

Introduction

Viral infection such as common cold is the most common cause of acute rhinosinusitis. Secondary bacterial infection during acute rhinosinusitis is relatively uncommon, estimated to be 0.5%–2% of adult cases. Despite this, antibiotics are frequently prescribed for patients presenting with symptoms of acute rhinosinusitis. So proper diagnosis of acute bacterial rhinosinusitis (ABRS) can help to reduce the excessive use of antibiotics. Hence two clinical practice guidelines have been proposed to provide the criteria for diagnosing ABRS; European Position Paper on Rhinosinusitis and Nasal Polyps (EPOS2012) and the Infectious Diseases Society of America clinical practice guideline for acute bacterial rhinosinusitis in children and adults (IDSA2012). (1, 2, 3, 4, 5)

Aim of the work

The present research aimed to compare between two clinical practice guidelines: [EPOS2012, IDSA2012] in regard to the diagnostic accuracy for ABRS in terms of their sensitivity, specificity and predictive values.

Patients and Methods

The study had been conducted on a total number of 69 patients presented with symptoms suggestive of acute rhinosinusitis. All patients had been subjected to detailed history taking, full ENT clinical examination, temperature measurement provided that the patient had not received any antipyretic medications 6 hours before the measurement and investigations which included Serum C reactive protein (CRP), erythrocyte sedimentation rate (ERS) and middle meatal bacterial culture. Every patient included in the study was classified as having acute bacterial rhinosinusitis or not based on evaluation using three different tools: European Position Paper on Rhinosinusitis and Nasal Polyps (EPOS2012), Infectious Diseases Society of America clinical practice guideline for acute bacterial rhinosinusitis in children and adults (IDSA2012) and Middle meatal bacterial culture which used as a gold standard for diagnosis of ABRS.

Results

Table 1: Overall EPOS2012 results

	Positive culture “ABRS”	Negative culture ”Not ABRS”	
EPOS2012 +ve”ABRS”	18	9	27
EPOS2012 –ve”Not ABRS”	20	22	42
	38	31	69

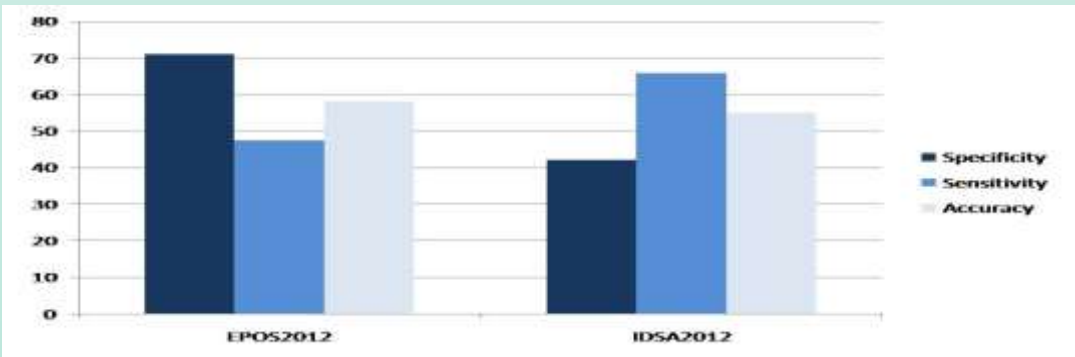
Table 2: overall IDSA2012 results

	Positive culture “ABRS”	Negative culture ”Not ABRS”	
IDSA2012 +ve”ABRS”	25	18	43
IDSA2012 –ve”Not ABRS”	13	13	26
	38	31	69

Table 3: Comparison between EPOS2012 & IDSA2012 values

	EPOS2012	IDSA2012
Specificity	70.97%	41.94%
Sensitivity	47.37%	65.79%
Accuracy	58%	55.07%
Positive Predictive Value	66.7%	58.1%
Negative Predictive Value	52.4%	50%

Figure: Diagram showing EPOS2012 & IDSA2012 overall specificity, sensitivity & accuracy



Conclusion

EPOS2012 had less sensitivity but better specificity than IDSA2012 for diagnosing acute bacterial rhinosinusitis. And both EPOS2012 and IDSA2012 had moderate accuracy. The use of EPOS2012 diagnostic criteria for diagnosing ABRS In our daily practice will reduce the unnecessary antibiotics prescription in the patients suffering from ARS.

References

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