

CHARACTERISTICS OF ATROPHIC RHINITIS IN IRAQI PATIENTS AT THI-QAR PROVINCE

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ABSTRACT:

Objectives : A study conducted at Al-Habbobi General Hospital in Annassirriya city – South of Iraq since April 2008 till Aug.2009 to show the characteristics of Atrophic rhinitis in patients attending the ENT -outpatient clinic .

Method : The common characteristics of primary atrophic rhinitis were studied in 71 Iraqi patients by the maintenance of age and sex data of all patients, the mode of presentation and most common presenting symptom defined , then nasoendoscopic examination done . Also all patients were subjected to routine blood work-up " Hemoglobin level , ESR , Blood grouping and Rh . "

Results : From history and demographic data the female to male ratio was found to be 1.08 to 1 , Most of them were urban .The main complaints affecting the life quality were nasal blockade , crustation, anosmia , epistaxis, foul smell and showing that there is a seasonal variation in symptoms. The results of the blood tests did not elucidate anemia or nutritional deficiency .

Conclusion : Although many factors have been cited previously as the possible cause of atrophic rhinitis, the common characteristics found in our patients indicate that environmental factors and possibly infective and allergic/immunologic disorders .

Key words ;Atrophic , Rhinitis , Ozena

INTRODUCTION :

Rhinitis is tissue inflammation and nasal hyperfunction that leads to nasal congestion/obstruction, rhinorrhea, nasal itching, and/or sneezing .Although rhinitis is generally not life-threatening, it is associated with significant loss of productivity and decreased quality of life .¹ Atrophic rhinitis is a chronic inflammation of the nasal mucosa of unknown aetiology , it is a well-known disease for ages and was first described by Fraenkel in the nineteenth century .^{2, 3, 4}The condition is characterized by progressive atrophy of the

mucosa with loss of the turbinate bone and resulting in a capacious cavity full of foul-smelling crust^{5,6} .Other names for atrophic rhinitis include dry rhinitis, rhinitis sicca, open-nose syndrome or ozena(meaning "stench")

Prior to antibiotics, primary atrophic rhinitis in was commonly associated with infection from bacteria such as Klebsiellaozaenae .Today, atrophic rhinitis is seen more often as a result of aggressive surgery for nasal obstruction, trauma, manifestations of granulomatous diseases, chronic cocaine abuse, and radiation therapy. ⁷ Also it is associated with aging (

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mucosal changes, along with aging, lead to decreased function, decreased ability to condition inspired air, and decreased secretion production resulting in rhinitis symptoms .⁸

It affects both sides of the nose, occurs after puberty, and is more common in women .Because of this, an endocrine imbalance has been postulated as a cause, whereas others believe it has an autoimmune basis, possibly initiated by a virus or owing to vitamin or iron deficiencies.⁹

The nasal mucosa in atrophic rhinitis gradually changes from a functional respiratory form to nonfunctional mucosa, with a loss of mucociliary clearance and neurologic regulation .⁹

Histologically, there is non-specific chronic inflammatory infiltrate, squamous metaplasia of the surface epithelium and of glandular excretory ducts, and atrophy of mucoserous glands with sensory nerve fibers degeneration .¹⁰

It is socially debilitating condition marked by an extremely foul odor that can be easily detected by others .Patients often complain of epistaxis, nasal obstruction, headaches, and the foul smell and associated with excessive crusting and mucopurulent discharge .¹¹

After excluding other possible underlying conditions by appropriate hematology and imaging, local treatment with saline irrigation, oil based ointment impregnated nasal tampons, vitamin A and D and iron supplements,¹² systemic or topical

antibiotics (for secondary infections) consider nasal vestibuloplasty or periodic nostril closure for failed medical therapy¹³

AIM OF THE STUDY

The aim of this study is to throw a light on the characteristics of Atrophic rhinitis in patients at Thi-Qar Province .

MATERIAL AND METHOD

The study was carried out on 71 Iraqi patients attending Habbobi General Hospital at Annassirriya City – south of Iraq .The common characteristics of atrophic rhinitis were studied by the maintenance of age and sex data of all patients .To ascertain the mode of presentation and most common presenting symptom, the presenting symptoms were i.e .foul smell, anosmia, crusting, epistaxis, nasal blockade and history of seasonal variation of the symptoms .

Nasoendoscopic examination done by rigid , 4 mm , 0°Hopiken's rod to show the characteristic finding .

All the patients were subjected to routine blood work-up including haemoglobin level , ESR , WBCand Blood grouping & Rh .

The statistical package for social sciences (SPSS)- V. 12.0 , windows compatible program was used for statistical analysis .

RESULTS :

Table I : Sex distribution of the patients

Male	34	47.8%
Female	37	52.2%

Sex Distribution

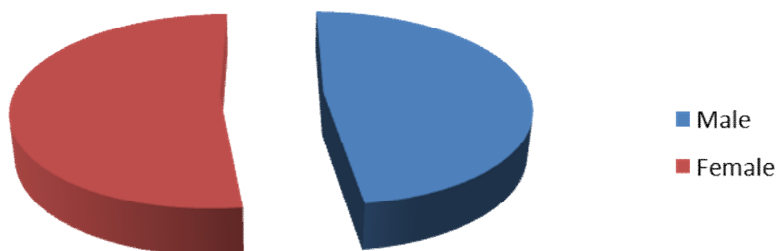


Table II: Age distribution of the patients

Age /years	No.	%
< 20	17	23.94
20 -40	26	36.61
> 40	28	39.43

Age Distribution

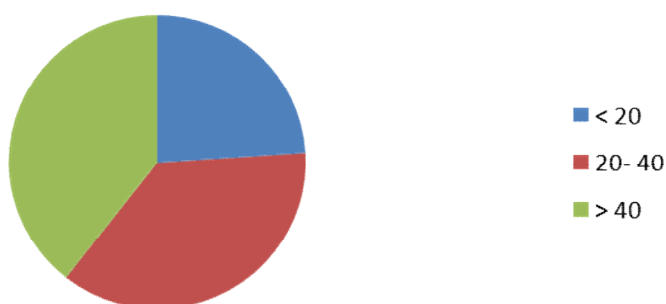


Table III: Residency of the patients

Urban	52	73.2%
Rural	19	26.8%

Residency Distribution



Table IV: Family history of the disease

Characteristics Of Atrophic Rhinitis In Iraqi Patients At Thi-Qar Province

Positive	13	18.3%
Negative	58	80.7%

Family History

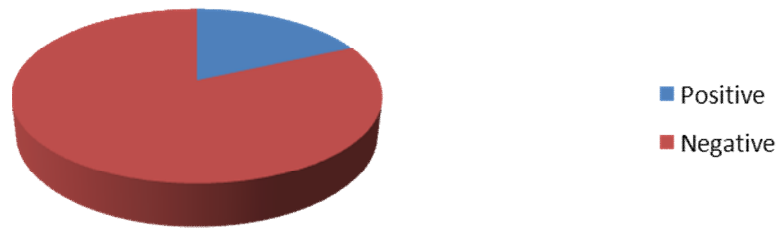


Table V : Symptoms and signs

Symptoms		
Nasal Blockade	66	93%
Epistaxis	38	53.5%
Nasal crustation	60	84%
Foul smell	38	53.5%
Anosmia	39	55%
Seasonal variation	47	66%
Signs (nasendoscopy)		
Crusts	64	90.2%
Widening of the cavity	38	53.5%
Septal deviation	14	19.7%
Septal perforation	1	1.4%
Purulent discharge	2	2.8%

SYMPTOMS & SIGNS

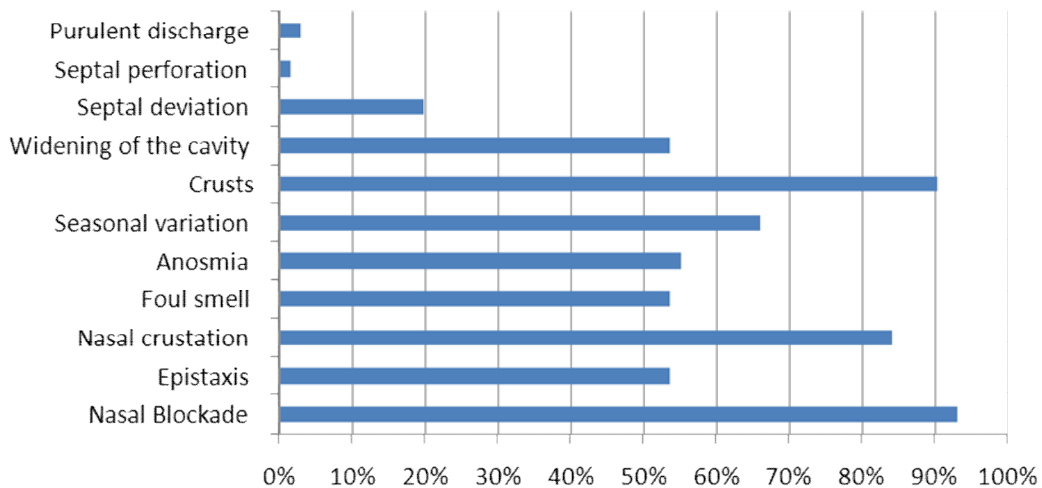


Table VI: Blood work up

Haemoglobin Level

Non of the patients found to be anaemic.

ESR

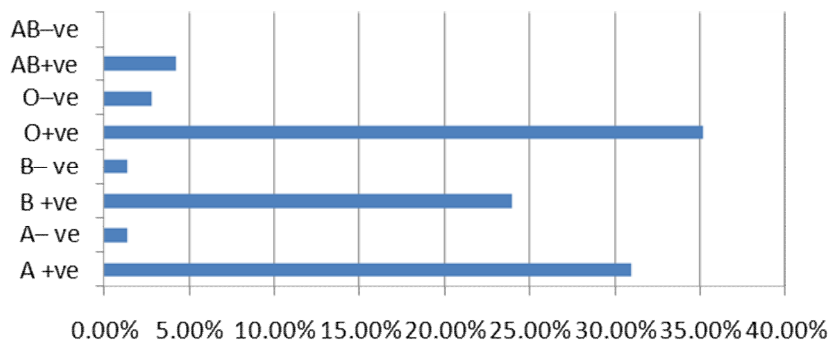
15-20	8	11.26 %
< 15	63	88.74 %



Blood group & Rh

A +ve	22	30.98%
A- ve	1	1.4%
B +ve	17	23.94%
B- ve	1	1.4%
O+ve	27	35.2%
O-ve	2	2.8%
AB+ve	3	4.2%
AB-ve	-	0.0%

Blood Grouping



Rh +ve	67	94.36%
Rh -ve	4	5.64%

Rh Grouping

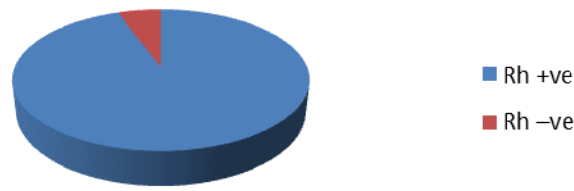
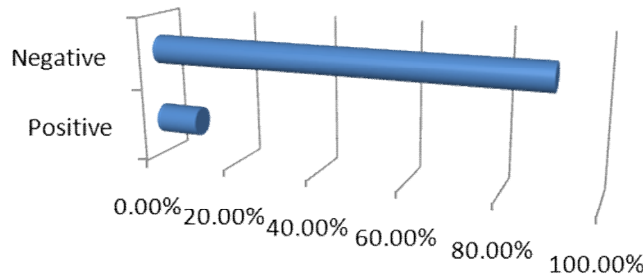


Table VII : History of trauma (surgical & non surgical)

Positive	7	9.9%
Negative	64	90.1%

Trauma History



DISCUSSION:

From history and demographic data the female to male ratio was found to be **1.08** to **1**. The significance of environmental factors^{9,12} was supported by the findings that **73.2%** were people from urban areas and **26.8%** from rural areas (most of them were active male workers at the urban areas) but a hereditary factor^{11,14} has not been confirmed (only 18.3 % has family history).

The symptoms data analyzed revealing that the main complaints affecting the life quality were nasal blockade (**93%**), crustation (**84.5%**), anosmia (**55%**), epistaxis (**53.5%**), foul smell (**53.5%**) and showing that there is a seasonal variation in symptoms (**66%**) mostly at winter & early spring which may give a clue for the infective cause^{9,11,12,15} "more cold attacks at winter " or allergic background "season of

pollen & dusty environment in the south of Iraq "of the disease.

The results of the blood tests did not elucidate anemia or nutritional deficiency^{9,11,12,15} as the cause of atrophic rhinitis .

Although the disease had chronic course , but most of the patient (**88.74%**) have low ESR .

Blood grouping of the patient show distribution of the disease among most of the groups in percentage near that of their distribution of the general population¹⁶.

History of trauma (surgical/nonsurgical) in present in **7** patients (**9.9%**) which found to be non significant .

CONCLUSION :

Although many factors have been cited previously as the possible cause of atrophic rhinitis, we found no relation with anaemia, or elevated ESR or any blood group

predominance; the common characteristics found in our patients indicate that environmental factors and possibly infective and allergic/immunologic disorders could be one or more of its multifactorial etiology and should be further investigated.

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دراسة خصائص مرض ضمور الأغشية المخاطية المبطنة للأنف في محافظة ذي قار

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الخلاصة :

دراسة اجريت في مستشفى الحبوبي العام في مدينة الناصرية – جنوب العراق للفترة من نيسان ٢٠٠٨ حتى آب ٢٠١٠ لبحث الصفات الشائعة لمرض ضمور الاغشية المخاطية المبطنة للتجويف الانفي لواحد وسبعين مريضاً من مراجعي العيادة الاستشارية في المستشفى ، وعن طريق كشف التاريخ المرضي والفحص السريري للمرضى مع اجراء بعض التحليلات المختبرية : تبين ان نسبة الاناث الى الذكور هي ١,٠٨ الى ١ ، معظمهم من سكان المدينة ، وكانت الاعراض الرئيسية هي انسداد الانف، تيبس الافرازات المخاطية ، فقدان حاسة الشم ، الرعاف ، الرائحة الكريهة (منبغثة من الانف) ولوحظ وجود تباين في حدة هذه الاعراض من موسم الى اخر ، بينما لم تبين أي من التحليلات المختبرية أي من علامات فقر الدم او النقص الغذائي او ارتفاع نسبة ترسب خلايا الدم الحمر وكذلك لم نشاهد اية علاقة بين اصناف الدم مع المرض . ومن هذا نستنتج بانه على الرغم من وجود العديد من العوامل المؤثرة في مرض ضمور الاغشية المخاطية الا انه في دراستنا تبين ان اهمها هو العامل البيئي و الدور الكبير للالتهابات الخمجية و حساسية الاغشية المخاطية في ذلك .

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