

# G.H.Laier

Research &  
Analysis

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## PUBLICATIONS (PEER-REVIEWED)

### **VIDA-STATUSRAPPORT 2 VIDENSBASERET INDSATS OVER FOR UDSATTE BØRN I DAGTILBUD**

VIDA-forskningsserien 2011:3. 11/2011

*Bente Jensen et. al.*

The report presents the first results from the project Knowledge-based activities for disadvantaged children in day care (VIDA) . The report illustrates educational practice, parental cooperation and children's competencies at the VIDA project start. A baseline study. The project's overall objective is to address the question: How do we take better care of socially vulnerable children? Quality in day care must in future be judged by whether day care actually is a place where education and formation processes can commence.

### **An observational nationwide register based cohort study on lamotrigine versus lithium in bipolar disorder.**

Journal of Psychopharmacology 09/2011; 26(5):644-52

*Lars Vedel Kessing, Gunnar Hellmund, Per Kragh Andersen*

It is not clear whether the effectiveness of lamotrigine versus lithium differs for patients with bipolar disorder treated in clinical practice. We compared rates of switch to, or add on of, another psychotropic, and rates of psychiatric hospitalization for patients treated with lamotrigine or lithium in clinical practice. Using linkage of nationwide Danish registers we identified 730 patients who received lamotrigine and 3518 patients received lithium subsequent to a diagnosis of bipolar disorder in psychiatric hospital settings during a period from 1995 to 2006. The overall rate of switch to or add on of another psychotropic (the opposite drug of interest (lithium or lamotrigine), antidepressants, antipsychotics or other anticonvulsants than lamotrigine) was increased for lamotrigine compared with lithium. Rates did not differ significantly between the drugs for patients with a mixed index episode and for patients in remission. It is concluded that in daily clinical practice, treatment with lithium is in general superior to treatment with lamotrigine.

### **Predictors of excellent response to lithium: Results from a nationwide register-based study.**

International clinical psychopharmacology 08/2011; 26(6):323-8.

*Lars Vedel Kessing, Gunnar Hellmund, Per Kragh Andersen*

The aim of this study was to identify socio-demographic and clinical predictors of excellent response, that is, 'cure' of future affective episodes, to lithium in monotherapy. We used nationwide registers to identify all patients with a diagnosis of bipolar disorder in psychiatric hospital settings who were prescribed lithium from 1995 to 2006 in Denmark (N=3762). Excellent lithium responders were defined as patients who after a stabilization lithium start-up period of 6 months, continued lithium in monotherapy without being hospitalized. The rate of excellent response to lithium in monotherapy was 8.9% [95% confidence interval (CI): 7.9-9.9] at 5-year follow-up and 5.4% (95% CI: 4.4-6.3) at 10-year follow-up. We conclude prevalence of excellent response to lithium monotherapy is low. Characteristics for patients with excellent response are few earlier psychiatric hospitalizations, a manic index episode before lithium and reduced somatic comorbidity.

**\*Valproate v. lithium in the treatment of bipolar disorder in clinical practice:**

**Observational nationwide register-based cohort study.**

The British journal of psychiatry: The journal of mental science 05/2011; 199(1):57-63.

*Lars Vedel Kessing, Gunnar Hellmund, John R Geddes, Guy M Goodwin, Per Kragh Andersen*

A total of 4268 participants were included among whom 719 received valproate and 3549 received lithium subsequent to the diagnosis of bipolar disorder. The rate of switch/add on to the opposite drug (lithium or valproate), antidepressants, antipsychotics or anticonvulsants (other than valproate) was increased for valproate compared with lithium (hazard ratio (HR) = 1.86, 95% CI 1.59-2.16). The rate of psychiatric hospital admissions was increased for valproate v. lithium (HR = 1.33, 95% CI 1.18-1.48) and regardless of the type of episode leading to a hospital admission (depressive or manic/mixed). Similarly, for participants with a depressive index episode (HR = 1.87, 95% CI 1.40-2.48), a manic index episode (HR = 1.24, 95% CI 1.01-1.51) and a mixed index episode (HR = 1.44, 95% CI 1.04-2.01), the overall rate of hospital admissions was significantly increased for valproate compared with lithium.

**\*Completely random signed measures**

Statistics & Probability Letters 01/2009; 79(7):894-898.

*Gunnar Hellmund*

As described in Kingman (1993) and Karr (1991) and more recently in Daley and Vere-Jones (2003) and Daley and Vere-Jones (2008) completely random measures are related to point process models, in particular Poisson cluster point processes.

We make a natural extension of completely random measures to completely random signed measures and give a characterization of this class of signed random measures. It is shown that the class of Lévy random measures, introduced and used in Lévy adaptive regression kernel models in Tu et al. (2006), and the class of Lévy bases, defined in Barndorff-Nielsen and Schmiegel (2004) and used in spatio-temporal modeling in Barndorff-Nielsen and Schmiegel (2004), Hellmund et al. (2008) and Jónsdóttir et al. (2008), are natural extensions of completely random signed measures. Furthermore we show that the assumption of infinite divisibility in the definition of Lévy random measures and Lévy bases can be replaced by other very mild assumptions. The most basic concept involved in the definition of Lévy random measures and Lévy bases is thus independence.

**\*Lévy-based Cox point processes**

Advances in Applied Probability 03/2008; 40(2008)

*Gunnar Hellmund, Michaela Prokešová, Eva B. Vedel Jensen*

In this paper we introduce Levy-driven Cox point processes (LCPs) as Cox point processes with driving intensity function  $\Lambda$  defined by a kernel smoothing of a Levy basis (an independently scattered, infinitely divisible random measure). We also consider log Levy driven Cox point processes (LLCPs) with a randomfield equal to the exponential of such a kernel smoothing. Special cases are shot noise Cox processes, log Gaussian Cox processes, and log shot noise Cox processes. We study the theoretical properties of Levy-based Cox processes, including moment properties described by  $n$ th-order product densities, mixing properties, specification of inhomogeneity, and spatio-temporal extensions.