ClinicalTrials.gov Protocol Registration and Results System (PRS) Receipt
Release Date: 02/24/2014

ClinicalTrials.gov ID: NCT01107392

Study Identification

Unique Protocol ID:	191622-100
Brief Title:	Safety and Efficacy of Botulinum Toxin Type A to Treat Lower Urinary Tract Symptoms Due to Benign Prostatic Hyperplasia
Official Title:	
Secondary IDs:	

Study Status

Record Verification:	February 2014
Overall Status:	Completed
Study Start:	August 2010
Primary Completion:	March 2012 [Actual]
Study Completion:	June 2012 [Actual]

Sponsor/Collaborators

Sponsor:	Allergan
Responsible Party:	Sponsor
Collaborators:	

Oversight

FDA Regulated?:	Yes
Applicable Trial?:	Section 801 Clinical Trial? Yes Delayed Posting? No

IND/IDE Protocol?:	Yes
IND/IDE Information:	Grantor: CDER IND/IDE Number: 102,269 Serial Number: Has Expanded Access? No
Review Board:	Approval Status: Board Name: Board Affiliation: Phone: Email:
Data Monitoring?:	No
Plan to Share Data?:	
Oversight Authorities:	United States: Food and Drug Administration

Study Description

Brief Summary:	This study will evaluate the safety and efficacy of intraprostatic administration of botulinum toxin Type A (BOTOX®) compared with placebo to treat urinary tract symptoms due to benign prostatic hyperplasia.
Detailed Description:	

Conditions

Conditions:	Benign Prostatic Hyperplasia
Keywords:	

Study Design

Study Type:	Interventional
Primary Purpose:	Treatment
Study Phase:	Phase 2
Intervention Model:	Parallel Assignment
Number of Arms:	2
Masking:	Double Blind (Subject, Investigator)
Allocation:	Randomized

Endpoint Classification: Safety/Efficacy Study

Enrollment: 315 [Actual]

Arms and Interventions

Arms	Assigned Interventions
Experimental: botulinum toxin Type A botulinum toxin Type A total dose of 200U equally divided and administered to each lateral prostatic lobe.	Drug: botulinum toxin Type A botulinum toxin Type A total dose of 200U equally divided and administered to each lateral prostatic lobe. Other Names: • BOTOX® • onabotulinumtoxinA
Placebo Comparator: Placebo (Normal saline) Placebo (Normal saline) equally divided and administered to each lateral prostatic lobe.	Drug: Normal saline Placebo (Normal saline) equally divided and administered to each lateral prostatic lobe.

Outcome Measures

[See Results Section.]

Eligibility

Minimum Age: 45 Years

Maximum Age:

Gender: Male

Accepts Healthy Volunteers?: No

Criteria: Inclusion Criteria:

- Clinical enlargement of the prostate gland
- Body weight ≥ 50 kg or 110 lbs

Exclusion Criteria:

- History of chronic prostatitis
- History of two or more urinary tract infections in the past year or one in the last 6 months
- History of bladder stones
- History of previous prostate surgery
- History of bladder cancer or prostate cancer
- Any previous or current usage of botulinum toxin therapy of any serotype for any urological condition

- Botulinum toxin therapy of any serotype for any non-urological condition or usage (e.g., cosmetic) during the previous 12 weeks prior to study entry

Contacts/Locations

Study Officials: Medical Director
Study Director
Allergan, Inc.

Locations: United States, California
Newport Beach, California, United States

Canada, British Columbia
Surrey, British Columbia, Canada

Korea, Republic of
Seoul, Korea, Republic of

Taiwan
Taoyuan, Taiwan

Germany
Munich, Germany

France
Paris, France

Belgium
Liege, Belgium

Netherlands
Amsterdam, Netherlands

Philippines
Manila, Philippines

Poland
Poznan, Poland

Czech Republic
Praha, Czech Republic

References

Citations:

Links:

Study Data/Documents:

Study Results

Participant Flow

Reporting Groups

	Description
Botulinum Toxin Type A	botulinum toxin Type A total dose of 200U equally divided and administered to each lateral prostatic lobe.
Placebo (Normal Saline)	Placebo (Normal saline) equally divided and administered to each lateral prostatic lobe.

Overall Study

	Botulinum Toxin Type A	Placebo (Normal Saline)
Started	158	157
Completed	153	154
Not Completed	5	3
Adverse Event	2	0
Personal Reasons	2	3
Administrative decision	1	0

Baseline Characteristics

Reporting Groups

	Description
Botulinum Toxin Type A	botulinum toxin Type A total dose of 200U equally divided and administered to each lateral prostatic lobe.
Placebo (Normal Saline)	Placebo (Normal saline) equally divided and administered to each lateral prostatic lobe.

Baseline Measures

	Botulinum Toxin Type A	Placebo (Normal Saline)	Total
Number of Participants	158	157	315
Age, Customized [units: Participants]			
≤ 65 Years	89	79	168
> 65 Years	69	78	147
Gender, Male/Female [units: Participants]			
Female	0	0	0
Male	158	157	315

Outcome Measures

1. Primary Outcome Measure:

Measure Title	Change From Baseline in the Total International Prostate Symptom Score (IPSS) at Week 12
Measure Description	IPSS is a disease-specific outcome measure based on the American Urological Association Symptom Index. The questionnaire consisted of seven items. The patient evaluated their urinary symptoms (incomplete emptying, frequency, hesitancy, urgency, weak stream, straining, and nocturia) during the previous 4 weeks. The total symptom score ranged from 0 (no symptoms) to 35 (most severe symptoms). A negative change from Baseline indicated improvement.
Time Frame	Baseline, Week 12
Safety Issue?	No

Analysis Population Description

Modified Intent-to-treat population included all randomized and treated participants with at least one post-baseline IPSS measurement.

Reporting Groups

	Description
Botulinum Toxin Type A	botulinum toxin Type A total dose of 200U equally divided and administered to each lateral prostatic lobe.
Placebo (Normal Saline)	Placebo (Normal saline) equally divided and administered to each lateral prostatic lobe.

Measured Values

	Botulinum Toxin Type A	Placebo (Normal Saline)
Number of Participants Analyzed	156	157

	Botulinum Toxin Type A	Placebo (Normal Saline)
Change From Baseline in the Total International Prostate Symptom Score (IPSS) at Week 12 [units: Score on a scale] Mean (Standard Deviation)		
Baseline	21.8 (4.90)	21.5 (4.56)
Change from Baseline at Week 12	-6.3 (6.61)	-5.6 (5.86)

2. Secondary Outcome Measure:

Measure Title	Change From Baseline in the Total International Prostate Symptom Score (IPSS)
Measure Description	IPSS is a disease-specific outcome measure based on the American Urological Association Symptom Index. The questionnaire consisted of seven items. The patient evaluated their urinary symptoms (incomplete emptying, frequency, hesitancy, urgency, weak stream, straining, and nocturia) during the previous 4 weeks. The total symptom score ranged from 0 (no symptoms) to 35 (most severe symptoms). A negative change from Baseline indicated improvement.
Time Frame	Baseline, Week 6, Week 24
Safety Issue?	No

Analysis Population Description

Modified Intent-to-treat population included all randomized and treated participants with at least one post-baseline IPSS measurement.

Reporting Groups

	Description
Botulinum Toxin Type A	botulinum toxin Type A total dose of 200U equally divided and administered to each lateral prostatic lobe.
Placebo (Normal Saline)	Placebo (Normal saline) equally divided and administered to each lateral prostatic lobe.

Measured Values

	Botulinum Toxin Type A	Placebo (Normal Saline)
Number of Participants Analyzed	156	157
Change From Baseline in the Total International Prostate Symptom Score (IPSS) [units: Score on a scale] Mean (Standard Deviation)		
Baseline	21.8 (4.90)	21.5 (4.56)
Change from Baseline at Week 6 (n=156,156)	-5.4 (5.84)	-5.3 (5.27)

	Botulinum Toxin Type A	Placebo (Normal Saline)
Change from Baseline at Week 24 (n=152,154)	-6.3 (6.43)	-6.0 (5.79)

3. Secondary Outcome Measure:

Measure Title	Change From Baseline in Peak Urine Flow Rate
Measure Description	Urinary flow was determined by uroflowmetry measured in milliliters/second (mL/sec). An increase from Baseline indicated improvement.
Time Frame	Baseline, Weeks 6, 12 and 24
Safety Issue?	No

Analysis Population Description

Modified Intent-to-treat population included all randomized and treated participants with at least one post-baseline IPSS measurement with data available for this outcome measure.

Reporting Groups

	Description
Botulinum Toxin Type A	botulinum toxin Type A total dose of 200U equally divided and administered to each lateral prostatic lobe.
Placebo (Normal Saline)	Placebo (Normal saline) equally divided and administered to each lateral prostatic lobe.

Measured Values

	Botulinum Toxin Type A	Placebo (Normal Saline)
Number of Participants Analyzed	154	156
Change From Baseline in Peak Urine Flow Rate [units: mL/sec] Mean (Standard Deviation)		
Baseline	8.0 (2.52)	8.0 (2.86)
Change from Baseline at Week 6 (n=138,136)	2.5 (4.97)	1.2 (3.40)
Change from Baseline at Week 12 (n=143,147)	2.5 (5.24)	1.7 (4.38)
Change from Baseline at Week 24 (n=140,149)	2.5 (4.97)	1.9 (4.32)

4. Secondary Outcome Measure:

Measure Title	Duration of Effect
Measure Description	Duration of effect was calculated from the time of the first follow-up visit with a ≥ 4-point reduction from Baseline in IPSS to the next visit when the IPSS change from Baseline was < 4-points.
Time Frame	24 Weeks
Safety Issue?	No

Analysis Population Description

Modified Intent-to-treat population included all randomized and treated patients with at least one post-baseline IPSS measurement. Only patients with at least a 4-point reduction from Baseline in total IPSS were included in the analysis.

Reporting Groups

	Description
Botulinum Toxin Type A	botulinum toxin Type A total dose of 200U equally divided and administered to each lateral prostatic lobe.
Placebo (Normal Saline)	Placebo (Normal saline) equally divided and administered to each lateral prostatic lobe.

Measured Values

	Botulinum Toxin Type A	Placebo (Normal Saline)
Number of Participants Analyzed	123	120
Duration of Effect [units: Weeks] Median (95% Confidence Interval)	20.9 (18.6 to 20.9)	20.6 (20.1 to NA) [1]

[1] Not estimable.

Reported Adverse Events

Time Frame	[Not specified]
Additional Description	[Not specified]

Reporting Groups

	Description
Botulinum Toxin Type A	botulinum toxin Type A total dose of 200U equally divided and administered to each lateral prostatic lobe.

	Description
Placebo (Normal Saline)	Placebo (Normal saline) equally divided and administered to each lateral prostatic lobe.

Serious Adverse Events

	Botulinum Toxin Type A	Placebo (Normal Saline)
	Affected/At Risk (%)	Affected/At Risk (%)
Total	5/158 (3.16%)	8/157 (5.1%)
Eye disorders		
Retinal detachment [A] †	1/158 (0.63%)	0/157 (0%)
Gastrointestinal disorders		
Inguinal hernia [A] †	1/158 (0.63%)	0/157 (0%)
Hepatobiliary disorders		
Cholelithiasis [A] †	0/158 (0%)	1/157 (0.64%)
Infections and infestations		
Cellulitis [A] †	1/158 (0.63%)	0/157 (0%)
Localised infection [A] †	1/158 (0.63%)	0/157 (0%)
Urosepsis [A] †	0/158 (0%)	1/157 (0.64%)
Metabolism and nutrition disorders		
Hypoglycaemia [A] †	1/158 (0.63%)	0/157 (0%)
Musculoskeletal and connective tissue disorders		
Osteoarthritis [A] †	0/158 (0%)	1/157 (0.64%)
Neoplasms benign, malignant and unspecified (incl cysts and polyps)		
Malignant melanoma [A] †	1/158 (0.63%)	0/157 (0%)
Prostate cancer [A] †	0/158 (0%)	1/157 (0.64%)
Thyroid cancer [A] †	0/158 (0%)	1/157 (0.64%)
Transitional cell carcinoma [A] †	0/158 (0%)	1/157 (0.64%)
Nervous system disorders		

	Botulinum Toxin Type A	Placebo (Normal Saline)
	Affected/At Risk (%)	Affected/At Risk (%)
Carotid artery stenosis [A] †	0/158 (0%)	1/157 (0.64%)
Skin and subcutaneous tissue disorders		
Leukoplakia [A] †	0/158 (0%)	1/157 (0.64%)

† Indicates events were collected by systematic assessment.
A Term from vocabulary, MedDRA (15.0)

Other Adverse Events

Frequency Threshold Above Which Other Adverse Events are Reported: 5%

	Botulinum Toxin Type A	Placebo (Normal Saline)
	Affected/At Risk (%)	Affected/At Risk (%)
Total	42/158 (26.58%)	44/157 (28.03%)
Investigations		
Prostatic specific antigen increased [A] †	6/158 (3.8%)	10/157 (6.37%)
Renal and urinary disorders		
Haematuria [A] †	23/158 (14.56%)	18/157 (11.46%)
Reproductive system and breast disorders		
Haematospermia [A] †	13/158 (8.23%)	16/157 (10.19%)

† Indicates events were collected by systematic assessment.
A Term from vocabulary, MedDRA (15.0)

Limitations and Caveats

[Not specified]

More Information

Certain Agreements:

Principal Investigators are NOT employed by the organization sponsoring the study.

There IS an agreement between the Principal Investigator and the Sponsor (or its agents) that restricts the PI's rights to discuss or publish trial results after the trial is completed.

A disclosure restriction on the PI is that the sponsor can review results communications prior to public release and can embargo communications regarding trial results for a period that is less than or equal to 90 days from the time submitted to the sponsor for review. The sponsor cannot require changes to the communication and cannot extend the embargo.

Results Point of Contact:

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