord	Kronisk rhinosinuitis med og uden polypper, CRS, CRSwP, CRSsP

1. Titel

Kronisk rhinosinuitis med og uden nasal polypose.

2. Formål

At sikre korrekt diagnosticering og behandling af kronisk rhinosinuitis med og uden polypper.

3. Definition

Kronisk rhinosinuitis (CRS) omfatter et spektrum af sygdomme, der er kendetegnet ved samtidig inflammation i cavum nasi og sinus paranasales. CRS findes med (CRSwNP) og uden (CRSsNP) nasal polypose. I 2005 udkom European Position Paper on Rhinosinusitis and Nasal Polyps (EPOS) første gang. I EPOS defineres CRS ud fra symptomer samt objektive fund.

4. Baggrund

Et dansk studie har netop vist en CRSwNP prævalens på 4 %. CRSsNP findes hyppigere. Årsagen bag kronisk betændelse i slimhindedækket i næse-bihuler anses for multifaktoriel.

a. Differentialdiagnoser:

- Cancer nasi, cancer vestibuli nasi, cancer paranasalis, cancer rhinopharyngis
- Papillom
- Tandrodsabsces med penetration til sinus maxillaris
- Koanal polyp
- Meningo/encephalocèle

- Fremmedlegeme

b. Symptomer:

Tilstedeværelse af to eller flere af følgende symptomer i > 3 måneder:

- Anterior el. posterior nasal sekretion
- Nasalstenose
- Hyp- eller anosmi
- Trykken/smerter omkring pande, næse eller øjne

Mindst ét af symptomerne skal være sekret eller nasalstenose.

c. Objektiv undersøgelse:

- ØNH undersøgelse
- Nasal endoskopi med evt. påvisning af:
 - o Nasale polypper (CRSwNP)
 - o Ødem i meatus medius og/eller sekretion fra en eller flere bihuler (CRSsNP)
- Ved første kontakt bør patienter med polypper biopteres mhp. at udelukke anden ætiologi, også ved bilateral sygdom
- CT af bihuler reserveres til patienter hvor operation planlægges, eller ved mistanke om anden sygdom

d. Behandling:

CRSwNP

- *Steroid:* Der foreligger god evidens for behandling med steroid (lokalt og systemisk)
- *Nasal lavage:* Symptomlindrende og som adjuverende behandling til topisk steroid
- *Antibiotika:* anbefales ikke
- *FESS:* anbefales til patienter, som ikke responderer på ovennævnte medicinske behandling

CRSsNP

- *Steroid*: Lokalt steroid anbefales. Der foreligger ikke evidens for behandling med systemisk steroid
- *Nasal lavage*: Symptomlindrende og som adjuverende behandling til topisk steroid
- *Antibiotika*: Makrolidbehandling i 2-3 måneder kan forsøges, specielt hos patienter med normal serum IgE
- *FESS*: Anbefales til patienter, som ikke responderer på ovennævnte medicinske behandling

e. Komplikationer til kirurgi:

Blødning, infektion, gennembrud til periorbita, skade på m. rectus medialis, skade på n. opticus, intraorbital blødning ved læsion af a. ethmoidalis ant./post., CSF lækage, skade på a. carotis interna, skade på tåreveje, læsion af septum/collumella.

f. Opfølgning:

- Planlægges lokalt
- Hvor muligt via Rhinobase.dk

5. Referenceliste

1. Fokkens WJ, Lund VJ, Mullol J, Bachert C, Alobid I, Baroody F, et al. European Position Paper on Rhinosinusitis and Nasal Polyps 2012. *Rhinol Suppl* 2012 Mar;(23):3-298.
2. Bachert C, Zhang N. Chronic rhinosinusitis and asthma: novel understanding of the role of IgE 'above atopy'. *J Intern Med* 2012 Aug;272(2):133-43.
3. Zhang N, Holtappels G, Gevaert P, Patou J, Dhaliwal B, Gould H, et al. Mucosal tissue polyclonal IgE is functional in response to allergen and SEB. *Allergy* 2011 Jan;66(1):141-8.
4. Cohen M, Kofonow J, Nayak JV, Palmer JN, Chiu AG, Leid JG, et al. Biofilms in chronic rhinosinusitis: a review. *Am J Rhinol Allergy* 2009 May;23(3):255-60.

5. Suzaki H, Watanabe S, Pawankar R. Rhinosinusitis and asthma-microbiome and new perspectives. *Curr Opin Allergy Clin Immunol* 2013 Feb;13(1):45-9.
6. Feazel LM, Robertson CE, Ramakrishnan VR, Frank DN. Microbiome complexity and *Staphylococcus aureus* in chronic rhinosinusitis. *Laryngoscope* 2012 Feb;122(2):467-72.
7. Abreu NA, Nagalingam NA, Song Y, Roediger FC, Pletcher SD, Goldberg AN, et al. Sinus microbiome diversity depletion and *Corynebacterium tuberculostearicum* enrichment mediates rhinosinusitis. *Sci Transl Med* 2012 Sep 12;4(151):151ra124.
8. Mfuna-Endam L, Zhang Y, Desrosiers MY. Genetics of rhinosinusitis. *Curr Allergy Asthma Rep* 2011 Jun;11(3):236-46.
9. Dogru H, Tuz M, Uygur K, Akkaya A, Yasan H. Asymptomatic IgE mediated food hypersensitivity in patients with nasal polyps. *Asian Pac J Allergy Immunol* 2003 Jun;21(2):79-82.
10. Houser SM, Keen KJ. The role of allergy and smoking in chronic rhinosinusitis and polyposis. *Laryngoscope* 2008 Sep;118(9):1521-7.
11. Guo C, Ghadersohi S, Kephart GM, Laine RA, Sherris DA, Kita H, et al. Improving the detection of fungi in eosinophilic mucin: seeing what we could not see before. *Otolaryngol Head Neck Surg* 2012 Nov;147(5):943-9.
12. Fokkens WJ, van DC, Georgalas C, Ebbens F. Role of fungi in pathogenesis of chronic rhinosinusitis: the hypothesis rejected. *Curr Opin Otolaryngol Head Neck Surg* 2012 Feb;20(1):19-23.
13. Zhang N, Van ZT, Perez-Novo C, Van BN, Holtappels G, DeRuyck N, et al. Different types of T-effector cells orchestrate mucosal inflammation in chronic sinus disease. *J Allergy Clin Immunol* 2008 Nov;122(5):961-8.
14. Hastan D, Fokkens WJ, Bachert C, Newson RB, Bislimovska J, Bockelbrink A, et al. Chronic rhinosinusitis in Europe--an underestimated disease. A GA(2)LEN study. *Allergy* 2011 Sep;66(9):1216-23.
15. Collins JG. Prevalence of selected chronic conditions: United States, 1990-1992. *Vital Health Stat 10* 1997 Jan;(194):1-89.
16. Blackwell DL, Collins JG, Coles R. Summary health statistics for U.S. adults: National Health Interview Survey, 1997. *Vital Health Stat 10* 2002 May;(205):1-109.

17. Lange B, Holst R, Thilsing T, Baelum J, Kjeldsen A. Quality of life and associated factors in persons with Chronic Rhinosinusitis in the general population. *Clin Otolaryngol* 2013 Oct 16.
18. Johansson L, Akerlund A, Holmberg K, Melen I, Bende M. Prevalence of nasal polyps in adults: the Skovde population-based study. *Ann Otol Rhinol Laryngol* 2003 Jul;112(7):625-9.
19. Min YG, Jung HW, Kim HS, Park SK, Yoo KY. Prevalence and risk factors of chronic sinusitis in Korea: results of a nationwide survey. *Eur Arch Otorhinolaryngol* 1996;253(7):435-9.
20. Tarp B, Fiirgaard B, Christensen T, Jensen JJ, Black FT. The prevalence and significance of incidental paranasal sinus abnormalities on MRI. *Rhinology* 2000 Mar;38(1):33-8.
21. Gwaltney JM, Jr., Phillips CD, Miller RD, Riker DK. Computed tomographic study of the common cold. *N Engl J Med* 1994 Jan 6;330(1):25-30.
22. Maroldi R, Ravanelli M, Borghesi A, Farina D. Paranasal sinus imaging. *Eur J Radiol* 2008 Jun;66(3):372-86.
23. Lund VJ, Stammberger H, Nicolai P, Castelnovo P, Beal T, Beham A, et al. European position paper on endoscopic management of tumours of the nose, paranasal sinuses and skull base. *Rhinol Suppl* 2010;(22):1-143.
24. Buchwald C, Franzmann MB, Tos M. Sinonasal papillomas: a report of 82 cases in Copenhagen County, including a longitudinal epidemiological and clinical study. *Laryngoscope* 1995 Jan;105(1):72-9.
25. Joe SA, Thambi R, Huang J. A systematic review of the use of intranasal steroids in the treatment of chronic rhinosinusitis. *Otolaryngol Head Neck Surg* 2008 Sep;139(3):340-7.
26. Harvey R, Hannan SA, Badia L, Scadding G. Nasal saline irrigations for the symptoms of chronic rhinosinusitis. *The Cochrane database of systematic reviews* 2007 Jan;(3):CD006394.
27. Wei CC, Adappa ND, Cohen NA. Use of topical nasal therapies in the management of Chronic rhinosinusitis. *Laryngoscope* 2013 Oct;123(10):2347-59.

28. Singhal D, Weitzel EK, Lin E, Feldt B, Kriete B, McMains KC, et al. Effect of head position and surgical dissection on sinus irrigant penetration in cadavers. *Laryngoscope* 2010 Dec;120(12):2528-31.
29. Van ZT, Gevaert P, Holtappels G, Beule A, Wormald PJ, Mayr S, et al. Oral steroids and doxycycline: two different approaches to treat nasal polyps. *J Allergy Clin Immunol* 2010 May;125(5):1069-76.
30. Suzuki H, Shimomura A, Ikeda K, Oshima T, Takasaka T. Effects of long-term low- dose macrolide administration on neutrophil recruitment and IL-8 in the nasal discharge of chronic sinusitis patients. *Tohoku J Exp Med* 1997 Jun;182(2):115-24.
31. Ichimura K, Shimazaki Y, Ishibashi T, Higo R. Effect of new macrolide roxithromycin upon nasal polyps associated with chronic sinusitis. *Auris Nasus Larynx* 1996;23:48-56.
32. Yamada T, Fujieda S, Mori S, Yamamoto H, Saito H. Macrolide treatment decreased the size of nasal polyps and IL-8 levels in nasal lavage. *Am J Rhinol* 2000 May;14(3):143-8.
33. Hopkins C, Browne JP, Slack R, Lund V, Topham J, Reeves B, et al. The national comparative audit of surgery for nasal polyposis and chronic rhinosinusitis. *Clin Otolaryngol* 2006 Oct;31(5):390-8.
34. Hathorn IF, Habib AR, Manji J, Javer AR. Comparing the reverse Trendelenburg and horizontal position for endoscopic sinus surgery: a randomized controlled trial. *Otolaryngol Head Neck Surg* 2013 Feb;148(2):308-13.
35. Boonmak S, Boonmak P, Laopaiboon M. Deliberate hypotension with propofol under anaesthesia for functional endoscopic sinus surgery (FESS). *Cochrane Database Syst Rev* 2013;6:CD006623.
36. Snidvongs K, Kalish L, Sacks R, Craig JC, Harvey RJ. Topical steroid for chronic rhinosinusitis without polyps. *The Cochrane database of systematic reviews* 2011 Jan;(8):CD009274.
37. Piromchai P, Thanaviratananich S, Laopaiboon M. Systemic antibiotics for chronic rhinosinusitis without nasal polyps in adults. *The Cochrane database of systematic reviews* 2011 Jan;(5):CD008233.

38. Videler WJ, Badia L, Harvey RJ, Gane S, Georgalas C, van der Meulen FW, et al. Lack of efficacy of long-term, low-dose azithromycin in chronic rhinosinusitis: a randomized controlled trial. *Allergy* 2011 Nov;66(11):1457-68.
39. Wallwork B, Coman W, Feron F, Mackay-Sim A, Cervin A. Clarithromycin and prednisolone inhibit cytokine production in chronic rhinosinusitis. *Laryngoscope* 2002 Oct;112(10):1827-30.
40. Ragab SM, Lund VJ, Scadding G. Evaluation of the medical and surgical treatment of chronic rhinosinusitis: a prospective, randomised, controlled trial. *Laryngoscope* 2004 May;114(5):923-30.
41. Khalil HS, Nunez DA. Functional endoscopic sinus surgery for chronic rhinosinusitis. *The Cochrane database of systematic reviews* 2006 Jan;(3):CD004458.