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Clinical Presentation of Referred Otalgia in Karbala

 <p>IJPPR INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH An official Publication of Human Journals</p>  <p>ISSN 2349-7203</p>	<p>Keywords: Otalgia, ear, Clinical</p> <p>ABSTRACT</p>
<p>Nadhim Imran Kadhim*¹, Mohamed Rhida Hasan Subbar²</p> <p>¹<i>MRCs Otolaryngology, Al-Hussian Teaching Hospital, Karbala, Iraq</i></p> <p>²<i>FICMS Otolaryngology, Al-Hussian Teaching Hospital, Karbala, Iraq</i></p> <p>Submission: 10 June 2017 Accepted: 15 June 2017 Published: 25 June 2017</p>	<p>Background: Otalgia is an annoying complaint which may be in the ear, primary otalgia or outside the ear from structures around the ear called referred Otalgia due to complex neural connection to ear with these structures so many researches conducted to identify the most common causes of referred otalgia in patient visiting ENT clinic. Methods: A prospective study was carried out on 990 patients with otalgia at ENT Department, Al-Hussian Teaching Hospital, Karbala Iraq during the period January 2015 to January 2016. Patient with earache but with normal ear examination was selected. Results: Out of total 990 patients with otalgia found 83 (8.3%) patients with referred otalgia, 35 (42%) were males and 48 (58%) were females (F: M=1.8:1). The age range was 10 to 60 years with a mean age of 33 years. Dental cause was the most common cause of referred otalgia (38.6%) while Bell's palsy is the least common cause (1.2%). Aim: To know the most common causes of referred otalgia in ENT clinic in Karbala Iraq on 2015-2016. Conclusion: We demonstrated that if ear is normal in any patient with otalgia we must rule out any important hidden cause by complete ENT examination.</p>



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INTRODUCTION

Otalgia is an bothersome pain in ear which may be inside the ear called primary otalgia or outside the ear from adjacent structures called referred otalgia⁽¹⁾. The ear received innervations from four cranial nerves which are trigeminal, facial, glossopharyngeal, vagus and cervical spine c2c3 which sharing with most head and neck structures which lead to otalgia.⁽²⁾ Due to this complex innervations complete examination of the head and neck, mouth, nose, pharynx, and larynx are important to rule out any cause of referred pain to the ear which is normal on examination. Children are suffering more from primary otalgia than adult whom suffer more from referred otalgia⁽³⁾. In one study of 294 patients was found that primary otalgia more in children than adult and in men more than in women.⁽⁴⁾ A study by kiiakojoori et al. found that referred otalgia more in women than man⁽⁵⁾. Another study show incidence of referred otalgia was found 33% in patients with carcinoma of tongue⁽⁶⁾. Cervical spine pathology can cause referred otalgia⁽⁷⁾.also, Elongated styloid process⁽⁸⁾, Bell's palsy also cause referred otalgia⁽⁹⁾.

PATIENTS AND METHODS

A prospective study was carried out on 990 patients at Department of ENT, Al-Hussian Teaching Hospital, Karbala during the period January 2015 to January 2016 focusing on patient's age, sex, and side of ear involved. Patient with earache but with normal ear examination was selected. Selected patient with age 10 to 60 years. Operated patient was excluded from the study but consultation to other specialties was done.

RESULTS

Out of total, 990 patients with otalgia found 83 (8.3%) patient with referred otalgia, 35 (42%) were males and 48 (58%) were females (F: M=1.8:1). The age range was 10 to 60 years with a mean age of 33 years (Tab.1). Dental cause was the most common cause of referred otalgia (38.6%) followed by T.M joint diseases (26.5%) then cervical spine (12%), pharyngitis (9.7%), quinsy (4.8%), hypopharyngeal and sinusitis (3.6%) for each while Bell's palsy is the least (1.2%) as listed in table 2.

Table 1: Age distribution of referred otalgia

Cause	10-20years	21—40years	41-60years
Dental	9(10.8%)	15 (14%)	8 (9.6%)
TM joint	5 (6%)	11 (13%)	6 (8.4%)
Cervical spine	0	4 (4.8%)	6 (7.2%)
Pharyngitis	2 (2.4%)	5 (6%)	1 (1,2%)
Sinusitis	1 (1.2%)	2 (2.4%)	0
Quinsy	3 (3.6%)	1 1.2%)	0
Hypo pharyngeal	0	0	3 (3.6%)
Bell's palsy	1 (1.2%)	0	0
Total	21 (25%)	38 (45%)	24 (30%)

Table 2: Causes of referred otalgia with sex

Causes	Female	Male	Total
Dental	18(21.5%)	14 (16.5%)	32 (38%)
TM joint	12 (14.5%)	10 (12%)	22 (26.5%)
Cervical spine	7 (8.5 %)	3 (3.6%)	10 (11.5%)
Pharyngitis	6 (7.3%)	2 (2.4%)	8 (9.7%)
Quinsy	2 (2.4%)	2 (2.4%)	4 (4.8%)
Hypo pharyngeal	1 (1.2%)	2 (2.4%)	3 (3.6%)
Sinusitis	1 (1.2%)	2 (2.4%)	3 (3.6%)
Bell's palsy	1 (1.2%)	0 0%	1 (1.2%)
Total	48 (57.5%)	35 (42.5%)	83 (100%)

Table 3: Referred otalgia between right and left ear or both

Cause	Right ear	Left ear	Both
Dental	18(21.5%)	12 (14.5%)	2 (2%)
TM joint	14 (16.5%)	8 (9.7%)	0
Cervical spine	4 (4%)	5 (6%)	1 (1.2%)
Pharyngitis	5 (6%)	3 (3%)	0
Quinsy	3(3.6%)	1(1,2%)	0
Hypo pharyngeal	1 (1,2%)	1(1,2%)	1(1.2
Sinusitis	2(2.4%)	0	1
Bell's palsy	1(1.2%)	0	0
Total	48(57.5%)	30 (36%)	5(6.5%)

DISCUSSION

Otalgia is an uncomfortable complaint to patient and his relative which prevent sleepiness and delay in his work and make patient in different age visiting ENT clinic.

Pain originates inside the ear called primary otalgia which may be in external, middle, inner ear, or outside the ear which called referred otalgia from other structures due to share neural connection between ear and head neck structures⁽¹⁾. Good history with good clinical examination to rule out whether otalgia primary or secondary.

In our research 990 patient suffering from otalgia, 8.3% of whom had referred otalgia 58% female with 42% male. Right ear more affected with otalgia than left ear. In another study on 300 patients by behnood et al in Iran the incidence of referred otalgia is 30.6% and more in female than male which consistent with our study⁽⁴⁾. My result shows the causes of referred otalgia is dental 38.5% follow by temporomandibular joint 26.5% cervical spine 12% pharyngitis 9.6% quinsy 3.6% sinusitis 3.2% pharyngolaryngeal disorder 3.6% Bell palsy 1.2%.

In Kim study toothache account more than 50% of referred otalgia⁽⁶⁾.

In Reiter's study, there is case of nasopharyngeal carcinoma manifested as referred otalgia⁽⁹⁾. Another study show elongated styloid process due to irritation to cranial nerves glossopharyngeal vagus.⁽⁸⁾

Mulwafus study on 17 patients suffering from carcinoma of the base of tongue 33% of cases presented with referred otalgia which differs from our study.⁽¹⁰⁾

Temporomandibular joint account 2nd cause in my research 26.5% comparing to behonnd et al. study which is the most frequent cause.⁽¹¹⁾

Cervical spine 3rd cause of referred otalgia in our study comparing to another study which is less than our study but regarded as cause of referred otalgia⁽⁷⁾

Also, han reported one case of Bell palsy presented as otalgia as constituent with my result.⁽¹²⁾

Another diagnosis should always be considered as otalgia like temporal arteritis, parotid neoplasm, herpes zoster, angina pectoris which are treatable if reach to diagnosis⁽¹³⁾.

CONCLUSION

In our study, the results are less than other studies except cervical spine and TM joint diseases which are more in our study but dental problem still the first presentation like other studies so we must pay attention for complete examination and consultation to other specialties if ear examination is normal.

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