A communication profile of elderly people assisted in a reference center

Perfil fonoaudiológico dos idosos atendidos em um centro de referência

Perfil de comunicación de adultos mayores asistidos em un centro de referencia

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Abstract

Introduction: *Because of population ageing, special attention should be given to elderly people. Speech-language assistance has advanced concerning the development of elderly care actions, enhancing knowledge and improving intervention strategies in this area.* ***Objective:*** *To characterize the speech-language alterations and the most frequent speech-language conducts in elderly individuals who underwent speech-language assessment at a Reference Center, as well as to verify the relationship between the medical reasons for referral and speech-language assessment findings.* ***Methods****: Exploratory, cross-sectional, and retrospective study. Data were gathered from the medical records of patients who underwent speech-language assessment at a Reference Center from January to July of 2012.* ***Results:*** *Five hundred and fourteen medical records were analyzed. The main medical reasons for referral were concerns for swallowing (32%), hearing (29%), benign paroxysmal positional vertigo - BPPV (20%), and dizziness (12%). The speech-language diagnoses were: dysphagia (26%), hearing loss (22%), absence of functional impairment (12%), BPPV (10%), and no speech-language diagnosis (17%). The agreement level between the medical reason for referral and speech-language diagnosis was 77%. The most frequent speech-language conducts were: guidance (40%), rehabilitation (28%), and referral to a hearing aid service (11%) or to the Nuclear Family Health Support - NFHS (10%). The speech-language conduct could not be determined for 11% of the subjects. Referrals to otorhinolaryngology, odontology,*

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and nutrition were also suggested. ***Conclusion:*** *This study provided the identification of the most frequent speech-language issues in the elderly subjects, directioning gerontology professional's qualification and the establishment of actions on health's promotion, protection and recovery.*

Keywords: *Speech, Language and Hearing Sciences; Elderly; Public Health; Geriatrics.*

Resumo

Introdução: *Com o envelhecimento populacional, faz-se necessária uma atenção especial a essa parcela da população. A atuação da fonoaudiologia nessa área tem avançado no sentido de desenvolver ações para a atenção ao idoso, ampliando seus conhecimentos e aprimorando suas estratégias de intervenção.* ***Objetivos:*** *Caracterizar as alterações referidas pelos idosos e as condutas fonoaudiológicas mais frequentes em uma equipe de fonoaudiologia num Centro de Referência, bem como estabelecer relação entre o motivo do encaminhamento médico e os achados fonoaudiológicos.* ***Método:*** *Estudo exploratório, transversal, retrospectivo de coleta de dados de prontuários de idosos avaliados em um serviço de fonoaudiologia de Centro de Referência, no período de janeiro a julho de 2012.* ***Resultados:*** *Foram analisados 514 prontuários. Os principais motivos de encaminhamento foram devido à deglutição (32%), audição (29%), vertigem posicional paroxística benigna (VPPB) (20%) e outros tipos de tontura (12%). Os diagnósticos fonoaudiológicos foram: disfagia (26%), perda auditiva (22%), ausência de comprometimento funcional (12%), VPPB (10%) e ausência de diagnóstico (17%). Houve concordância de 77% entre o motivo de encaminhamento médico e o diagnóstico fonoaudiológico. As condutas fonoaudiológicas mais frequentes foram: orientação (40%), reabilitação (28%), encaminhamento ao programa de saúde auditiva (11%) e ao núcleo de apoio à saúde da família - NASF (10%). Em 11% dos casos não foi estabelecida a conduta. Foram sugeridos encaminhamentos à otorrinolaringologia, odontologia e nutrição.* ***Conclusão:*** *O estudo proporcionou a identificação das alterações fonoaudiológicas mais frequentes nos idosos permitindo o direcionamento na qualificação do profissional gerontólogo e ações de promoção, proteção e recuperação da saúde.*

Palavras-chave: *Fonoaudiologia; Idoso; Saúde Pública; Geriatria.*

Resumen

Introducción: *Con el envejecimiento de la población se hace necesaria una atención especial a esa parcela de personas. La actuación fonoaudiológica ha avanzado en el desarrollo de acciones para el cuidado de los adultos mayores, ampliando conocimientos y amprimorando sus estrategias de intervención.* ***Objetivo****: Caracterizar las alteraciones referidas por los adultos mayores y los procedimientos más frecuentes de un servicio de fonoaudiología para adultos mayores asistidos por un equipo de salud en un Centro de Referencia, como también establecer relación entre el motivo del encaminamiento medico y los hallazgos fonoaudiológicos.* ***Método:*** *Estudio transversal, exploratorio, retrospectivo por recolección de datos de las historias clínicas de adultos mayores evaluados en un servicio de fonoaudiología de un Centro de Referencia, en el período enero-julio 2012.* ***Resultados:*** *Fueron analizados 514 registros. Los principales motivos de encaminamiento fueron debidos a la deglución (32%), audición (29%), vértigo posicional paroxístico benigno (VPPB) (20%) y otros tipos de mareos (12%). Los diagnósticos fonoaudiológicos fueron: disfagia (26%), pérdida de la audición (22%), ~~la~~ ausencia de deterioro funcional (12%), VPPB (10%) y ausencia de diagnóstico (17%). Hubo acuerdo de 77% entre el motivo del encaminamiento médico y el diagnóstico fonoaudiológico. Las conductas fonoaudiológicas más frecuentes fueron: orientación (40%)', rehabilitación (28%), encaminar al programa de salud auditiva (11%) y al núcleo de apoyo a salud de la familia - NASF (10%). En el 11% de los casos no se estableció una conducta.* ***Conclusión :*** *El estudio proporcionó la identificación de las alteraciones fonoaudiológicas más frecuente para los adultos mayores, lo que permitió la cualificación del médico gerontólogo, como también las acciones de promoción, protección y recuperación de la salud.*

Palabras claves: *Fonoaudiología; Adultos mayores; Salud Pública; Geriatría.*

Introduction

Population ageing is considered a global phenomenon, that is becoming increasingly evident, especially in developing countries. In Brazil, according to the Brazilian Institute of Geography and Statistics (BIGS), it is estimated that 13% of the Brazilian population would be considered elderly in 2020, exceeding 30 millions of people[1]. In that sense, Brazil would become the sixth country with the largest elderly population in the world[1,2].

This new reality instigates health professionals to seek for interventions that provide health promotion and prevention for disease aggravation, decreasing the occurrence of chronic complications besides preexistent health conditions[2]. The early an alteration is detected, the greater is the chance of making adequate and efficient intervention, which is crucial when considering elderly population. This population is also vulnerable to the development of impairments, such as disorders in communication (language, speech, voice, and hearing), swallowing disorders, and vestibular balance disorders. Several causes of communication impairment in elderly people are described in literature, such as alterations in the phonoarticulatory organs, slowness of speech processes and orafacial praxis, phonation, access to linguistic systems, hearing and vestibular balance issues[3].

The geriatric population requires an integrated and multidisciplinary approach, involving a sort of professional areas, including the Speech Language Pathology and Audiology. The speech language pathologist, as a health professional, takes part in this health care team, providing health care actions in the field of human communication and its disorders[3].

Considering the needing of elderly integral care, a health program named "Mais Vida" (PMV) was structured and implemented in the State of Minas Gerais. The aim of this program is to ensure excellence standard to the health actions, by means of an articulated and integrated health system, starting at Primary Healthcare (PHC). Reference Centers in Secondary Healthcare (SHC), named Mais Vida Centers (MVC) are reference points in the Health Net. They are composed by multidisciplinary health teams specialized in elderly care.

The PMV is the assistance modality responsible for the elders' multidimensional assessment, in order to determine their health conditions and develop a Care Plan.

The referral and appointment schedule are carried out by the PHC[4]. After the assessment by the Mais Vida health team, the elders are referred back to the PHC, which is responsible for the Care Plan implementation. During the medical appointment at Mais Vida Center, when the geriatric physician identifies some speech-language demand, the elderly patient is referred to speech-language assessment (only the main speech-language issues identified by the geriatrician are assessed).

In the clinical practice, we observe an agreement relationship between the medical reason for referral and the speech-language alterations found in the elderly patient. However, in some cases, no agreement is noted between them. Considering that the elderly patient access to speech-language intervention (diagnosis and treatment) is linked to the geriatric assessment, it is important to acquaint these elderly patients' profile. This knowledge will make possible the development of preventive actions and high quality treatments, in consonance with speech-language real demands of these patients.

Thus, the aim of this study was to characterize the speech-language alterations and the most frequent speech-language conducts in elderly individuals who underwent speech-language assessment by the speech-language team of the Mais Vida Health Program, at the Elderly Healthcare Institute Jenny de Andrade Faria (IJAF), as well as to verify the relationship between the medical reasons for referral and speech-language assessment findings.

Material and methods

The present study is an exploratory, cross-sectional, and retrospective study based on the analysis of medical files and carried out at the IJAF, a Reference Center for elderly care at Belo Horizonte city, State of Minas Gerais.

Data were gathered from the medical records of patients who were referred to speech-language assessment by the geriatric medical service, from January to July of 2012. The following items were collected from the medical records: the medical reason for referral to speech-language assessment, the speech-language diagnosis and conduct, speech-language pathologists' suggestions for referral, and patients' gender and age. The medical records

that were incomplete concerning those items were excluded from the study.

The medical reasons for referral were arranged as follows: swallowing disorders (dysphagia); communication disorders (language, speech, voice, and hearing), and vestibular balance disorders (benign paroxysmal positional vertigo - BPPV and other types of dizziness).

The speech-language diagnosis were also arranged in categories, as follows: swallowing disorders (dysphagia); communication disorders (hearing loss, dysarthria, dysphonia, language impairment); and vestibular balance disorders (BPPV, elderly multifactorial imbalance, and other types of dizziness).

Data information was entered into a database, which was developed using the Epidata®. The *Statistical Package for Social Sciences* (SPSS) 18.0 *for Windows software was adopted for statistical analysis.* Tables of frequency distribution were made for categories' variables analysis. Frequency analysis was also carried out in order to verify the agreement level between the medical reason for referral to speech-language assessment and the speech-language diagnosis.

This research project was approved by the Research Ethics Commission of the Universidade Federal de Minas Gerais – RECO, under protocol number: CAAE -06539012.0.0000.5149. Since it involves only data analysis from medical records, the researchers from the present study were released from presenting the Consent form.

Results

Subjects Characteristics

Because they did not meet the inclusion criteria established for this research, 66 medical records were excluded (11%). A total of 514 medical records made part of this study, from which 186 (36%) were from male elderly patients and 328 (64%) were from female elderly patients. The youngest subject was 60 years old and the oldest was 103 years old. The mean age was 78 years ($SD^{\pm}8$).

Medical referrals to speech-language assessment

Concerning the medical reasons for referral, we found a total of 557. The number of medical reasons was higher than the number of elderly subjects, which is justified by the fact that they can be referred to speech-language assessment for more than one reason.

As previously described, the medical reasons for referral were arranged as follows: swallowing disorders (dysphagia), communication disorders (language, speech, voice, and hearing), and vestibular balance disorders (dizziness, benign paroxysmal positional vertigo – BPPV). These results are presented in Table 1.

The communication disorders were the most frequent medical reason for referral (35.4%), followed by swallowing disorders (32.3%), and vestibular balance disorders (31.6%).

Table 1. Frequency of the main medical reasons for referral to speech-language service, from January to July of 2012. N=557

Medical reason for referral		Number	Frequency (%)
Swallowing disorder	Dysphagia	180	32,32
Communication disorder	Hearing	162	29.08
	Voice	15	2.69
	Speech	13	2.33
	Language	7	1.26
Vestibular balance disorder	BPPV	111	19.93
	Other kind of dizziness	65	11.67
Other reasons		4	0.72
Total		557	100

Label: BPPV: Benign paroxysmal positional vertigo

Speech-Language Diagnosis

Speech-Language assessment was carried out for each medical reason for referral, and the speech-language diagnosis was determined.

The frequency of those diagnoses is presented in Table 2.

The most frequent speech-language diagnosis was communication disorders (27.3%), followed by swallowing disorders (26.4%), and vestibular balance disorders (17.1%).

From the 143 individuals who underwent hearing assessment through pure-tone audiometry and speech audiometry, 37 (26%) presented mild bilateral sensorineural hearing loss; 56 (39%) presented moderate, severe or profound bilateral sensorineural hearing loss; 27 (19%) presented mixed or conductive hearing loss in one or both ears; and (16%) presented normal hearing.

The speech-language diagnosis was determined for 464 (83%) of the 557 medical reasons for referral. Agreement between the medical reason for referral and speech-language diagnosis was 77% (n=357), whereas disagreement was found for 23% (n=107). This analysis took into account only the cases for which were possible to determinate the speech-language diagnosis.

Table 2. Frequency of the main speech-language diagnosis, from January to july of 2012. N=557. Belo Horizonte

Speech-Language diagnosis		Number	Frequency (%)
Communication disorder	Hearing loss	120	21.54
	Dysarthria	12	2.15
	Disphonia	13	2.33
	Language impairment	7	1.26
Swallowing disorder	Dysphagia	147	26.39
Vestibular balance disorder	BPPV	54	9.69
	Multifactorial imbalance	16	2.87
	Other types of dizziness	25	4.49
Absence of speech-language diagnosis		93	16.7
Absence of speech-language alteration		67	12.03
Other		3	0.54
Total		557	100

Label: BPPV: Benign paroxysmal positional vertigo

Speech-Language Conducts

One or more speech-language conducts were determined for each elderly patient. The frequency and percentage of these conducts are presented in Table 3.

Besides the conducts described in Table 3, speech-language guidance was carried out for 100% of the subjects, aiming health promotion and prevention for disease aggravation.

In some cases, after speech-language assessment, referrals to professionals from other health specialties or for complementary exams were carried out. The frequency of these referrals is presented in Table 4.

Table 3. Percentage of speech-language conducts, from January to July of 2012. N=514. Belo Horizonte

Speech-Language Conduct	Number	Frequency (%)
Guidance only	210	40.86
Follow-up by NASF	51	9.92
Speech-language rehabilitation	142	27.63
Waiting diagnosis	55	10.70
Referral to hearing aid programs	56	10.89
Total	514	100

Label:
NASF: Nuclear Family Health Support

Table 4. Percentage of speech-language recomendations of referrals, from January to July of 2012. N=162. Belo Horizonte

Speech-language referrals	Number
Odontology	37
Otorhinolaryngology	58
Nutrition	18
Occupational Therapy	2
Vestibular Exam	21
Audiometry	19
Objective assessment of swallowing	3
Psychology	1
Neuropsychology	1
Gastroenterology	2
Total	162

Discussion

Population Characteristics

The predominance of female subjects in our sample corroborates the literature and the feminization phenomenon[1,5].

The number of elderly patients who underwent speech-language assessment does not correspond to the number of referrals by the geriatric medical service because some patients missed their appointments.

Medical reasons for Referral versus *Speech-Language Diagnosis*

The main medical reason for referral was communication disorders. Communication refers to the capacity to establish a relationship with the environment, primarily through hearing, speech, and vision, and one fifth of population aged over 65 presents some communication disorder[6]. The decline of those functions in elderly usually lead to communication disorders, which are related to limitations and difficulties concerning social activities (functionality) and decision making, thus affecting independency and quality of life of elderly people[7-9]. The aging process causes deterioration of hearing function, known as presbycusis, leading the elderly individual to experience negative impacts[10]. Some studies have reported that despite reporting normal hearing in their clinical history, elderly people usually present difficulties in speech comprehension and hearing loss, detected after hearing assessment[9]. It is also reported in the literature that hearing loss is frequently neglected in these patients because it is considered part of the natural process of aging[6,10].

Among the communication functions considered for analysis, hearing represented great part of the cases (29%). Hence, hearing loss was also a frequent speech-language diagnosis (22%).

Concerning the medical referrals due to hearing issues, the clinical suspect of hypoacusia is common, due to elders' difficulties of communication during the medical interview (difficulties in hearing, paying attention or understanding what

have been said). However, it works only for moderate or severe hearing loss, since mild hearing losses are hardly detected during communication situations. Thus, an objective hearing assessment is necessary in these cases. This fact explains the possibility of late diagnosis of mild hearing losses[8,10]. Based on our clinical practice, we realized that in these cases, hearing complains can first come from relatives or caregivers, since the elderly patients' self-perception is not always consistent with their hearing function.

The kind of hearing loss presented by the elderly subjects of this research shows the occurrence of presbycusis. Thus, regular hearing assessments are necessary in this population, since great part of our sample presented moderate to profound sensorineural hearing loss. In some cases, there is no complains about hearing acuity decreasing nor about difficulties in speech comprehension, but presbycusis is evidenced by mild hearing loss.

Besides hearing, the literature describes the causes of communication impairments in elderly people, such as language, speech, and voice disorders[3]. In the present study, we found a reduced number of medical referrals for speech-language assessment due to medical concerns for these functions. This finding can be due to the scale of priorities determined by the geriatric physician for referral to speech-language assessment, during the medical appointment. These communication domains were not necessarily neglected during the medical appointment, but were not defined as priorities. Hence, the number of speech-language diagnosis concerning these functions was also low.

The second most frequent medical reason for referral was swallowing disorder (32%) as well as the speech-language diagnosis of dysphagia (26%).

These results evidenced the geriatrician's concern for fragile elders. Due to physical and cognitive impairments, these individuals may not be able to make the necessary adaptations, evolving to swallowing difficulties. The presbiphagia is due to naturally diminished functional reserve of organs and body systems, with the deterioration of both motor and sensorial functions[11,12], such as reduced orofacial sensibility and mobility, decreased saliva production, tooth loss, and use of dental prosthesis. Studies have shown that a great percentage of elderly people present some kind of complaint about feeding[11-13].

Some clinical signs and symptoms that are suggestive of swallowing disorders, such as coughing and/or choking are often observed during feeding. These aspects are naturally observed and reported by relatives, caregivers or by the patients themselves. In that sense, the swallowing disorder is easily detected by the geriatrician, resulting in probable medical referral to speech-language assessment. A study found that 13.3% of the elderly subjects complained about frequent chocking during feeding, 33.3% reported eventual choking, and 6.7% reported that they seldom present choking episodes while eating or drinking[14]. Based on their self-perception, 80% reported difficulties in feeding, with regards to at least one consistence. Moreover, 33.3% of them also reported difficulties swallowing pills[15]. Nevertheless, even in the absence of these clinical signs during feeding, it is important to refer elderly patients to speech-language assessment, especially those who are at high risk for dysphagia. Some studies have pointed out the phenomenon of silent aspiration, that is, the dysphagia in the absence of clinical signs, which is associated with mechanisms such as muscle weakness or incoordination in the pharyngeal phase, reduction in laryngopharyngeal sensitivity, and decline of the capacity to produce the cough reflex[16].

Besides that, in elderly population there is a high prevalence of neurologic conditions, usually correlated to dysphagia, such as stroke, Parkinson disease, and dementia[17-21]. The swallowing disorders also present several severity levels and they may compromise nutrition and hydration, besides the risk for lung complications, especially the occurrence of aspiration pneumonia, which can lead the elderly patient to death.[18,21].

The vestibular balance disorders were also a frequent medical reason for referral and a recurrent speech-language diagnosis, among which the benign paroxysmal positional vertigo was the most expressive disorder. This vestibulopathy involves a quick and simple diagnosis and treatment, which consists of postural maneuvers[22,23]. The postural maneuvers are the most commonly used therapeutic techniques in clinical practice, as they can be applied in a single appointment with no need of more complex procedures. The treatment was carried out for almost half of elderly patients with vestibular complaints, for whom the presence of BPPV was detected in the speech-language assessment.

According to the literature, the BPPV, among all the different kinds of dizziness, is the most common cause of vertigo in elderly people, insofar as 30% of people over 70 years already had experienced this kind of dizziness at least once in their life[23,27]. The BPPV is caused by a dysfunction in the semicircular canals (internal structures responsible for body balance), and it is triggered by the otoliths that are inappropriately displaced into the semicircular canals. The BPPV causes more specifically brief episodes of vertigo, nausea and/or nystagmus associated with head movement[26,27]. Studies have evidenced that the main risk factor for falls in elderly people with vestibulopathy is sudden dizziness, and the BPPV is the most prevalent diagnosis in these cases (43.8%)[24]. Other studies have showed that the frequency of falls in elderly is significantly reduced after BPPV treatment[27]. In that sense, there is a special concern from the health services with respect to dizziness as a risk factor for fall, leading to possible fractures and potential development of the immobility syndrome, and thus causing full functional dependence.

Epidemiological studies have pointed out prevalence of dizziness in 45% of elderly people. The rotatory dizziness, vertigo, is a complaint of 70.4% of elderly population and 43.8% of them reported to have already been through a vertigo crisis at some point in life. Dizziness is also associated with apprehension due to probability of fall, which may compromise the elders' functional capacity, affecting their daily activities and consequently their Independence and quality of life[22].

The literature also describes how dizziness prevalence significantly increases with aging[23]. Recent population-based studies have reported that dizziness prevalence in elderly people ranges from 11% to 32.5% [22, 23]. A longitudinal study carried out with people aged over 65 reported dizziness complaints by 27% of subjects aged over 70 and by 54% of subjects aged over 90 or more[23]. Dizziness as a postural instability condition is characterized as a geriatric syndrome that is caused by the cumulative effect of deficits in multiple systems, making elderly people more vulnerable to develop vestibular diseases[24]. Some health conditions have been associated with dizziness, such as anxiety, depression, hearing deficits, polipharmacy, fatigue, postural hypotension and vestibular balance disease. Studies concerning the prevalence of metabolic alterations (diabetes, hypertension, dyslipidemia, and thyroid dysfunction) in elderly patients with vestibular diseases found that those metabolic conditions could lead to the development of cochleovestibular symptoms[25]. Those findings highlight the importance of a multifactorial and therefore multidisciplinary approach for elderly patients with dizziness[23,24].

The absence of speech-language diagnosis was verified in 17% of the medical records analyzed in the present study. In these cases, the speech-language pathologist was waiting for health professionals' reports results, or for results from complementary exams of hearing and vestibular system. Besides that, in some cases, the diagnosis was not beyond the speech-language pathologist's competence, for example esophageal dysphagia, metabolic dizziness, phobic cervical or postural vertigo, and orthostatic hypotension. These findings show the importance of speech-language pathologists' expertise and qualification in elderly care, considering the clinical complexity of this area, and also considering that speech-language assessment is carried out in a single appointment in the Mais Vida Program.

For some patients, the speech-language assessment evidenced the absence of a functional impairment, that is, some elderly patients referred to speech-language assessment did not present communication, swallowing or vestibular balance disorders. This finding is explained by the fact that these subjects presented dementia or Parkinson, among others diseases usually linked to speech-language alterations, in its initial stage. Thus, no impairments were observed during the speech-language assessment. This finding also points out the geriatrician's concern, already in the early stages of the disease due to its possible speech-language repercussions, caring for the maintenance of elders' functionality and consequently for their quality of life.

Regarding the medical reason for referral to speech-language assessment, agreement was found for most of the cases, and it was defined when the elderly patient presented speech-language diagnosis that was coincident with the reason for why the geriatrician requested the speech-language assessment. In our practice experience, we observe that the way the Mais Vida Center is structured allows communication among different professionals who take part in the multidisciplinary team, which favors the elderly health care. Thus, in several times, the case was previously discussed by these

professionals before formally referring the elderly patient to speech-language assessment. The results of this study also demonstrated the importance of a specialized assistance to elderly people, since the geriatrics professionals should present awareness and care of the patient as a whole, detecting and electing the priority demands in the elderly. These aspects have contributed to the agreement level found between the medical reason for referral and speech-language diagnosis. Disagreements have occurred when speech-language assessment revealed no functional disorder related to the medical reason for referral.

Speech-Language Conducts

Concerning speech-language conduct, we found that all the assessed elders had received speech-language verbal or written information for guidance about communication (speech, voice, language, and hearing), body balance, and nutritional care aimed at swallowing functionality. These conducts were intended to promote health or to prevent diseases aggravations.

The second most frequent speech-language conduct was speech-language rehabilitation. The speech-language treatment was provided at the own IJAF Reference Center or the patient was referred to another place. Elderly patients with swallowing, speech, voice and/or vestibular balance disorders were referred.

The elderly patients who were eligible for hearing aids were referred to a hearing aid service, and speech-language guidance concerning hearing care, communication strategies, and hearing aids were carried out. These patients also underwent Otorhinolaryngological assessment and the medical report was provided for applying to the hearing health program for verification of the possibility of hearing aids adaptation.

Regarding the conduct of requesting the elderly patient follow-up by the Nuclear Family Health Support (NFHS), it was carried out in case of neurodegenerative diseases that required swallowing and communication functions' management, since they can lead to dysphagia or communication impairments as the disease progresses. Given that the Reference Center offers specialized care for fragile elders, another criterion for requesting elderly patients' follow-up by the NFHS was the presence of mobility and locomotion restrictions, with the need for home care. The NFHS provides this modality of assistance.

Some speech-language conducts were not possible to be defined because of the necessity of waiting for clinical assessment complementation. This fact reinforces once again the importance of a multidisciplinary approach for elderly care. In this sense, it is often necessary to indicate evaluations by other professionals and to perform complementary exams for a comprehensive, at the same time cautious approach, considering the risk of iatrogenic diseases.

The speech-language team also suggested to the geriatrician some referrals to professionals from other specialties, when they have not been previously carried out. Generally, the geriatrician had already referred the elderly patient to other health professionals, what explains the reduced number of speech-language pathologists' suggestions for referral to some professional categories.

The most frequent suggestion for referral was to otorhinolaryngology due to dizziness and vestibular balance impairments with undetermined etiology by the speech-language assessment.

The elderly patients commonly presented excessive cerumen observed during the external acoustic meatus inspection (meatuscopy), condition that may lead to hearing deficits, besides interfering in the adequate execution of the hearing tests. Thus, the patients with excessive cerumen and the patients who were candidates for adaptation to hearing aids were referred to this medical specialty.

Odontology was also suggested for referral. During the speech-language assessment, specifically during the assessment of the sensorimotor system and estomatognathic functions, when the examination of oral cavity was performed, referrals for Odontology were suggested in the presence of a precarious dental conservation or ill-fitting dentures, since these alterations may affect the preparatory and oral phases of swallowing and also lead to difficulties in the feeding process.

Referrals to Nutrition service was suggested when the elderly patients presented important ponderal weight loss, nutritional impairments, or need for changes or adaptations in food consistencies, according to the speech-language assessment.

The speech-language pathologist performed the suggestions for referral, being at the discretion of the geriatrician, the care manager, to accomplish it or not.

Conclusion

In the present study, it was possible to characterize elderly individuals who underwent speech-language assessment, as well as to identify the most frequent speech-language conducts in a Reference Center. The most frequent medical reasons for referral and speech-language alterations were communication disorders, followed by swallowing disorders and vestibular balance disorders. These findings provide instrumentation for supporting guidance interventions, information and education for health, that is, actions that help the process of production and systematization of health care practices, thus meeting the needs of elderly people.

The presence of agreement between the medical reason for referral and the speech-language diagnosis, observed for most of the cases, confirmed the importance of the multidisciplinary team, making possible the dialogue among geriatrics and gerontology speech-language professionals concerning concepts sharing and discussion of assessment and intervention conducts, in order to reach a unified and increasingly interdisciplinary discourse, and thus meeting the objectives of the Mais Vida Program.

Health promotion, assistance and rehabilitation initiatives should have as the main goal the improvement, maintenance or recovery of the elderly functional capacity, as long as possible, valuing their autonomy and both physical and mental independence.

References

1. IBGE - Instituto Brasileiro de Geografia e Estatística. Censo Demográfico: Estudos e pesquisas, 2010. [Acesso em 15 agosto 2013]. Disponível em: http://cod.ibge.gov.br/214IE.

2. Secretaria de Vigilância em Saúde do Ministério da Saúde. Epidemiologia e Serviços de Saúde: Sistema Único de Saúde. Brasília, DF, jul/set 2009; 18(3):209-218. [Acesso em 13 janeiro 2013]. Disponível em: http://bvsms.saude.gov.br/bvs/periodicos/rev_epi_vol18_n3.pdf.

3. Mac-kay APMG. Linguagem e Gerontologia. In: Fernandes FDM, Mendes BCA, Navas ALPGP (orgs). Tratado de Fonoaudiologia. 2º Ed. São Paulo: Ed Roca; 2010; 386-390.

4. Secretaria Estadual de Saúde de Minas Gerais. Rede Mais Vida: A rede de atenção ao idoso em Minas Gerais, jan/ 2012. [Acesso em 15 out 2013]. Disponível em: http://www.ibedess.org.br/imagens/biblioteca/870_Programa Mais Vida em Minas Gerais.pdf.

5. Brasil. Lei federal nº 10.741, de 01 de outubro de 2003. Dispõe sobre o Estatuto do Idoso e dá outras providências. Secretaria Especial dos Direitos Humanos. Brasília, DF, 2004. [Acesso em 2 julho 2013]. Disponível: em http://www.planalto.gov.br/ccivil_03/leis/2003/L10.741.htm.

6. Moraes EM, Marino MCA, Santos RR. Principais síndromes geriátricas. RMMG, 2010; 20(1):54-66.

7. Carmo LC, Silveira JAM, Marona SAM, D'ottaviano FG, Zagati LL, Lins EMDVS. Estudo audiológico de uma população idosa brasileira. Rev. Bras. Otorrinolaringol. Mai/Jun 2008;74(3):342-9.

8. Baraldi GS, Almeida LC, Borges ACC. Evolução da perda auditiva no decorrer do envelhecimento. Rev. Bras. Otorrinolaringol. Jan/Fev 2007;73(1):64-70.

9. Kano CE, Mezzena LH, Guida HL. Estudo comparativo da classificação do grau de perda auditiva em idosos institucionalizados. Rev. CEFAC. Jul/Set 2009; 11(3):473-7.

10. Calais LL, Borges ACLC, Baraldi GS, Almeida LC. Queixas e preocupações otológicas e as dificuldades de comunicação de indivíduos idosos. Rev. CEFAC. 2008;13(1):12-9.

11. Gutierrez SM, Zanato LE, Pelegrini P, Cordeiro RC. Queixas fonoaudiológicas de idosos residentes em uma instituição de longa permanência. Dist. Comum. São Paulo. Abr/2009; 21(1): 21-30.

12. Feijó AV, Rieder CAM. Distúrbios da deglutição em idosos. In: Acosta NB, Cardoso MCAF. Presbifagia: estado da arte da deglutição do idoso. RBCEH. Jan/Abr. 2012; 9(1): 143-154.

13. Bilton T. Estudo da dinâmica da deglutição e suas variações associadas ao envelhecimento avaliadas por videodeglutoesofagograma, em adultos assintomáticos de 20 a 86 anos [tese de doutorado]. São Paulo (SP): Unifesp, 2000.

14. Cardoso, MCAF, Dias BKP. Características da função de deglutição em grupo de idosas institucionalizadas. Estudos Interdisciplinares sobre o Envelhecimento. Porto Alegre, 2009; 14(1):107-124.

15. Tanure, CMC, Barbosa JP, Amaral JP, Motta AR. Deglutição no processo normal de envelhecimento. Rev. CEFAC. São Paulo. Abr/Jun. 2005; 7(2):171-7.

16. Rodrigues B, Nóbrega AC, Sampaio M, Argolo N, Melo A. Silent saliva aspiration in parkinson's disease movement disorders. Mov. Disord. Jan 2011; 26(1):138-41.

17. Galhardo MMAMC, Amaral AKFJ, Vieira ACC. Caracterização dos distúrbios cognitivos na Doença de Parkinson, Rev. CEFAC. 2009; 11(2): 251-7.

18. Silva LM. Disfagia orofaríngea pós-acidente vascular encefálico no idoso. Rev. Bra. Geriatr. Gerontol. Rio de Janeiro, 2006; 9(2): 93-106.

19. Talmelli, LFS, Gratão ACM, Kusumota L, Rodrigues RAP. Nível de independência funcional e déficit cognitivo em idosos com doença de Alzheimer. Rev. Esc. Enferm. USP, São Paulo. Dez/2010; 44(4):933-9.

20- Gauoni J, Pedroso KCA, Grolli EB. Avaliação fonoaudiológica funcional em pacientes portadores de doença de Parkinson. Rev. CEFAC, 2003; 5:223-6.

21. Almeida APRS, Mourão LF. Estudo das alterações na deglutição na doença de Parkinson. XV Congresso Interno de Iniciação Científica da Unicamp; 26 e 27 set/

2007; pp.43-43, Campinas, SP, Faculdade de Ciências Médicas – FCM; 2007.

22. Moraes AS, Soares WFS, Rodrigues AS, Fett WCR, Ferriolli E, Perracini MR. Dizziness in community-dewelling older adults: a population-based study. Braz. J. Otorhinolaryngol. Nov/Dez 2011;77(6):691-9.

23. Ganança FF, Gazzola JM, Aratani MC, Perracini MR, Ganança MM. Circumstances and consequences of falls in elderly people with vestibular disorder. Rev. Bras. Otorrinolaringol. Mai/jun 2006; 72(3):388-93.

24. Santos EM; Gazzola JM; Ganança CF; Caovilla HH; Ganança FF. Impacto da tontura na qualidade de vida de idosos com vestibulopatia crônica. Rev. CEFAC. Out/dez 2010; 22(4):427-32.

25. Bittar SEM, Zerati MAB, Moraes CLO, Cunha AU, Bento RF. Prevalência das alterações metabólicas em pacientes portadores de queixas vestibulares. Rev. Bras. Otorrinolaringol. Jan/fev 2003; 69(1):64-8.

26. Takano NA, Cavalli SS, Ganança MM, Caovilla HH, Santos MAO, Peluso ETP, Ganança FF. Quality of life in elderly with dizziness. Rev. Bras. Otorrinolaringol. Nov/dez 2010;76(6):769-75.

27. Ganança FF, Gazzola JM, Ganança CF, Caovilla HH, Ganança MM, Cruz OLM. Quedas em idosos com Vertigem Posicional Paroxística Benigna. Rev. Bras. Otorrinolaringol. Jan/fev 2010;76(1):113-20.