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ID: TAK-491CLD_309 Long-Term Safety of Azilsartan Medoxomil and Chlorthalidone Compared to Olmesartan Medoxomil and Hydrochlorothiazide in Participants With Hypertension and Kidney Disease NCT01309828

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Results Preview

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Participant Flow

Recruitment Details Participants took part in the study at 46 investigative sites in the United States, Germany, Latvia, Lithuania, Poland, Slovakia, and the Ukraine from 02 March 2011 to 11 October 2012.

Pre-Assignment Details Participants with high blood pressure and moderate renal impairment were enrolled in 1 of 2 once-daily (QD) treatment groups.

| Arm/Group Title | Azilsartan Medoxomil + Chlorthalidone | Olmesartan Medoxomil + Hydrochlorothiazide | Total (Not public) |
|-----------------------------|--|---|--------------------|
| Arm/Group Description | United States and Europe: Azilsartan medoxomil 20 mg plus chlorthalidone 12.5 mg fixed dose combination tablets (TAK-491CLD), titrated up to azilsartan medoxomil 40 mg plus chlorthalidone 25 mg orally, once daily for up to 52 weeks. | United States: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets (OLM/HCTZ), titrated up to olmesartan medoxomil 40 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. Europe: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets, titrated up to olmesartan medoxomil 20 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. | |
| Period Title: Overall Study | | | |
| Started | 77 | 76 | 153 |
| Completed | 61 | 60 | 121 |
| Not Completed | 16 | 16 | 32 |
| <u>Reason Not Completed</u> | | | |
| Adverse Event | 10 | 11 | 21 |
| Voluntary Withdrawal | 5 | 4 | 9 |
| Major Protocol Deviation | 0 | 1 | 1 |
| Other | 1 | 0 | 1 |

NOTE : "Other" is not

sufficiently descriptive for "Other" Reason Not Completed. Please provide a more descriptive label. (Not Public)

Not Completed = 16
Total from all reasons = 16

Not Completed = 16
Total from all reasons = 16

 Baseline Characteristics

| Arm/Group Title | Azilsartan Medoxomil + Chlorthalidone | Olmesartan Medoxomil + Hydrochlorothiazide | Total |
|--|--|---|-------------|
|  Arm/Group Description | United States and Europe: Azilsartan medoxomil 20 mg plus chlorthalidone 12.5 mg fixed dose combination tablets (TAK-491CLD), titrated up to azilsartan medoxomil 40 mg plus chlorthalidone 25 mg orally, once daily for up to 52 weeks. | United States: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets (OLM/HCTZ), titrated up to olmesartan medoxomil 40 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. Europe: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets, titrated up to olmesartan medoxomil 20 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. | |
| Overall Number of Baseline Participants | 77 | 76 | 153 |
|  Baseline Analysis Population Description [Not specified] | | | |
| Age, Continuous Mean (Standard Deviation) Units: years | 67.9 (8.24) | 68.9 (9.10) | 68.4 (8.66) |
| Age, Customized Measure Type: Number Units: participants | | | |
| <45 years | 0 | 1 | 1 |
| ≥45 to <65 years | 21 | 18 | 39 |
| ≥65 to <75 years | 38 | 39 | 77 |
| ≥75 years | 18 | 18 | 36 |
| Gender, Male/Female Measure Type: Number Units: participants | | | |
| Female | 45 | 31 | 76 |
| Male | 32 | 45 | 77 |
| Race/Ethnicity, Customized Measure Type: Number Units: participants | | | |
| White | 57 | 62 | 119 |
| Black or African American | 18 | 12 | 30 |

| | | | |
|--|--|----------------|----------|
| Region of Enrollment | Asian 2 | 2 | 4 |
| Measure Type: Number | | | |
| Units: participants | | | |
| | Germany 10 | 9 | 19 |
| | Latvia 4 | 5 | 9 |
| | Lithuania 5 | 2 | 7 |
| | Poland 7 | 6 | 13 |
| | Slovakia 6 | 6 | 12 |
| | Ukraine 6 | 11 | 17 |
| | United States 39 | 37 | 76 |
| Weight | | | |
| Mean (Standard Deviation) | | | 86.82 |
| Units: kg | 83.54 (17.894) | 90.14 (21.587) | (20.025) |
| Height | | | |
| Mean (Standard Deviation) | | | 167.2 |
| Units: cm | 165.7 (9.65) | 168.7 (9.48) | (9.65) |
| Body Mass Index (BMI) | | | |
| Mean (Standard Deviation) | | | 31.00 |
| Units: kg/m² | 30.44 (6.226) | 31.57 (6.524) | (6.380) |
| Smoking Classification | | | |
| Measure Type: Number | | | |
| Units: participants | | | |
| | Never Smoked 46 | 40 | 86 |
| | Current Smoker 11 | 11 | 22 |
| | Ex-smoker 20 | 25 | 45 |
| Diabetes Status | | | |
| Measure Type: Number | | | |
| Units: participants | | | |
| | Yes 33 | 32 | 65 |
| | No 44 | 44 | 88 |
| Estimated glomerular filtration rate (eGFR) | | | |
| Mean (Standard Deviation) | | | 47.99 |
| Units: mL/min/1.73 m² | 48.25 (10.205) | 47.73 (8.761) | (9.487) |
| Baseline estimated glomerular filtration rate (eGFR) category | | | |
| Measure Type: Number | | | |
| Units: participants | | | |
| | ≥45 and <60 mL/min/1.73 m ² | 39 | 79 |
| | ≥30 and <45 mL/min/1.73 m ² | 33 | 64 |
| | ≥60 mL/min/1.73 m ² | 4 | 10 |
| Systolic blood pressure | | | |
| Mean (Standard Deviation) | | | 150.1 |
| Units: mm Hg | 151.1 (10.30) | 149.0 (7.80) | (9.18) |
| Diastolic blood pressure | | | |
| Mean (Standard Deviation) | | | 84.7 |
| Units: mm Hg | 84.8 (10.31) | 84.7 (9.68) | (9.97) |
| Systolic blood pressure categories | | | |
| Measure Type: Number | | | |

| | | |
|--|----|-----|
| Units: participants | | |
| <140 mm Hg | 11 | 21 |
| ≥140 to <160 mm Hg | 60 | 124 |
| ≥160 to <180 mm Hg | 5 | 7 |
| ≥180 mm Hg | 1 | 1 |
| Diastolic blood pressure categories | | |
| Measure Type: Number | | |
| Units: participants | | |
| <90 mm Hg | 52 | 102 |
| ≥90 mm Hg | 25 | 51 |

 Outcome Measures

1. Primary Outcome

Title: Number of Participants With at Least 1 Adverse Event (AE)

An AE is any untoward medical occurrence in a clinical investigation participant administered a drug; it does not necessarily have a causal relationship with this treatment. A serious AE is defined as any untoward medical occurrence that resulted in death, was life threatening, required or prolonged inpatient hospitalization, resulted in persistent or significant disability or incapacity, led to a congenital anomaly/birth defect or was an important medical event that may have required intervention to prevent any of items above.

 **Description:** From the first dose of open-label study drug until 14 days (or 30 days for a serious adverse event) after the last dose of open-label study drug (up to 56 weeks).

Time Frame: From the first dose of open-label study drug until 14 days (or 30 days for a serious adverse event) after the last dose of open-label study drug (up to 56 weeks).

Safety Issue? Yes

 Outcome Measure Data 

 Analysis Population Description

Safety analysis set - All participants who received at least 1 dose of open-label study drug.

| | | |
|-----------------|--|---|
| Arm/Group Title | Azilsartan Medoxomil + Chlorthalidone | Olmesartan Medoxomil + Hydrochlorothiazide |
|-----------------|--|---|

| | | |
|--|---|--|
|  Arm/Group Description: | <p>United States and Europe: Azilsartan medoxomil 20 mg plus chlorthalidone 12.5 mg fixed dose combination tablets (TAK-491CLD), titrated up to azilsartan medoxomil 40 mg plus chlorthalidone 25 mg orally, once daily for up to 52 weeks.</p> | <p>United States: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets (OLM/HCTZ), titrated up to olmesartan medoxomil 40 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. Europe: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets, titrated up to olmesartan medoxomil 20 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks.</p> |
|--|---|--|

| | | |
|--|----|----|
| Number of Participants Analyzed | 77 | 76 |
| Measure Type: Number | | |
| Units: participants | | |
| Adverse Events | 68 | 58 |
| Adverse Events Leading to Discontinuation | 17 | 15 |
| Serious Adverse Events | 8 | 9 |
| Serious Adverse Events Leading to Discontinuation | 5 | 4 |
| Death | 0 | 1 |

2. Secondary Outcome

Title: Percentage of Participants at Final Visit Who Achieve Target Systolic Blood Pressure <130 mm Hg

Description: Systolic blood pressure is the arithmetic mean of the 3 serial sitting systolic blood pressure measurements. Percentage of participants who achieve a sitting clinic systolic blood pressure response defined as less than 130 mm Hg at Week 52.

Time Frame: Week 52

Safety Issue? No

Outcome Measure Data

Analysis Population Description

Full analysis set participants (all randomized participants who received at least 1 dose of open-label study drug) with both Baseline and a post-baseline value; last observation carried forward was used.

| Arm/Group Title | Azilsartan Medoxomil + Chlorthalidone | Olmesartan Medoxomil + Hydrochlorothiazide |
|---|---|--|
| Arm/Group Description: | United States and Europe: Azilsartan medoxomil 20 mg plus chlorthalidone 12.5 mg fixed dose combination tablets (TAK-491CLD), titrated up to azilsartan medoxomil 40 mg plus chlorthalidone 25 mg orally, once daily for up to 52 weeks. | United States: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets (OLM/HCTZ), titrated up to olmesartan medoxomil 40 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. Europe: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets, titrated up to olmesartan medoxomil 20 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. |
| Number of Participants Analyzed | 75 | 74 |
| Number (95% Confidence Interval) Units: percentage of participants | 69.3 (57.6 to 79.5) | 78.4 (67.3 to 87.1) |

3. Secondary Outcome

Title: Percentage of Participants at Final Visit Who Achieved Target Diastolic Blood Pressure <80 mm Hg

Description: Diastolic blood pressure is the arithmetic mean of the 3 serial sitting diastolic blood pressure measurements. Percentage of participants at Week 52 who achieved a sitting clinic diastolic blood pressure response, defined as less than 80 mm Hg.

Time Frame: Week 52

Safety Issue? No

 Outcome Measure Data 

 Analysis Population Description

Full analysis set participants (all randomized participants who received at least 1 dose of open-label study drug) with both Baseline and a post-baseline value; last observation carried forward was used.

| Arm/Group Title | Azilsartan Medoxomil + Chlorthalidone | Olmesartan Medoxomil + Hydrochlorothiazide |
|--|---|--|
|  Arm/Group Description: | United States and Europe: Azilsartan medoxomil 20 mg plus chlorthalidone 12.5 mg fixed dose combination tablets (TAK-491CLD), titrated up to azilsartan medoxomil 40 mg plus chlorthalidone 25 mg orally, once daily for up to 52 weeks. | United States: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets (OLM/HCTZ), titrated up to olmesartan medoxomil 40 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. Europe: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets, titrated up to olmesartan medoxomil 20 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. |
| Number of Participants Analyzed | 75 | 74 |
| Number (95% Confidence Interval) Units: percentage of participants | 80.0 (69.2 to 88.4) | 87.8 (78.2 to 94.3) |

4. Secondary Outcome

Title: Percentage of Participants at Final Visit Who Achieved Both a Clinic Systolic and Diastolic Blood Pressure Response

 **Description:** Systolic/diastolic blood pressure is the arithmetic mean of the 3 serial sitting systolic/diastolic blood pressure measurements. Percentage of participants who achieved both a sitting clinic systolic and diastolic blood pressure response, defined as systolic blood pressure less than 130 mm Hg and diastolic blood pressure less than 80 mm Hg at Week 52.

Time Frame: Week 52

Safety Issue? No

 Outcome Measure Data 

 Analysis Population Description

Full analysis set participants (all randomized participants who received at least 1 dose of open-label study drug) with both Baseline and a post-baseline value; last observation carried forward was used.

| Arm/Group Title | Azilsartan Medoxomil + Chlorthalidone | Olmesartan Medoxomil + Hydrochlorothiazide |
|--|---|--|
|  Arm/Group Description: | United States and Europe: Azilsartan medoxomil 20 mg plus chlorthalidone 12.5 mg fixed dose combination tablets (TAK-491CLD), titrated up to azilsartan medoxomil 40 mg plus chlorthalidone 25 mg orally, once daily for up to 52 weeks. | United States: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets (OLM/HCTZ), titrated up to olmesartan medoxomil 40 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. Europe: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets, titrated up to olmesartan medoxomil 20 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. |
| Number of Participants Analyzed | 75 | 74 |
| Number (95% Confidence Interval) Units: percentage of participants | 58.7 (46.7 to 69.9) | 73.0 (61.4 to 82.6) |

 Adverse Events

Time Frame

From the first dose of open-label study drug until 14 days (or 30 days for a serious adverse event) after the last dose of open-label study drug (up to 56 weeks).
At each visit the investigator had to document any occurrence of

Additional Description adverse events and abnormal laboratory findings. Any event spontaneously reported by the participant or observed by the investigator was recorded, irrespective of the relation to study treatment.

Source Vocabulary Name MedDRA 15.0

Assessment Type Systematic Assessment

| | | |
|--|---|--|
| Arm/Group Title | Azilsartan Medoxomil + Chlorthalidone | Olmesartan Medoxomil + Hydrochlorothiazide |
|  Arm/Group Description | United States and Europe: Azilsartan medoxomil 20 mg plus chlorthalidone 12.5 mg fixed dose combination tablets (TAK-491CLD), titrated up to azilsartan medoxomil 40 mg plus chlorthalidone 25 mg orally, once daily for up to 52 weeks. | United States: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets (OLM/HCTZ), titrated up to olmesartan medoxomil 40 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. Europe: Olmesartan medoxomil 20 mg plus hydrochlorothiazide 12.5 mg fixed dose combination tablets, titrated up to olmesartan medoxomil 20 mg plus hydrochlorothiazide 25 mg orally, once daily for up to 52 weeks. |

 **Serious Adverse Events**

| | Azilsartan Medoxomil + Chlorthalidone Affected / at Risk (%) | Olmesartan Medoxomil + Hydrochlorothiazide Affected / at Risk (%) |
|---|--|---|
| Total | 8/77 (10.39%) | 9/76 (11.84%) |
| Cardiac disorders | | |
| Angina pectoris † A | 0/77 (0%) | 2/76 (2.63%) |
| Angina unstable † A | 2/77 (2.6%) | 1/76 (1.32%) |
| Atrial tachycardia † A | 0/77 (0%) | 1/76 (1.32%) |
| Bradycardia † A | 0/77 (0%) | 1/76 (1.32%) |
| Coronary artery disease † A | 2/77 (2.6%) | 1/76 (1.32%) |
| Gastrointestinal disorders | | |
| Vomiting † A | 0/77 (0%) | 1/76 (1.32%) |
| General disorders | | |
| Device malfunction † A | 1/77 (1.3%) | 0/76 (0%) |
| Infections and infestations | | |
| Gastroenteritis salmonella † A | 1/77 (1.3%) | 0/76 (0%) |
| Injury, poisoning and procedural complications | | |
| Concussion † A | 0/77 (0%) | 1/76 (1.32%) |
| Hip fracture † A | 0/77 (0%) | 1/76 (1.32%) |
| Metabolism and nutrition disorders | | |
| Diabetes mellitus † A | 0/77 (0%) | 1/76 (1.32%) |
| Neoplasms benign, malignant and unspecified (incl cysts and polyps) | | |
| Pituitary tumour recurrent † A | 0/77 (0%) | 1/76 (1.32%) |

Nervous system disorders

| | | |
|---|-------------|--------------|
| Cervicobrachial syndrome † A | 1/77 (1.3%) | 0/76 (0%) |
| Hypoglycaemic coma † A | 1/77 (1.3%) | 0/76 (0%) |
| Renal and urinary disorders | | |
| Renal failure acute † A | 1/77 (1.3%) | 0/76 (0%) |
| Respiratory, thoracic and mediastinal disorders | | |
| Pulmonary artery thrombosis † A | 0/77 (0%) | 1/76 (1.32%) |

† Indicates events were collected by systematic assessment.

A Term from vocabulary, MedDRA 15.0

 Other (Not Including Serious) Adverse Events

Frequency Threshold for Reporting 5%

Other Adverse Events

| | Azilsartan Medoxomil + Chlorthalidone Affected / at Risk (%) | Olmesartan Medoxomil + Hydrochlorothiazide Affected / at Risk (%) |
|------------------------------------|--|---|
| Total | 52/77 (67.53%) | 41/76 (53.95%) |
| Gastrointestinal disorders | | |
| Diarrhoea † A | 1/77 (1.3%) | 4/76 (5.26%) |
| General disorders | | |
| Asthenia † A | 3/77 (3.9%) | 4/76 (5.26%) |
| Infections and infestations | | |
| Bronchitis † A | 4/77 (5.19%) | 3/76 (3.95%) |
| Pharyngitis † A | 0/77 (0%) | 4/76 (5.26%) |
| Investigations | | |
| Blood creatinine increased † A | 34/77 (44.16%) | 29/76 (38.16%) |
| Metabolism and nutrition disorders | | |
| Hyperuricaemia † A | 3/77 (3.9%) | 4/76 (5.26%) |
| Hypokalaemia † A | 4/77 (5.19%) | 3/76 (3.95%) |
| Nervous system disorders | | |
| Dizziness † A | 6/77 (7.79%) | 5/76 (6.58%) |
| Headache † A | 8/77 (10.39%) | 2/76 (2.63%) |
| Vascular disorders | | |
| Hypotension † A | 4/77 (5.19%) | 3/76 (3.95%) |

† 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.

The first study related publication will be a multi-center publication submitted within 24 months after conclusion or termination of a study at all sites. After such multi site publication, all proposed site publications and presentations will be submitted to sponsor for review 60 days in advance of publication. Site will remove Sponsor confidential information unrelated to study results. Sponsor can delay a proposed publication for another 60 days to preserve intellectual property.

Results Point of Contact

Name/Official Title: Medical Director, Clinical Science
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