



Rhinosinusitis is symptomatic inflammation of the nasal cavity and sinus. This common condition can be:

- Acute (<4 weeks)
- Subacute (4-12 weeks)
- Chronic (>12 weeks)
- Recurrent (4+ events of ARS in one year)

## ETIOLOGY

Most causes of ARS are viral. Bacterial causes can be:

- *Streptococcus pneumoniae*
- *Haemophilus influenzae*
- *Moraxella catarrhalis*

## PRESENTATION

### Main symptoms of ARS (PODS):

- Facial **P**ain or pressure
- Nasal blockage/**O**bstruction
- Nasal purulence or post nasal discolored **D**ischarge
- Loss of **S**mell (hyposmia)

### Non specific symptoms:

- Fatigue
- Headache
- Cough
- Fever
- Bad breath
- Poor sense of smell

### PHYSICAL EXAM

- Tenderness of ethmoid and/or maxillary sinus
- Periorbital edema

#### Oral cavity examination

- palate integrity
- tenderness of maxillary teeth
- postnasal drip

#### Anterior rhinoscopy

- Mucosal edema
- Purulent drainage

## COMPLICATIONS

Infection can spread beyond paranasal sinuses. This can cause:

- Orbital/periorbital cellulitis
- Orbital, epidural, subdural, or brain abscesses
- Cavernous sinus thrombosis

Look out for:

- Orbital edema, pain, proptosis or abnormal eye movement
- Decreased visual acuity: poor red-green colour differentiation or diplopia
- Sudden onset or severe headache
- Neck stiffness
- Cranial nerve palsy



## DIAGNOSIS

- ARS is a clinical diagnosis wherein the **PODS** symptoms may be present
- Investigations are usually unnecessary, but further investigation by imaging (CT/MRI) and microbial analysis can be indicated in the event of complications or lack of response to treatment
- ARS is suspected to be bacterial if symptoms remain for longer than 7 days and  $\geq 2$  of PODS are present

MANAGEMENT	< 2 yrs old or complicated ARS	> 2 yrs old
<b>Viral</b>	Symptomatic care Consider saline nasal irrigation or intranasal corticosteroids	
<b>Bacterial</b>	amoxicillin-clavulanate	amoxicillin
	Antibiotics are administered following 3 days observation Typical course is 10-14 days Obtain cultures to direct antibiotic therapy when possible	
Surgery can be an option should treatments fail or the patient has developed complications (see red box)		