THE ASSOCIATION OF CO-MEDICATIONS AND CO-MORBIDITIES AND RISK OF DEMENTIA, IN PATIENTS WITH CHRONIC HEART FAILURE

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OBJECTIVES: To determine the association of co-medications and co-morbidities and the risk of dementia, in patients with chronic heart failure (CHF). METHODS: A national retrospective cohort of Veterans Affairs (VA) patients, with at least one outpatient claim of CHF from 1st October 1, 1996 to September 30, 2000, was identified. Drug exposure/co-morbidity data was analyzed from October 1, 1998 to September 30, 2000 and the outcome of dementia (yes/no) was identified based on ICD-9-CM codes from October 1, 2000 to September 30, 2002. Patients with non-attending services for two years before and previous cases of dementia were excluded. Multivariable logistic regression was conducted to determine outcome estimates, adjusted for socio-demo-graphics, co-medications and co-medications. RESULTS: Out of 242,734 patients, 2.77% met the definition for dementia. About 75% were elderly and 79% had hypertension. Females, African-Americans had significantly higher risk of dementia than males, whites, respectively. Risk of dementia increased progressively with age. In adjusted analyses, hypertension (OR: 1.172, 95% CI: 1.092–1.259), diabetes (OR: 1.085, 95% CI: 1.013–1.142) and seizure (OR: 1.786, 95% CI: 1.598–1.997) significantly increased the risk of dementia. Adjusted analyses of one-year exposure to Angiotensin II Receptor Blockers (ARBs) (OR: 0.775, 95% CI: 0.633–0.974), digoxin (OR: 0.915, 95% CI: 0.838–0.998) and two-year exposure to ARBs (OR: 0.715, 95% CI: 0.595–0.839), statins (OR: 0.909, 95% CI: 0.832–0.971), diuretics (OR: 0.877, 95% CI: 0.819–0.938), digoxin (OR: 0.925, 95% CI: 0.868–0.989) had pronounced effect on dementia. Adjusted analyses of one-year exposure to beta-blockers (OR: 1.077, 95% CI: 1.001–1.159), had increased risk of dementia.

CONCLUSIONS: This exploratory study highlights that major cardiovascular and cerebrovascular co-morbidities are significant risk factors for dementia. It indicates the needful of drug classes like ARBs, digoxin, diuretics, and statins. It provides direction for further evidence based research on patients with multiple co-morbidities and co-medications.

DEVELOPMENT OF TESTS FOR EARLY DIAGNOSIS OF PREECLAMPSIA

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OBJECTIVES: Preeclampsia complicates 5–8% of all pregnancies and remains a leading cause of maternal and perinatal morbidity and mortality. Negative outcomes could be avoided in many patients if a reliable diagnostic test were available. We systematically reviewed the literature to assess the current status of development of early diagnostic tests for preeclampsia. METHODS: We searched English-language MEDLINE-indexed publications in the 10 years prior to August 2008 concerning tests for early diagnosis of preeclampsia, and literature published in the 5 years prior to August 2008 using keywords relating to biomarkers for preeclampsia. We also searched non-MEDLINE-indexed sources such as organization websites, meeting abstracts, and governmental publications using the same keywords. RESULTS: We identified 116 primary studies from MEDLINE pertaining to biomarkers or tests for early diagnosis of preeclampsia. Non-MEDLINE sources yielded an additional 2 articles for a total of 118 reviewed for this study. A variety of serum biomarkers have been explored as candidates for predictive diagnostic tests for preeclampsia. These biomarkers represent a number of pathological processes involved in preeclampsia, including neurologic damage, oxidative stress, inflammation, and abnormal immune responses. The angiogenesis-related biomarkers PIGF and sFlt-1 are at the most advanced state of development as diagnostic tests, with PIGF decreases and sFlt-1 increases preceding overt clinical symptoms by 5–10 weeks. PIGF has potential to allow screening as early as 14 weeks of gestation, and sFlt-1 by week 16. Further research is needed to determine whether change in these biomarkers predicts preeclampsia or indicates substantially increased risk, or conversely, whether lack of change precludes preeclampsia or indicates lower risk. CONCLUSIONS: Currently, the angiogenesis-related biomarkers PIGF and sFlt-1 offer the most promise for use in the early diagnosis of preeclampsia.

BURDEN OF HYPERLIPIDEMIA AND ASSOCIATED TREATMENT PATTERNS IN EUROPE: A COMPARISON OF FIVE COUNTRIES

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OBJECTIVES: To assess burden of hyperlipidemia and associated treatment patterns among five European nations. METHODS: A large multi-country online cross-sectional survey of over 1,000 participants in each of five countries (Germany, UK and the Netherlands by TNS Healthcare. The survey enabled TNS to build an epidemiological database based on its proprietary European Health-care Panel (EHP) of consumers in these 6 countries. The data is representative of population gender and age (18–24,25–34,35–44,45–54,55–64,65–75 yrs) in each respective country, ensured by sampling and intensive panel management. The survey collected information on select health conditions (incl. hypertension; in the past 12 months, quality of life and health care-utilization. RESULTS: Hyperlipidemia disease burden appear to be substantial and increased with age. Treatment patterns and prescription cost reimbursement scenarios were diverse across the five European nations, with a sizable proportion remaining medically untreated.

BURDEN OF HYPERTENSION AND ASSOCIATED TREATMENT PATTERNS IN EUROPE: A COMPARISON OF FIVE COUNTRIES

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OBJECTIVES: To assess hypertension disease burden and associated treatment patterns among five European nations. METHODS: A large multi-country online cross-sectional survey of over 1,000 participants in each of five countries (Germany, UK and the Netherlands by TNS Healthcare. The survey enabled TNS to build an epidemiological database based on its proprietary European Health-care Panel (EHP) of consumers in these 6 countries. The data is representative of population gender and age (18–24,25–34,35–44,45–54,55–64,65–75 yrs) in each respective country, ensured by sampling and intensive panel management. The survey collected information on select health conditions (incl. hypertension; in the past 12 months), quality of life and health care-utilization. RESULTS: Hypertension disease burden appear to be substantial and increased with age. Accompanied by diverse treatment patterns and prescription cost reimbursement scenarios across the five European nations.

COMPARING CARDIOVASCULAR EVENT RATES OF STATIN PLUS FIBRATE COMBINATION THERAPY WITH STATIN MONOTHERAPY IN SUBJECTS WITH TYPE-2 DIABETES MELLITUS

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OBJECTIVES: To compare cardiovascular-event (CV) rates in subjects with type-2 diabetes who were on statin+fibrate combination-therapy with those on statin-monotherapy in a managed care setting. METHODS: “Combo-group” (defined as subjects who used statin+fibrate combination-therapy). RESULTS: Prevalence of Hyperlipidemia varied widely between the 5 nations, as follows; Italy: 10.7%, the Netherlands: 11.2%, U.K: 12.4%, France: 14.8%, Germany: 15.3%. Within each country, burden of hyperlipidemia varied by age and gender; distribution among male (18–24,25–34,35–44,45–54,55–64,65+ yrs) % was; Italy: 1.9%,3.1%,8.4%,15.0%,18.2%,23.3; the Netherlands: 0.6%,3.4%,5.9%,17.2%,25.6,24.6; U.K: 1.6%,3.5%,9.0%,18.1%,28.7%,30.0; France: 1.9%,5.8%,13.4%,22.7%,29.4%, 28.2%; Germany: 2.3%,5.2%,13.1%,23.1%,27.9%,31.3%; distribution among female (18–24,25–34,35–44,45–54,55–64,65+ yrs %) pts was; Italy: 2.4%,4.3%,6.6%, 12.4%,20.5%,29.0,30.4%; U.K: 1.2%,1.9%,4.8%,12.7%,23.7%,30.7%; France: 8.2%,7.6%,9.2%,15.1%, 23.5%,29.0%; Germany: 3.3%,5.8%,8.2%,16.5%,26.0%,31.1%. Point of diagnosis varied across the countries; Italy: GP:52.7%,Specialist:20.3%,Hospital:22.8%, Not-Medically-Diagnosed:4.2%; Netherlands: GP:57.9%,Specialist:22.9%,Hospital: 13.1%,Not-Medically-Diagnosed:5.4%; Germany: GP:76.1%,Specialist:16.0%, Hospital:5.3%,Not-Medically-Diagnosed:2.6%; U.K: GP:79.0%,Specialist:6.6%, Hospital:11.4%,Not-Medically-Diagnosed:3.0%; France: GP:83.3%,Specialist:9.2%, Hospital:5.0%,Not-Medically-Diagnosed:1.2%; Majority were treated by Intensive therapy (47.6% %) to 72.4% (U.K) , followed by Specialists (range: 3.6% (U.K) to 20.1% (the Netherlands). Being currently not medically treated was reported by 15.0%,15.7%,19.7%,20.0%,25.7% of individuals in Italy,UK,Netherlands/Germany respectively. Use of prescription medications predominated, while prescription cost reimbursement varied in the following order: fully-recompensated (range: 18.3% (Germany) to 69.9% (UK)), with co-payment (range: 0.0% (U.K) to 27.3% (Germany)) and complete- Out-of-Pocket (range: 0.0% (U.K) to 12.1% (France)). OTC product use very low (range: 0.8% (France) to 3.1% (Italy)). CONCLUSIONS: The present study highlights that major cardiovascular and cerebrovascular co-morbidities are significant risk factors for dementia. It indicates the needful of drug classes like ARBs, digoxin, diuretics, and statins. It provides direction for further evidence based research on patients with multiple co-morbidities and co-medications.