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Original Scientific Paper

AWARENESS OF THE EUROPEAN GROUP ON GRAVES' ORBITOPATHY (EUGOGO) GUIDELINES AND THEIR PRACTICAL USAGE IN CROATIA: AN EUGOGO PILOT STUDY

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SUMMARY – This pilot study aimed to evaluate the awareness and practical usage of the European Group on Graves' Orbitopathy (EUGOGO) Guidelines in Croatia, in view of a possible EUGOGO survey on a larger scale. A 27-question anonymous online questionnaire survey was administered. It included questions regarding EUGOGO activities (usage of proposed assessment tools while diagnosing Graves' orbitopathy (GO) and algorithms while treating GO), besides sociodemographic data. The questionnaire was administered to endocrinologists, ophthalmologists, and nuclear medicine specialists whose e-mail addresses were available in the published records of national scientific societies. Collected data were processed and statistical analyses performed in Base SAS 9.4 (SAS Institute Inc., Cary, North Carolina, USA). Endocrinologists had the best response rate to the questionnaire. Ophthalmologists and the youngest responders (age 25-35) displayed the best usage and knowledge of the EUGOGO Clinical Evaluation Atlas and Guidelines. Responders who attended international meetings regularly and those in higher levels of health care used the Guidelines more often in clinical practice. This online survey proved to be a useful tool for obtaining data rapidly and inexpensively. It provided clear figures concerning the awareness and practical usage of the EUGOGO Guidelines in Croatia, thus it can represent the basis for larger EUGOGO survey.

Key words: *EUGOGO; Graves' orbitopathy; Graves' ophthalmopathy; Thyroid eye disease*

Introduction

Graves' orbitopathy (GO) is an autoimmune disease of the orbit and orbital tissue which most commonly (80%-90%) occurs in female patients (female to male ratio 5.5-3.9:1) with Graves' hyperthyroidism[1,2], but

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can also arise in euthyroid or hypothyroid patients, or in patients affected by chronic thyroiditis[3]. It is clinically relevant (mild to moderate) in about 25%-50% of patients with Graves' disease[4-6], and moderate to severe in 3%-5% of cases. Females are usually affected in their forties, males a decade later[7]. In adult Europeans, the prevalence of GO is 8.97-15.48 *per* 10000, although there are differences throughout the continent[8]. Orbitopathy rarely affects children[7,8]. All affected patients report a relevant decrease in their quality of life[1,9].

The European Group on Graves' Orbitopathy (EUGOGO) was established in 1999 as a multicenter and multidisciplinary network of clinicians who are committed to improving the treatment and quality of life in patients with GO. The vast majority of EUGOGO members are ophthalmologists and endocrinologists working in teams within each of the 26 EUGOGO sites. At some sites, other dedicated physicians such as specialists in nuclear medicine, clinical epidemiologists and radiologists are part of the GO teams.

In order to assemble all the useful information and knowledge on managing and classification of GO patients, in 2001 Dickinson and Perros published an article describing detailed protocols and photographs with the aim to objectify assessment of GO patients, later known as EUGOGO Clinical Evaluation Atlas[10]. In 2007/2008, EUGOGO first published a consensus statement on the management of GO simultaneously in the European Journal of Endocrinology and in Thyroid[11,12]. At that time, randomized clinical trials in this field were sparse, therefore, the document could only be labeled as a consensus statement. In the course of the following years, the number of randomized clinical trials pertinent to the treatment of GO had risen, thus permitting publication of the first ETA/EUGOGO Guidelines for the Management of GO in 2016[6]. In August 2021, EUGOGO published the most recent Guidelines on the same topic[13].

The multidisciplinary team on GO at the Zagreb University Hospital Center from Zagreb, Croatia, became the EUGOGO Croatian Site in 2017. The team consists of ophthalmologists, endocrinologists and nuclear medicine specialists working in close collaboration and according to the EUGOGO principles. In line with this, they strive to promote multidisciplinary collaboration among Croatian physicians who manage patients with GO either regularly or sporadically.

The general perception of EUGOGO and practical use of the EUGOGO published Guidelines and Atlas amongst clinicians treating GO is unknown. This survey aimed to assess the awareness of EUGOGO activities, usefulness, and prevalence of using EUGOGO consensus 2007-2008 and Guidelines 2016[6,11,12] and Atlas for diagnosis, clinical evaluation, classification, and treatment of GO patients[6,11,12], willingness to establish liaisons with EUGOGO and for education on GO among Croatian ophthalmologists, endocrinologists and specialists in nuclear medicine. It was designed and conducted as a pilot study in view of the possible EUGOGO surveys on a larger scale.

Subjects and Methods

An internet-based, anonymous online survey was conducted from July to October 2020. It was administered to all ophthalmologists, endocrinologists, and specialists in nuclear medicine whose e-mail addresses were available and published in the records of their respective national scientific societies gathered under the Croatian Medical Association. Physicians were contacted by e-mail using Mailchimp online service and responses were collected using 123 Form builder online service. These online services accept only one response from the same IP address; therefore, the same responder was able to fill out the questionnaire only once. The questionnaire could not be submitted unless all the questions were answered.

The survey was sent to medical doctors, members of the Croatian Ophthalmological and Optometric Society, members of the Croatian Society for Endocrinology and Diabetology, and members of the Croatian Society of Nuclear Medicine. The survey included residents.

The lists of e-mail addresses that were made available by the respective scientific societies permitted to make contact with 350 ophthalmologists, 100 endocrinologists, and 150 specialists in nuclear medicine.

The questionnaire consisted of a total of 27 questions; it was written in the Croatian language and was specifically designed for this survey (Table 1). Besides collecting sociodemographic records of responders (age, gender, work experience, facilities, academic/educational status) (questions 1-9), the questionnaire

Table 1. Questionnaire used in this survey translated into English language by a validated native speaker double translation (Croatian into English and English into Croatian)

Question	**Answer**	**n**	**fr(%)**
Age (years)?	25-35	39	28.06
	36-46	59	42.45
	47-57	26	18.71
	58-68	15	10.79
Gender?	Male	44	31.65
	Female	95	68.35
Are you a specialist or resident?	Specialist	19	13.67
	Resident	120	86.33
Your field of specialty?	Ophthalmology	37	26.62
	Endocrinology	24	17.27
	Nuclear medicine	78	56.12
Years of specialty training?	0-5	47	33.81
	6-10	25	17.99
	11-15	32	23.02
	>15	35	25.18
Level of health care you work in	Clinical hospital center	50	37.31
	Clinical hospital	14	10.45
	University school of medicine	11	8.21
	General/special hospital	37	27.61
	Primary health care facility	2	1.49
	Private medical practice	20	14.93
Did you attend an international conference abroad in the past year?	Yes, as an active participant	30	21.58
	Yes, as a passive participant	51	36.69
	Yes, both as an active and passive participant	6	4.32
	No	52	37.41
Do you regularly attend international conferences abroad?	Yes	65	46.76
	No	74	53.24
If yes, how many times *per* year?	Mean=1.79, SD=0.8, Min=0, Med=1.5, Max=5		
Do you know what acronym EUGOGO stands for?	Yes	82	58.99
	No	35	25.18
	I'm not sure	22	15.83
If yes, state what does it stand for?			
Are you acquainted with goals and activities of EUGOGO team?	Yes	57	41.01
	No	52	37.41
	I'm not sure	30	21.58

Table 1. ctnd.

Question	Answer		n	fr(%)
Do you know which Croatian health center has been accepted to EUGOGO as a multidisciplinary team?	Yes		52	37.41
	No		87	62.59
If yes, state which one?				
Do you know which specialists make a EUGOGO multidisciplinary team?	Yes		60	43.17
	No		60	43.17
	I'm not sure		19	13.67
Do you know for which disease are EUGOGO 2016 Guidelines for?	Yes		101	72.66
	No		29	20.86
	I'm not sure		9	6.47
If yes, state which one?				
Where and when did you first hear about EUGOGO?				
Did you come across EUGOGO 2016 Guidelines in your clinical practice?	Yes		72	51.80
	No		67	48.20
Do you use EUGOGO 2016 Guidelines in your clinical practice for diagnosis and treatment of patients with Graves' orbitopathy (GO)? (*)	Yes		39	28.06
	No		66	47.48
	Sometimes		34	24.46
Do you find the use of EUGOGO 2016 Guidelines useful in evaluating patients with GO? (*)	Yes		128	92.09
	No		11	7.91
Does the use of Clinical Evaluation Atlas help you in classifying patients with GO in certain disease categories? (*)	Yes		51	36.69
	No		3	2.16
	I don't use it		85	61.15
Do you know which external risk factor, according to EUGOGO, is associated with the severity, progression, and outcome of GO treatment?	Name it	Smoking	87	63.97
		Hyperthyroidism	1	0.74
		Exophthalmos	1	0.74
		I don't know	47	34.56
Do you want to ensure contact with members of the Croatian EUGOGO multidisciplinary team?	Yes		124	89.21
	No		15	10.79
Do you think that help of the EUGOGO team would be useful in your daily practice?	Yes		117	84.17
	No		4	2.88
	I'm not sure		18	12.95
Do you want to receive notifications about EUGOGO activities, including access to various educational materials, information about courses and meetings, results of completed clinical studies, etc.	Yes		130	93.53
	No		9	6.47
Are you interested in attending courses on GO?	Yes		117	84.17
	No		22	15.83

(*) the use defined as consultation of the Guidelines or Atlas during clinical practice or adhering to them for those who are familiar with their contents; EUGOGO = European Group on Graves' Orbitopathy

included questions regarding knowledge of EUGOGO (questions 10-17), use of EUGOGO resources (assessment tools and therapeutic algorithms), i.e., the Atlas proposed by Jane Dickinson and Petros Perros in 2009 and later embraced by EUGOGO[10], and the EUGOGO Guidelines 2016 (questions 18-22) (Table 1). Question 23 was aimed at evaluating if one of the basic messages of the EUGOGO Guidelines (smoke as a risk factor for GO) was acquired by the responders, in fact confirming their use of the EUGOGO Guidelines; final questions 24-27 were aimed at exploring the wish of the responders to make liaisons with EUGOGO and for further education in the field of GO.

Ethics approval

The questionnaire was anonymous and was conducted according to all ethical standards. The study was approved by the institutional Ethics Committee.

Statistical analysis

Descriptive statistics were made for all analyzed variables, i.e., frequency and relative frequency (percentage) for categorical variables, and mean, standard deviation, minimum, maximum and median for continuous variables. The significance between category variables was tested by the χ^2-test. If the expected frequency *per* cell of the contingency table was less than 5, Fisher exact test was performed. In all statistical analyses, the level of statistical significance was set at 5%. Statistical analyses were performed in Base SAS 9.4 (SAS Institute Inc., Cary, North Carolina, USA). Graphic representations were made in Microsoft Excel version 16.58.

Results

Overall, 139 (23.17%) completed questionnaires were received, 56.8% (79/139) of which were returned by ophthalmologists, 25.9% (36/139) by endocrinologists, and 17.26% (24/139) by specialists in nuclear medicine. Responders were 79 of 350 ophthalmologists (response rate 22.57%), 36 of 100 endocrinologists (response rate 36%), and 24 of 150 specialists in nuclear medicine (response rate 16%).

Responder characteristics (Table 1, questions 1-9)

There were no statistically significant differences in responder distribution either as resident or specialist (Fig. 1A), or in sex distribution by specialty (Fig. 1C). Age distribution of endocrinologists was similar to nuclear medicine specialists, while the curve was shifted to the left for ophthalmologists (Fig. 1B).

In the group of ophthalmologists, response rate significantly decreased from 41.8% (33/79) for physicians with 5 or less years of working experience to 19.0% (15/79) for physicians with more than 15 years of working experience. On the contrary, in the group of endocrinologists, response rate continuously increased with years of working experience from 16.7% (6/36) in the first 5 years to 33.3% (12/36) in last >15

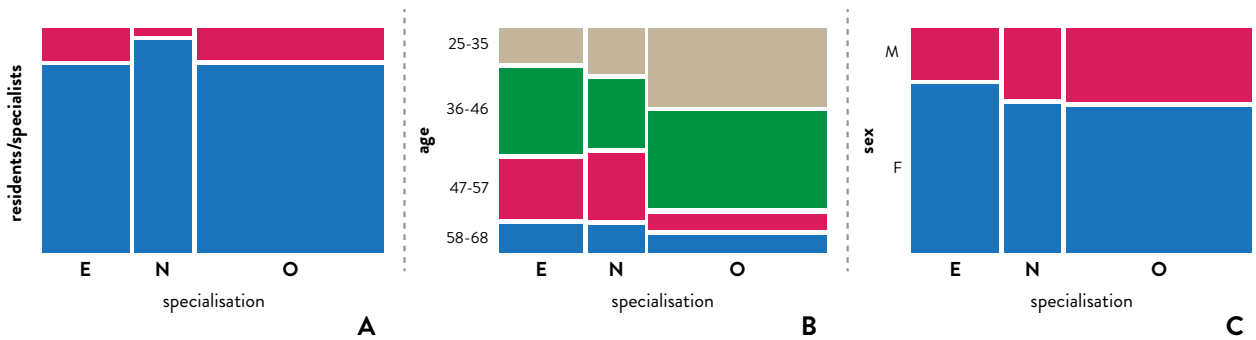

Fig. 1. (A) Distribution of residents or specialists by specialty: χ^2=2.2344, p=0.3645; (B) distribution of age by specialty: χ^2=14.4139, p=0.0186; (C) distribution of sex by specialty: χ^2=1.2663, p=0.5577.

years class. Nuclear medicine specialists displayed the highest response rate of 33.3% (8/24) in the first (0-5 years) and 33.3% (8/24) in the last (>15 years) class of working experience.

It was found that endocrinologists most often and regularly attended international meetings (55.6%, 20/36), while less than half of surveyed ophthalmologists (44.3%, 35/79) and nuclear medicine specialists (41.7%, 10/24) regularly attended international meetings.

Responder awareness of EUGOGO (questions 10-17)

Ophthalmologists had the best general insight (as defined by questions 10-17 of the questionnaire) into EUGOGO. More than 70% (Table 1, Q16) of all responders knew that GO is the disease which is addressed by the EUGOGO consensus 2007/2008 and Guidelines 2016, around 60% (Table 1, Q10) knew what the acronym EUGOGO stands for but only around 40% (Table 1, Q12) had been previously acquainted with the goals and activities of the EUGOGO Croatian site and EUGOGO in general.

Responder awareness and use of EUGOGO Guidelines and Atlas (questions 18-22)

The vast majority of all responders were affirmative (Table 1, questions 18-22) towards EUGOGO team and its Guidelines in general. Overall, a mean of 92.1% responders, without substantial differences among the groups of specialists (86.1% (31/36) of ophthalmologists, 91.7% (22/24) of endocrinologists and 94.9% (75/79) of nuclear medicine specialists) found the Guidelines useful in assessment of patients with GO (Table 1, Q21), although only 51.8% of them, again without substantial differences among the groups of specialists (50% (18/36) of endocrinologists, 45.8% (11/24) of nuclear medicine specialists and 54.4% (43/79) of ophthalmologists) came across EUGOGO Guidelines in their clinical practice (Table 1, Q19).

Only 28.1% of all responders (22.2% (8/36) of endocrinologists, 29.2% (7/24) of nuclear medicine specialists and 30.4% (24/79) of ophthalmologists) admitted using (as defined in the Methods section) the EUGOGO Guidelines in their practice regularly, while 24.5% (30.6% (11/36) of endocrinologists, 16.7% (4/24) of nuclear medicine specialists and 24.1% (19/79) of ophthalmologists) stated using them sometimes (Table 1, Q20). When questioned about usefulness of the Clinical Evaluation Atlas in classifying patients with GO, as many as 83.3% (20/24) of nuclear medicine specialists and 69.4% (25/36) of endocrinologists stated that they did not use it at all, while around half (46.8%, 37/79) of ophthalmologists found the Atlas useful in their clinical practice. (Fig. 2, Table 2).

We explored correlation between age and awareness of EUGOGO Guidelines and Atlas. We detected that overall, the youngest (25-35 age group) responders came across Guidelines in their clinical practice more often than other age groups (36-46, 47-57 and 58-68), scoring 66.7% (26/39) *versus* 45%-50%. The youngest

Table 2. χ^2 and p values for questions 19-22

Question	Specialty (Fig. 2)	Age group (Fig. 3)	Regular attendance to international meetings (Fig. 4)	Level of health care (Fig. 5)
21	χ^2=2.43; p=0.267*	χ^2=3.3872 p=0.4061	χ^2=0.2906 p=0.5898	χ^2=2.7180 p=0.7434*
19	χ^2=0.476; p=0.788	χ^2=5.0572 p=0.1677	χ^2=0.3224 p=0.5701	χ^2=5.9578 p=0.3103*
20	χ^2=2.65; p=0.618	χ^2=8.1438 p=0.2278	χ^2=1.7803 p=0.4106	χ^2=14.0180 p=0.1722*
22	χ^2=9.07; p=0.038*	χ^2=9.3597 p=0.0986	χ^2=0.5372 p=0.7885	χ^2=19.2173 p=0.0376*

*Fisher exact test

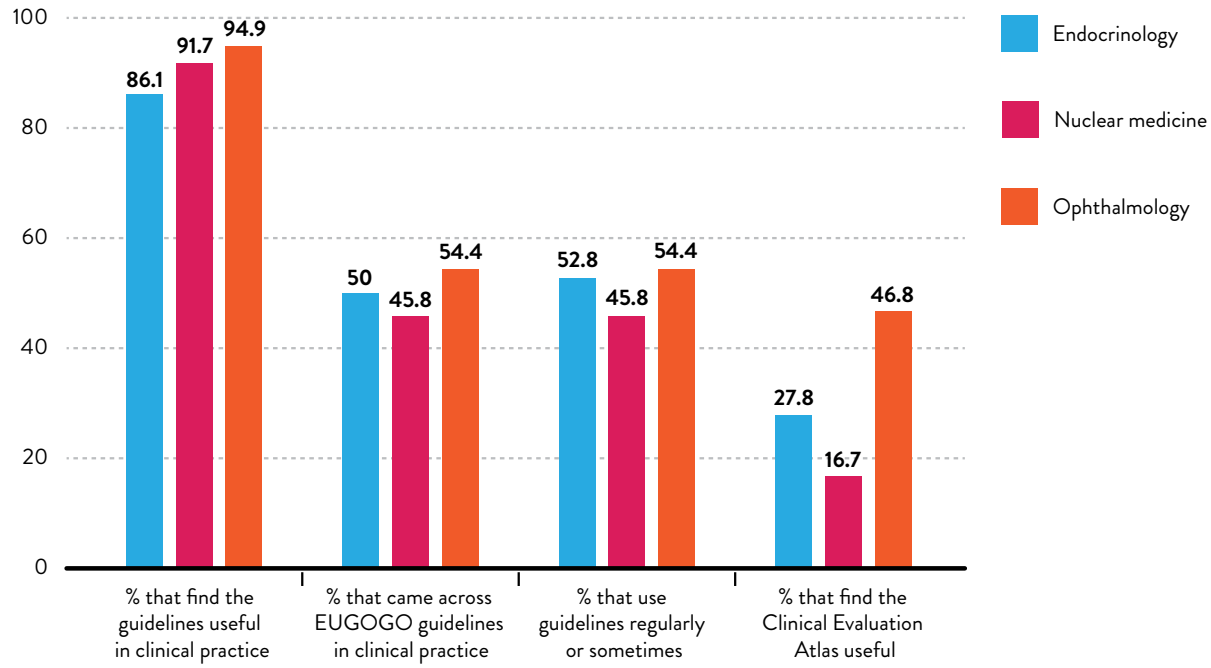

Fig. 2. Analysis of usefulness (Q21), awareness (Q19) and prevalence of using EUGOGO Guidelines (Q20) and Clinical Evaluation Atlas (Q22) by specialty.

age group also had the highest rate of positive answers regarding usefulness of the Clinical Evaluation Atlas in classifying patients with GO (46.2%, 18/39), while the percentage of positive answers dropped in older responders, resulting in only 13.3% (2/15) of responders aged 58-68 stating they found the Atlas useful. Responses regarding regular usage and usefulness of Guidelines in their practice were distributed equally across all groups (Fig. 3, Table 2) independently of age and specialty.

Furthermore, we tested the usage of EUGOGO Atlas and Guidelines according to regular attendance of international meetings. Although differences were weak, specialists who gradually discontinued their regular participation in international meetings (74 responders in total) had come across EUGOGO Guidelines in their practice more often than those who continued attending international meetings (65 responders in total) (54.1%, 40/74 *vs.* 49.2%, 32/65) and found the Clinical Evaluation Atlas (37.8%, 28/74 *vs.* 35.4%, 23/65) and Guidelines (93.2%, 69/74 *vs.* 90.8%, 59/65) more useful. However, the latter group used the Guidelines more often in their clinical practice (32.3%, 21/65 *vs.* 24.3%, 18/74) (Fig. 4, Table 2). We also observed that the middle-aged specialists (36-46 and 47-57 age groups) attended international meetings more often than younger (25-35 age group) and older (58-68 age group) colleagues.

We also detected that working environment of responders correlated with their awareness and usage of EUGOGO Guidelines and Atlas. Specialists who worked in academic or tertiary regional hospitals were most often acquainted with the Atlas and Guidelines, and had proven to use them most in their clinical work (Fig. 5) compared to those who worked in primary or secondary health centers (general or special hospitals and private medical practices).

Discussion

The total number of 600 sent questionnaires does not reflect total number of Croatian subspecialists (ophthalmologists, endocrinologists and nuclear

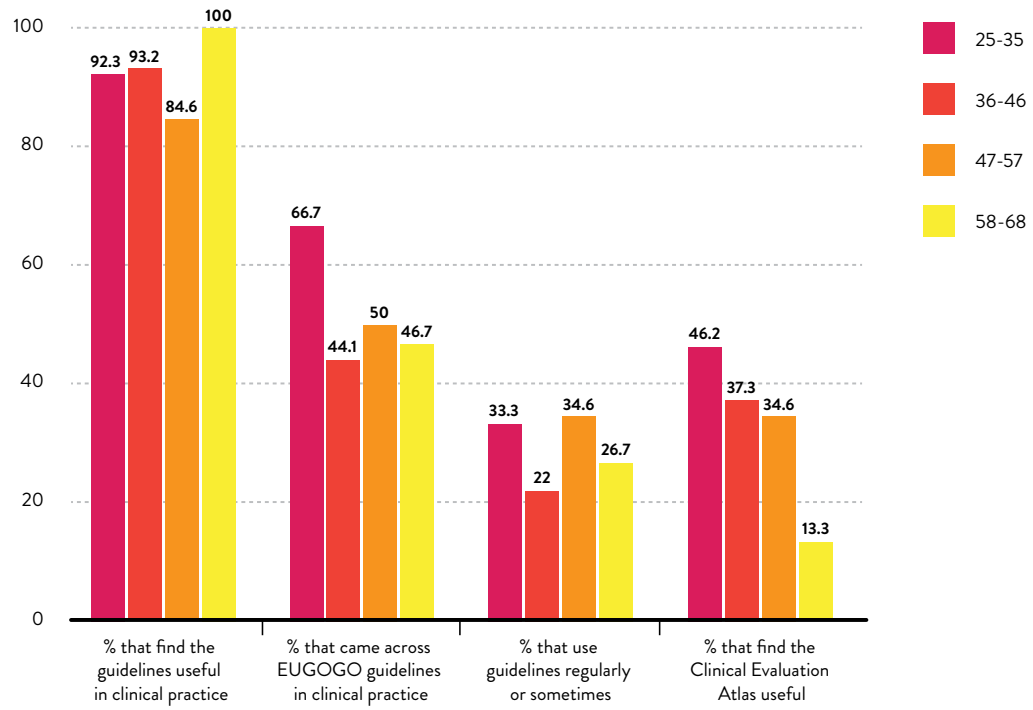

Fig. 3. Analysis of usefulness (Q21), awareness (Q19) and prevalence of using EUGOGO Guidelines (Q20) and Clinical Evaluation Atlas (Q22) by age groups.

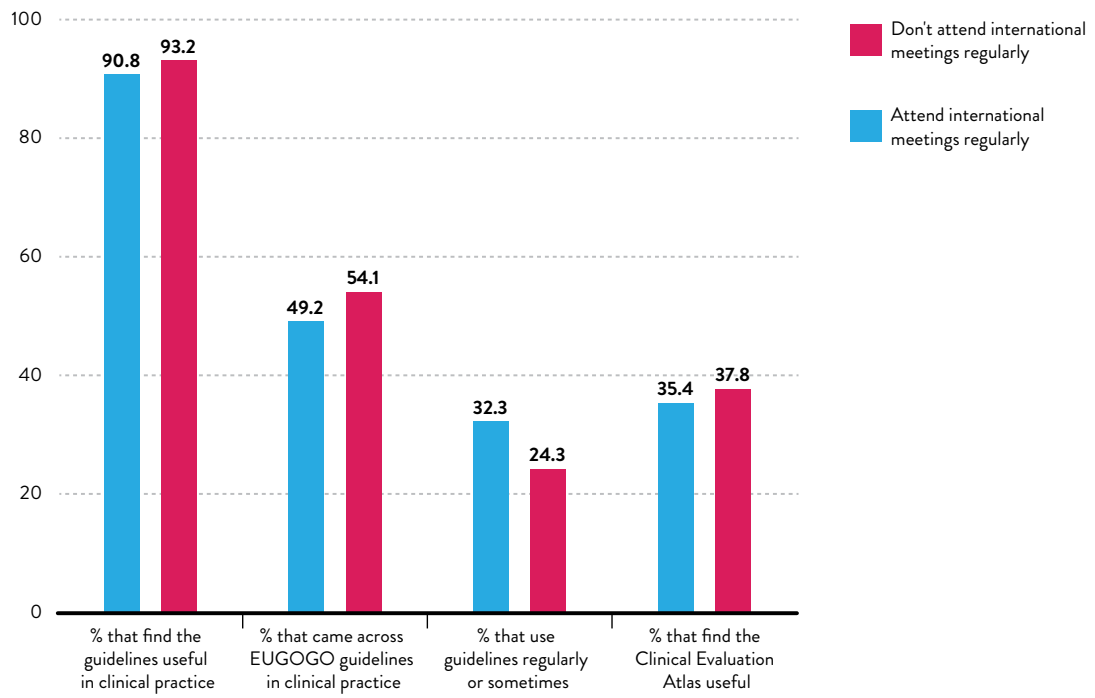

Fig. 4. Analysis of usefulness (Q21), awareness (Q19) and prevalence of using EUGOGO Guidelines (Q20) and Clinical Evaluation Atlas (Q22) by the criterion of regular attending international meetings.

medicine specialists), but only those who provided their respective national societies with valid e-mail addresses. We scored a mean response rate of 23.17% during the 4-month study, which demonstrates that web-based and e-mail-conducted surveys are satisfactory, fast, and inexpensive tools to collect information and data in general, and that our questionnaire was well received. Considering this, it is legitimate to conclude that the questionnaire and the modality of its administration represent a robust positive premise for similar studies on a larger scale to be conducted by EUGOGO.

Although ophthalmologists as the most numerous group provided most of the answers, endocrinologists had the highest response rate. This may suggest that endocrinologists are most likely or more accustomed to participating in online questionnaires, or are most sensitive towards the topic of this survey.

In all three groups, the response rate filtered *per* age and working experience may suggest that ophthalmologists were youngest or were most likely to participate in novelties at the very beginning of their careers, while endocrinologists increased their interest in GO proportionally to the increase in their working experience. The response rate of nuclear medicine specialists was not influenced by age and working experience, indicating that they maintained consistent interest in questionnaires and in the specific topic investigated in this survey throughout their career.

Ophthalmologists had also proven to have the best general knowledge about EUGOGO and the best usage of EUGOGO Guidelines and Atlas on clinical assessment in their everyday clinical practice (Fig. 2). These data most probably depend on the fact that GO is a disease of orbital tissue and as such it is mainly treated by ophthalmologists in Croatia.

Analyzing correlation between the age of our responders and their opinion on the usefulness of EUGOGO materials, we found it interesting that all responders in 58-68 age group found EUGOGO Guidelines useful, but only 13.3% of them found the Atlas an effective useful tool in classifying patients with GO in specific disease categories. These data are open to multiple speculative interpretations. They might indicate that for the oldest, presumably more expert physicians, the Atlas lacks certain information, or that information is complete and correct, but of no use for those with relevant background and experience in the field of GO. Another interesting finding is that the youngest age group (25-35) had come across EUGOGO Guidelines in their clinical practice most often and found the Clinical Evaluation Atlas most useful. This may reflect their inexperience, in contrast to the responses of the oldest age group. Our result seems to suggest that younger specialists tried to compensate their relatively low experience by frequent usage of the provided Guidelines and Atlas, thus finding their use helpful. Also, their good familiarity with the Guidelines might be a consequence of a positive influence of an 'older virtual EUGOGO mentor' who shares the EUGOGO experience with younger colleagues through the Guidelines and Atlas. Another speculative perspective can be that in general younger individuals tend to be more versatile and open to new inputs as compared with elderly subjects.

Although we expected to find a strong correlation between regular international meeting attendance and awareness of EUGOGO Guidelines, we did not; on the contrary, we found just the opposite (Fig. 4). The results which indicate that responders who did not attend international meetings regularly had higher awareness and better knowledge of the Guidelines and Atlas may be explained by the fact that middle-aged specialists (36-46 and 47-57 age groups) had the capacity to attend international meetings more often than younger colleagues (25-35 age group) because of working position and economic resources, while the youngest group (25-35) stated they had come across the Guidelines most often. Web-accessible information, probably more available to the youngest specialists, might have contributed to these figures. However, specialists who regularly and frequently attended international meetings might better appreciate (compared to those who did not) the importance of Guidelines in the frame of evidence-based medicine discussions typical of international meetings and hence, used them in their daily practice more often.

Finally, we identified that the physicians working at higher levels of health care, academic or tertiary regional hospitals had better knowledge and usage of EUGOGO Guidelines and Atlas (Fig. 5). This is presumably because these institutions have a higher level of understanding of evidence-based medicine and therefore are more likely to comply with evidence-based

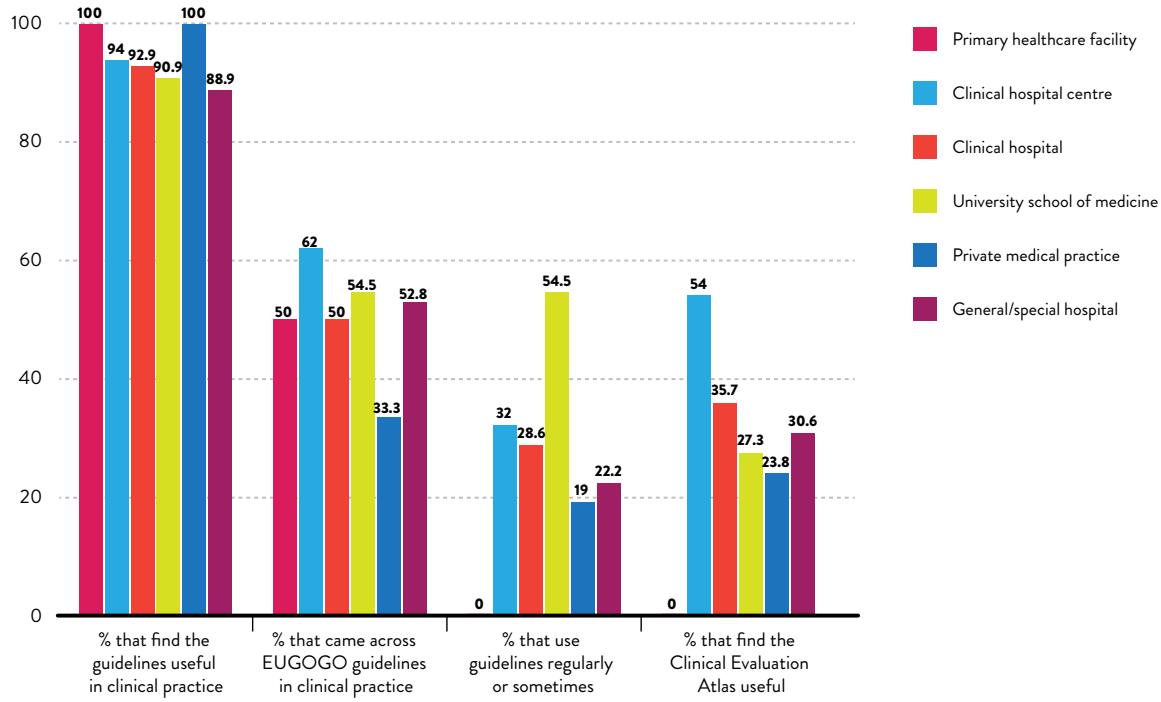

Fig. 5. Analysis of usefulness (Q21), awareness (Q19) and prevalence of using EUGOGO Guidelines (Q20) and Clinical Evaluation Atlas (Q22) by health care level.

Guidelines and material offered by leading organizations such as EUGOGO. Moreover, in such institutions, continuous education is mandatory, and so is regular flow of up-to-date information.

Results of this survey among Croatian ophthalmologists, endocrinologists and nuclear medicine specialists show that in Croatia, more teaching activities are needed to standardize care for GO patients although the EUGOGO purposes as outlined by the Amsterdam Declaration 2009 are met to some extent.

The satisfying response rate in this online survey proved that this type of questionnaire and its modality of administration could provide valuable indicative results and data in assessing awareness, attitudes and prevalence of using the EUGOGO consensus 2007-2008 and Guidelines 2016. Efficiency and economic viability also are advantages in this type of study. Therefore, we believe it is essential to propose EUGOGO to duplicate this national pilot study at a larger scale. Pooling data from all 26 EUGOGO sites might indicate direction for further EUGOGO engagement in respect of education and training of health professionals in the field of GO. Should we speculate similar results as ours in a larger, multi-center study, this could indicate the need of EUGOGO to enhance its visibility and reach practitioners all over Europe, especially young specialists and residents. This might also suggest the need of restructuring the Guidelines, better promotion of both the Clinical Evaluation Atlas and Guidelines in a more user-friendly manner, and raising awareness of the disease among young generations of practitioners.

We also believe that through this survey, active promotion of the EUGOGO group and its recommendations among colleagues is achieved, encouraging them to apply EUGOGO protocols in everyday practice even more.

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Sažetak

POZNAVANJE I PRAKTIČNA UPOTREBA SMJERNICA EUROPSKOG DRUŠTVA ZA GRAVESOVU ORBITOPATIJU (*EUROPEAN GROUP ON GRAVES' ORBITOPATHY*, EUGOGO) U HRVATSKOJ: PROBNO ISTRAŽIVANJE EUGOGO

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Cilj ovoga probnog istraživanja bila je procjena razine osviještenosti te praktična primjena smjernica Europskog društva za Gravesovu orbitopatiju (*European Group on Graves' Orbitopathy*, EUGOGO) među specijalistima oftalmologije, endokrinologije i nuklearne medicine u Hrvatskoj rezultati kojega bi mogli biti temelj za planiranje provođenja istraživanja međunarodnog opsega koje bi uključivalo sve centre EUGOGO diljem Europe. Podatci su prikupljani pomoću anonimne *online* ankete koja je sadržavala 27 pitanja. Uključivala je pitanja u vezi aktivnosti EUGOGO (upotreba predloženih alata za procjenu kliničke slike prilikom dijagnosticiranja Gravesove orbitopatije (GO) i algoritama prilikom liječenja GO) uz sociodemografske podatke. Anketa je odaslana na e-mail adrese članova nacionalnih stručnih društava iz oftalmologije i optometrije, endokrinologije i nuklearne medicine. Podatci su prikupljeni i statistički obrađeni pomoću Base SAS 9.4 (SAS Institute Inc., Cary, North Carolina, SAD). Endokrinolozi su imali najvišu stopu odgovora. Oftalmolozi i skupina najmlađih ispitanika (25-35 godina) pokazali su najbolje poznavanje i upotrebu Atlasa EUGOGO za kliničku procjenu i smjernica. Ispitanici koji su redovito pohađali internacionalne susrete, kao i oni zaposleni u ustanovama s višim razinama zdravstvene zaštite češće su rabili smjernice u kliničkoj praksi. Ova *online* anketa pokazala se korisnim alatom za brzo i jeftino prikupljanje podataka. Pružila je jasne činjenice u vezi poznavanja i primjene smjernica EUGOGO u Hrvatskoj. Iskustva iz provedene ankete mogla bi biti temelj za međunarodnu anketu svih centara EUGOGO.

Ključne riječi: *EUGOGO; Gravesova orbitopatija; Gravesova oftalmopatija; Tireoidna bolest oka*