

Management of Children with Comorbid Seasonal Allergic Rhinosinusitis, Acute Respiratory Viral Infection, and Bronchial Obstruction Syndrome: A Multidisciplinary Protocol

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Abstract

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Aim. To describe the protocol of an optimized multidisciplinary management tactic for children with combined seasonal allergic rhinosinusitis (SAR), acute respiratory viral infection (ARVI), and an asthmoid component (Group V), integrating three parallel management directions and a structured specialist consilium mechanism.

Material and methods. The optimized tactic comprises three parallel management directions: otorhinolaryngological (topical anti-allergic therapy, management of ARVI-related nasal comorbidity), pediatric (standard-protocol ARVI management, overall somatic monitoring, cross-specialist coordination), and endocrinological (engaged when an asthmoid component and/or abnormal nutritional status — excess weight — is confirmed). Management of Group V children is organized around a regular multidisciplinary consilium with mandatory participation of all three specialists at inclusion and at each subsequent follow-up point, with the resulting decision documented in the child's medical file.

Results. The structure of the three parallel management directions, with the leading specialist and scope of intervention for each, is presented (Table 1), together with a schematic of the multidisciplinary management pathway for Group V children — from diagnostic verification through parallel management directions to a consilium decision and subsequent follow-up with the possibility of tactic revision (Figure 1). Quantitative comparison of the optimized tactic's clinical efficacy against traditional management is at the data-accrual stage for the prospective cohort and will be reported in a separate publication once enrolment is complete.

Conclusion. Organizing the management of children with combined viral-allergic pathology and an asthmoid component around three parallel care directions with a regular multidisciplinary consilium ensures coordinated treatment decisions across specialists and a pathogenetically grounded inclusion of the endocrinological component in comprehensive therapy.

Keywords: seasonal allergic rhinosinusitis, children, multidisciplinary approach, asthmoid component, consilium, optimized tactic

1. Introduction

Children in whom seasonal allergic rhinosinusitis (SAR) coincides with an acute respiratory viral infection (ARVI), particularly when accompanied by a transient asthmoid component (subclinical bronchial hyperreactivity without an overt asthma diagnosis), represent the most diagnostically and therapeutically challenging subgroup within the broader population of schoolchildren with SAR. Their management cannot be reduced to either standard ARVI care or standard anti-allergic therapy alone, since both processes are simultaneously active and may interact pathogenetically — for instance, through obesity-associated adipokine production, which has been shown to amplify systemic and airway inflammation in children with concurrent atopic and metabolic disturbance [1,2].

Current allergic rhinitis guidance recognizes upper and lower airway disease as closely linked processes requiring coordinated, rather than siloed, management [3,4]. However, translating this principle into a concrete, reproducible clinical protocol — defining which specialist leads which aspect of care, when an additional specialist should be engaged, and how decisions are documented and revisited over time — is rarely made explicit in the literature. The present article describes such a protocol, developed within a broader dissertation research project on the diagnosis and treatment of SAR in schoolchildren, for the subgroup of children with combined SAR, ARVI, and an asthmoid component (Group V).

Aim

To describe the structure and operating logic of an optimized multidisciplinary management protocol for children with combined seasonal allergic rhinosinusitis, acute respiratory viral infection, and an asthmoid component.

2. Materials and Methods

The optimized tactic is organized around three parallel, concurrently active management directions rather than a sequential referral chain, so that no single specialist bears full responsibility for the child's combined pathology in isolation. Table 1 summarizes the trigger, lead specialist, and scope of intervention for each direction.

Table 1. Three parallel management directions for children with combined SAR, ARVI, and an asthmoid component (Group V)

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Direction	Trigger / lead specialist	Core scope of intervention
Otorhinolaryngological	All Group V children; otorhinolaryngologist	Topical anti-allergic therapy (intranasal corticosteroid, saline irrigation); assessment and management of ARVI-related nasal/paranasal comorbidity; monitoring of endoscopic and rhinomanometric findings
Pediatric	All Group V children; local pediatrician	Standard-protocol management of the concurrent acute respiratory viral infection; overall somatic status monitoring; scheduling and cross-specialist coordination of the consilium
Endocrinological	Triggered by confirmed asthmoid component and/or abnormal nutritional status (excess weight); endocrinologist	Anthropometric and metabolic assessment; evaluation of adipokine-related pro-inflammatory contribution to disease severity; correction of nutritional status where indicated

The otorhinolaryngological direction addresses the allergic component directly, through topical intranasal corticosteroid therapy and saline irrigation, while also evaluating and managing any ARVI-related nasal or paranasal comorbidity. The pediatric direction manages the concurrent viral infection according to standard protocol and additionally serves a coordinating function, since the pediatrician oversees the child's general somatic status across the observation period and schedules the multidisciplinary consilium. The endocrinological direction is not engaged by default for every Group V child: it is triggered specifically when an asthmoid component has been confirmed and/or when the child's nutritional status is abnormal (excess weight), reflecting the pathogenetic rationale that adipose-tissue-derived pro-inflammatory adipokines can plausibly aggravate the severity of combined viral-allergic airway inflammation and therefore warrant dedicated metabolic assessment and correction [1,2].

Coordination across the three directions is achieved through a regular multidisciplinary consilium, held with mandatory participation of the otorhinolaryngologist, pediatrician, and (where engaged) endocrinologist at two defined points in the observation cycle: at the child's inclusion into Group V, and at each subsequent dynamic follow-up point. Each consilium follows a fixed structure: (1) the treating otorhinolaryngologist reports on local disease dynamics (rhinoscopic picture, rhinomanometry, sinus ultrasonography, and, where available, inflammatory mediator levels); (2) the pediatrician reports on the child's general somatic status, the course of any intercurrent illness, and adherence to the current management regimen; (3) the endocrinologist, where engaged, reports on anthropometric dynamics, nutritional status, and any additional hormonal assessment results; (4) the tactic for the subsequent observation period is discussed jointly and, where warranted, revised, with the decision recorded in the child's single medical file. This structured format is intended to avoid the fragmentation of care that can arise when multiple specialists are involved without a shared decision point, and to ensure a single, agreed-upon strategy for the child's management going forward.

3. Results

The described protocol constitutes the completed structural output of this stage of the project: three explicitly bounded, concurrently active management directions with defined triggers and scope, and a recurring, fixed-format multidisciplinary consilium mechanism linking them. The overall management pathway for a Group V child, from diagnostic verification through the three parallel directions to a documented consilium decision and subsequent follow-up, is summarized schematically in Figure 1.

Figure 1. Optimized multidisciplinary management pathway for children with combined SAR, ARVI, and an asthmoid component (Group V)

As shown in Figure 1, the pathway is deliberately cyclical rather than a single linear course of treatment: each follow-up point (at 3, 6, and 12 months) re-enters the consilium loop if the treating specialists judge that a tactic revision is warranted, for example if a child originally managed under one of the three directions develops findings that newly meet the trigger for another (such as new-onset excess weight prompting endocrinological engagement partway through follow-up).

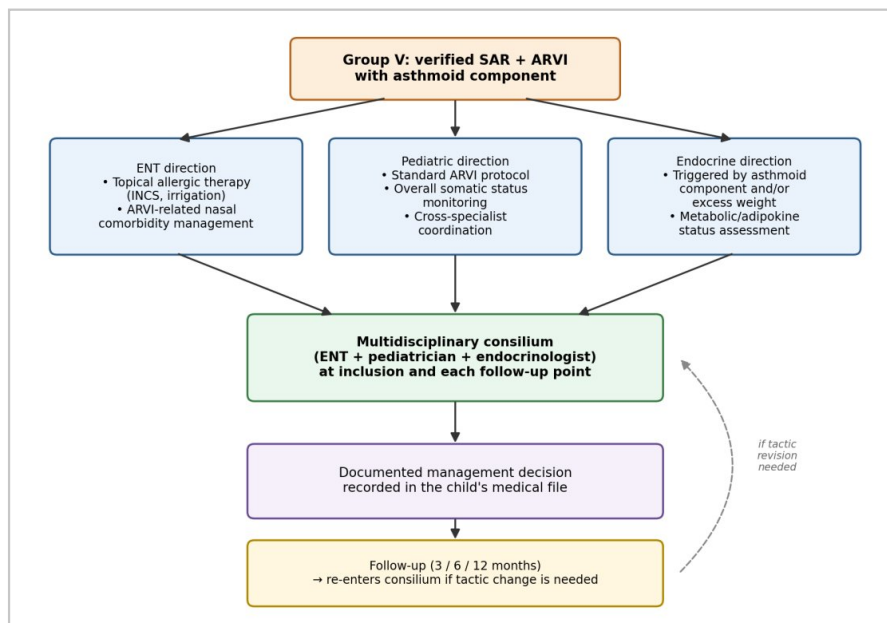


Figure 1. Figure 1.

4. Discussion

The rationale for explicitly separating three management directions, rather than assigning combined care informally to whichever specialist first evaluates the child, follows directly from the recognized bidirectional relationship between allergic airway inflammation, viral infection, and metabolic status in children [1,2,4]. Engaging an endocrinologist only when specific triggers are met, rather than by default, keeps the protocol proportionate: most children with isolated SAR-ARVI overlap without an asthmoid component or nutritional abnormality do not require endocrinological input, while those who do meet the trigger receive dedicated assessment of a pathogenetically plausible contributing factor to their disease severity.

The fixed, four-step consilium structure is intended to make cross-specialist coordination reproducible rather than dependent on informal communication between individual clinicians, and the requirement to document the resulting decision in the child's medical file provides an auditable record of how and why management was adjusted over time. A limitation of the present description is that, as a protocol report, it does not itself quantify whether this coordinated approach produces better clinical outcomes — symptom control, quality of life, or reduction in inappropriate antimicrobial or antiviral prescribing — than either single-specialty management or a less structured multidisciplinary approach; this comparison is the subject of ongoing prospective data collection within the same research project and will be reported separately once cohort enrolment and follow-up are complete.

5. Conclusion

An optimized management protocol built around three parallel, explicitly triggered care directions and a fixed-format, recurring multidisciplinary consilium provides a structured and reproducible framework for coordinating otorhinolaryngological, pediatric, and, where indicated, endocrinological care in children with combined seasonal allergic rhinosinusitis, acute respiratory viral infection, and an asthmoid component. Prospective evaluation of the protocol's comparative clinical efficacy, currently in progress, will determine its value relative to traditional, less coordinated management.

AUTHOR INFORMATION

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