

Supplementary Table 1. Search strategy for the use of botulinum toxin in otolaryngology field (performed on Aug 31, 2021)

	PubMed	Embase	Cochrane	KoreaMed	PubMed	Embase	Cochrane	KoreaMed
Spasmodic dysphonia								
#1	"Voice disorders"[MeSH Terms] AND (dystonia[tiab] OR spasm*[tiab])	'spasmodic dysphonia'/exp	"Voice disorders"[MeSH Terms] AND ((dystonia);ti,ab,kw OR (spasm*);ti,ab,kw)	(voice[ALL] AND disorder[MH]) AND (("dystonia"[TIAB]) OR ("spasm*" [TIAB]))	658	886	37	3
#2	Laryngismus[MeSH Terms]	'Larynx spasm'/exp	Laryngismus[MeSH Terms]	(laryngismus[MH])	998	4,176	76	60
#3	(spasm*[tiab] OR spastic[tiab]) AND dysphonia[tiab]	(spasm*:ab,ti OR spastic:ab,ti) AND dysphonia:ab,ti	((spasm*):ti,ab,kw OR (spastic):ti,ab,kw) AND (dysphonia):ti,ab,kw	((("spasm*" [TIAB]) OR ("spastic" [TIAB])) AND ("dysphonia" [TIAB]))	848	1,097	111	4
#4	Laryngeal[tiab] AND (dystonia[tiab] OR spasm*[tiab])	Laryngeal:ab,ti AND (dystonia:ab,ti OR spasm*:ab,ti)	(Laryngeal):ti,ab,kw AND ((dystonia):ti,ab,kw OR (spasm*):ti,ab,kw)	("laryngeal" [TIAB]) AND (("dystonia" [TIAB]) OR ("spasm*" [TIAB]))	807	1,046	223	9
#5	Phona*[tiab] AND (dystonia[tiab] OR spasm*[tiab])	Phona*:ab,ti AND (dystonia:ab,ti OR spasm*:ab,ti)	(Phona*):ti,ab,kw AND ((dystonia):ti,ab,kw OR (spasm*):ti,ab,kw)	("phona*" [TIAB]) AND (("dystonia" [TIAB]) OR ("spasm*" [TIAB]))	152	216	19	0
#6	(neurologic[tiab] AND voice[tiab]) AND (dystonia[tiab] OR spasm*[tiab])	(neurologic:ab,ti AND voice:ab,ti) AND (dystonia:ab,ti OR spasm*:ab,ti)	((neurologic):ti,ab,kw AND (voice):ti,ab,kw) AND ((dystonia):ti,ab,kw OR (spasm*):ti,ab,kw)	((("neurologic" [TIAB]) AND ("voice" [TIAB])) AND (("dystonia" [TIAB]) AND ("spasm*" [TIAB]))	33	45	2	0
#7	laryngospasm*	laryngospasm*	laryngospasm*	("laryngospasm*" [ALL])	1,359	1,953	564	0
#8	ABSD[tiab] OR ADSD [tiab]	ABSD:ab,ti OR ADSD:ab,ti	(ABSD):ti,ab,kw OR (ADSD):ab,ti,kw	("ABSD" [TIAB]) OR ("ADSD" [TIAB])	144	191	17	5
#9	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8	3,160	6,449	802	71
Essential tremor								
#10	Voice disorders[MeSH Terms] AND (tremor[tiab] OR tremour[tiab])	'voice disorder'/exp AND (tremor:ab,ti OR tremour:ab,ti)	Voice disorders[MeSH Terms] AND (tremor):ti,ab,kw OR (tremour):ti,ab,kw	((Voice[ALL] AND disorders[MH])) AND ((tremor[tiab] OR tremour[tiab]))	226	339	15	2
#11	Essential tremor[MeSH Terms] AND (larynx*[tiab] OR voice[tiab] OR vocal[tiab])	'essential tremor'/exp AND (larynx*:ab,ti OR voice:ab,ti OR vocal:ab,ti)	(essential tremor):ti,ab,kw AND (larynx*):ti,ab,kw OR (voice):ti,ab,kw OR (vocal):ti,ab,kw	(Essential[ALL] AND tremor[MH]) AND (larynx*[tiab] OR voice[tiab] OR vocal[tiab])	93	283	26	1
#12	(larynx*[tiab] OR voice[tiab] OR vocal[tiab]) AND (tremor[tiab] OR tremour[tiab])	(larynx*:ab,ti OR voice:ab,ti OR vocal:ab,ti) AND (tremor:ab,ti OR tremour:ab,ti)	((larynx*):ti,ab,kw OR (voice):ti,ab,kw OR (vocal):ti,ab,kw) AND ((tremor):ti,ab,kw OR (tremour):ti,ab,kw)	(larynx*[tiab] OR voice[tiab] OR vocal[tiab]) AND (tremor[tiab] OR tremour[tiab])	541	886	69	12
#13	#10 OR #11 OR #12	#10 OR #11 OR #12	#10 OR #11 OR #12	#10 OR #11 OR #12	557	1,015	69	12
Contact granuloma								
#14	"granuloma, laryngeal" [MeSH Terms]	'larynx granuloma'/exp	(larynx*):kw AND (granuloma):ti,ab,kw	(granuloma,[ALL] AND laryngeal[MH])	227	392	16	9
#15	(Larynx*[tiab] OR vocal[tiab] OR contact[tiab]) AND granuloma*[tiab]	(larynx*:ti,ab OR vocal:ab,ti OR contact:ab,ti) AND granuloma*:ab,ti	((larynx*) OR vocal OR contact):kw AND (granuloma):ti,ab,kw	((("laryngeal" [KW]) OR ("vocal" [KW]) OR ("contact" [KW])) AND ("granuloma" [TIAB]))	2,019	2,934	21	19
#16	#14 OR #15	#14 OR #15	#14 OR #15	#14 OR #15	2,067	3,065	21	24

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Supplementary Table 1. Continued

	PubMed	Embase	Cochrane	KoreaMed	PubMed	Embase	Cochrane	KoreaMed
Bilateral VFP								
#17	"vocal cord paralysis"[MeSH Terms]	'vocal cord paralysis'/exp	"vocal cord paralysis"[MeSH Terms]	(vocal[ALL] AND cord[ALL] AND paralysis[MH])	6,708	9,953	78	225
#18	Vocal[tiab] OR recurrent[tiab] OR larynx*[tiab]	Vocal:ab,ti OR recurrent:ab,ti OR larynx*:ab,ti	(vocal):ti,ab,kw OR (recurrent):ti,ab,kw OR (larynx*):ti,ab,kw	("Vocal[tiab] OR recurrent[tiab] OR larynx*[tiab]"[ALL])	409,875	591,446	38,336	7,102
#19	dysfunction*[tiab] OR paresis[tiab] OR pals*[tiab] OR paralyse*[tiab] OR impairment*[tiab] OR injur*[tiab] OR immobil*[tiab] OR fixation*[tiab] OR neuropath*[tiab]	dysfunction*:ab,ti OR paresis:ab,ti OR pals*:ab,ti OR paralyse*:ab,ti OR impairment*:ab,ti OR injur*:ab,ti OR immobil*:ab,ti OR fixation*:ab,ti OR neuropath*:ab,ti	(dysfunction):ti,ab,kw OR (paresis):ti,ab,kw OR (pals*):ti,ab,kw OR (paralyse*):ti,ab,kw OR (impairment):ti,ab,kw OR (injur*):ti,ab,kw OR (immobil*):ti,ab,kw OR (fix*):ti,ab,kw OR (neuropath*):ti,ab,kw	("dysfunction[tiab] OR paresis[tiab] OR pals*[tiab] OR paralyse*[tiab] OR impairment[tiab] OR injur*[tiab] OR immobil*[tiab] OR fix*[tiab] OR neuropath*[tiab]"[ALL])	2,109,977	2,834,919	183,274	4,105
#20	#18 AND #19	#18 AND #19	#18 AND #19	#18 AND #19	44,863	68,280	4,853	108
#21	#17 OR #20	#17 OR #20	#17 OR #20	#17 OR #20	46,447	71,881	4,853	332
Frey syndrome								
#22	"Sweating, Gustatory"[MeSH Terms]	'Frey syndrome'/exp	"Sweating, Gustatory"[MeSH Terms]	(Sweating[ALL] AND Gustatory[MH])	709	785	32	37
#23	(gustatory[tiab] OR parotid*[tiab]) AND (sweating*[tiab] OR hyperhidrosis[tiab])	(gustatory:ab,ti OR parotid*:ab,ti) AND (sweating*:ab,ti OR hyperhidrosis:ab,ti)	((Gustatory):ab,ti,kw OR (Parotid*):ab,ti,kw) AND ((sweating*):ab,ti,kw OR (hyperhidrosis):ab,ti,kw)	((("Gustatory"[KW]) OR ("Parotid"[KW])) AND ((("sweating"[KW]) OR ("hyperhidrosis"[KW]))	407	479	49	5
#24	("Frey*" [tiab] OR "Baillarger*" [tiab] OR "Dupuy*" [tiab] OR auriculotemporal[tiab]) AND syndrome*[tiab]	(Frey*:ab,ti OR Baillarger:ti,ab OR Dupuy*:ab,ti OR auriculotemporal:ab,ti) AND syndrome*:ab,ti	((Frey*):ab,ti,kw OR (Baillarger*):ab,ti,kw OR (Dupuy*):ab,ti,kw OR (auriculotemporal):ab,ti,kw) AND (syndrome*):ab,ti,kw	((("Frey"[KW]) OR ("Baillarger"[KW]) OR ("Dupuy"[KW]) OR ("auriculotemporal"[KW])) AND ("syndrome"[KW]))	1,206	1,573	104	8
#25	#22 OR #23 OR #24	#22 OR #23 OR #24	#22 OR #23 OR #24	#22 OR #23 OR #24	1,531	2,029	118	37
Sialocele								
#26	sialocele[tiab]	sialocele:ab,ti	(sialocele):ab,ti,kw	sialocele[ALL]	189	205	8	6
#27	(Salivary[tiab] OR sublingual[tiab] OR parotid[tiab] OR submandibular[tiab]) AND fistula[tiab]	(Salivary:ab,ti OR sublingual:ab,ti OR parotid:ab,ti OR submandibular:ab,ti) AND fistula:ab,ti	((Salivary):ab,ti,kw OR (sublingual):ab,ti,kw OR (parotid):ab,ti,kw OR (submandibular):ab,ti,kw) AND (fistula):ab,ti,kw	((("Salivary"[KW]) OR ("sublingual"[KW]) OR ("parotid"[KW]) OR ("submandibular"[KW])) AND ("fistula"[KW]))	885	996	48	8
#28	#26 OR #27	#26 OR #27	#26 OR #27	#26 OR #27	1,007	1,134	52	14

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Supplementary Table 1. Continued

	PubMed	Embase	Cochrane	KoreaMed	PubMed	Embase	Cochrane	KoreaMed
Sialorrhea								
#29	sialorrhea[MeSH Terms]	hypersalivation/exp	sialorrhea[MeSH Terms]	sialorrhea[ALL]	1,420	8,706	120	56
#30	drool*[tiab] OR dribbl*[tiab] OR hypersalivat*[tiab] OR sialorrhea*[tiab]	drool*:ab,ti OR dribbl*:ab,ti OR hypersalivat*:ab,ti OR sialorrhea:ab,ti	(drool*):ab,ti,kw OR (dribbl*):ab,ti,kw OR (hypersalivat*):ab,ti,kw OR (sialorrhea):ab,ti,kw	("sialorrhea"[KW]) OR ("hypersalivation"[KW]) OR ("drooling"[KW]) OR ("dribble"[KW])	3,512	5,603	734	22
#31	#29 OR #30	#29 OR #30	#29 OR #30	#29 OR #30	3,991	11,291	734	60
Cricopharyngeal spasm								
#32	"Deglutition Disorders"[MeSH Terms]	'dysphagia/exp	deglutition disorders[MeSH Terms]	(deglutition[ALL] AND disorders[MH])	56,475	86,299	3,156	1,073
#33	deglutition*[tiab] OR swallow*[tiab] OR cricopharyng*[tiab]	deglutition*:ab,ti OR swallow*:ab,ti OR cricopharyng*:ab,ti	(deglutition*):ti,ab,kw OR (swallow*):ti,ab,kw OR (cricopharyng*):ti,ab,kw	(("deglutition"[KW])) OR ("swallow"[KW]) AND ("crycopharyngeus"[KW])	35,736	54,869	5,859	161
#34	dysfunction*[tiab] OR disorder*[tiab] OR dysphagia*[tiab] OR difficult*[tiab] OR impair*[tiab] OR problem*[tiab] OR disturbance*[tiab] OR spasm[tiab]	dysfunction*:ab,ti OR disorder*:ab,ti OR dysphagia*:ab,ti OR difficult*:ab,ti OR impair*:ab,ti OR problem*:ab,ti OR disturbance*:ab,ti OR spasm*:ab,ti	(dysfunction*):ti,ab,kw OR (disorder*):ti,ab,kw OR (dysphagia*):ti,ab,kw OR (difficult*):ti,ab,kw OR (impair*):ti,ab,kw OR (problem*):ti,ab,kw OR (disturbance*):ti,ab,kw OR (spasm*):ti,ab,kw	(("dysfunction"[KW]) OR ("disorder"[KW]) OR ("dysphagia"[KW]) OR ("difficult"[KW]) OR ("impair"[KW]) OR ("problem"[KW]) OR ("disturbance"[KW])) AND ("spasm"[KW])	3,919,044	5,321,109	332,102	6
#35	#33 AND #34	#33 AND #34	#33 AND #34	#33 AND #34	19,542	32,082	3,527	0
#36	#32 OR #35	#32 OR #35	#32 OR #35	#32 OR #35	66,916	100,158	5,699	1,073
Chronic sialadenitis								
#37	Sialadenitis[MeSH Terms]	'sialadenitis/exp	Sialadenitis[MeSH Terms]	(Sialadenitis[MH])	4,104	16,108	22	53
#38	sialadenit*[tiab] OR sialiti*[tiab] OR parotitis[tiab] OR sialoadenit*[tiab]	sialadenit*:ti,ab OR sialiti*:ti,ab OR parotitis:ti,ab OR sialoadenit*:ti,ab	(sialadenit*):ti,ab,kw OR (sialiti*):ti,ab,kw OR (parotitis):ti,ab,kw OR (sialoadenit*):ti,ab,kw	sialadenit*[tiab] OR sialiti*[tiab] OR parotitis[tiab] OR sialoadenit*[tiab]	4,692	5,288	113	35
#39	Salivary[tiab] AND (adenitis[tiab] OR inflammation*[tiab])	salivary:ti,ab AND (adenitis:ti,ab OR inflammation*:ti,ab)	(Salivary):ti,ab,kw AND ((adenitis):ti,ab,kw OR (inflammation*):ti,ab,kw)	Salivary[tiab] AND (adenitis[tiab] OR inflammation*[tiab])	2,414	3,194	273	1
#40	#37 OR #38 OR #39	#37 OR #38 OR #39	#37 OR #38 OR #39	#37 OR #38 OR #39	8,144	19,693	382	87
First bite syndrome								
#41	"First bite syndrome"[tiab]	'first bite syndrome'/exp OR 'first bite syndrome':ti,ab	(First bite syndrome*):ti,ab,kw	First[ALL] AND bite[ALL] AND syndrome*[ALL]	78	118	21	0
Botulinum toxin								
#42	Botulinum toxins[MeSH Terms]	'botulinum toxin/exp	Botulinum toxins[MeSH Terms]	(Botulinum[ALL] AND toxins[MH])	17,490	19,393	2,125	372
#43	botulin*[tiab] or botox[tiab] or neurotoxin*[tiab] or BTX[tiab]	botulin*:ab,ti OR botox:ab,ti OR neurotoxin*:ab,ti OR BTX:ti,ab	(botulin*):ab,ti,kw OR (botox):ab,ti,kw OR (neurotoxin*):ab,ti,kw OR (BTX):ab,ti,kw	(("botulin"[TIAB]) OR ("botox"[TIAB]) OR ("neurotoxin"[TIAB]) OR ("BTX"[TIAB]))	37,395	49,485	4,682	110
#44	#42 OR #43	#42 OR #43	#42 OR #43	#42 OR #43	39,959	56,241	4,788	402