Pharmacology II

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SEDATION AND ANALGESIA FOR NEONATES IN NICUS ACROSS EUROPE: THE EUROPAIN SURVEY

R Carbajal¹, ¹M Eriksson, ²E Courtois, ³A Avila-Alvarez, ⁴A Berger, ⁵P Lago, ⁶B Van Overmeire, ⁷T Papadouri, ⁸ML Ilmoja, ⁹T Pölkki, ¹⁰M Schroth, ¹¹K Sarafidis, ¹²R Tamelienė, ¹³S Attard Montalto, ¹⁴S Simons, ¹⁵RD Andersen, ¹⁶A Dobrzanska, ¹⁷C Matos, ¹⁸E Boyle, ¹⁹E Europain Study group, ²⁰H Lagercrantz, ²¹L Bergqvist, ²¹KJS Anand. ¹Emergency Department, Hôpital Armand-Trousseau, Paris, France; ²Centre for Health Care Sciences, Örebro University Hospital, Örebro, Sweden; ³NICU, Complejo Hospitalario Universitario de a Coruña, a Coruña, Spain; ⁴NICU, Univ. Klinik F. Kinder und Jugendheilkunde, Vienna, Austria; ⁵NICU, University of Padova, Padova, Italy; ⁶NICU, Erasme Hospital, Bruxelles, Belgium; ⁷NICU, Arch. Makarios Hospital, Nicosia, Cyprus; ⁸NICU, Tallinn Children's Hospital, Tallinn, Estonia; ⁹NICU, Institute of Health Sciences University of Oulu, Oulu, Finland; ¹⁰NICU, Cnopf'sche Kinderklinik, Nuremberg, Germany; ¹¹NICU, Aristotle University of Thessaloniki, Thessaloniki, Greece; ¹²NICU, Perinatal Center, Kaunas, Lithuania; ¹³NICU, Mater Dei Hospital, Msida, Malta; ¹⁴NICU, Erasmus MC Sophia Children's Hospital, Rotterdam, Netherlands; ¹⁵NICU, Telemark Hospital, Skien, Norway; ¹⁶NICU, Children's Memorial Health Institute, Warsaw, Poland; ¹⁷NICU, Maternidade Dr Alfredo Da Costa, Lisboa, Portugal; ¹⁸NICU, University of Leicester, Leicester, UK; ¹⁹Europain Study Group, Europain Study Group, Paris, France; ²⁰NICU, Karolinska University Hospital, Stockholm, Sweden; ²¹Department of Pediatrics Critical Care Medicine Division, University of Tennessee Health Science Center, Memphis, USA

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Background Pain and stress induced by mechanical ventilation, invasive procedures, or painful diseases supports the use of sedation/analgesia (S/A) in newborns admitted to Neonatal Intensive

Abstract O-103 Figure 1 Rate of Analgesia/sedation in 2142 tracheal ventilated neonates (TV) and 1496 Non invasive ventilated neonates (NIV) admitted to NIUC in 18 European countries

Abstract O-103 Table 1 Sedation/analgesia drugs used in TV, NIV and SV neonates

	Tracheal ventilation (n=1746)	Non invasive ventilation (n=266)	Spontaneous ventilation (n=282)
Morphine, No. (%)	923 (52.9)	37 (13.9)	56 (19.9)
Fentanyl, No. (%)	629 (36.0)	41 (15.4)	24 (8.5)
Sufentanil, No. (%)	220 (12.6)	2 (0.8)	5 (1.8)
Midazolam, No. (%)	536 (30.7)	16 (6.0)	24 (8.5)
Neuroblocker, No. (%)	542 (31.0)	-	-

Care Units (NICUs). To date, these practices have not been studied at a large scale.

Objective To determine current clinical practices regarding the use of S/A drugs in NICUs across Europe.

Methods This epidemiological observational study on bedside clinical practices regarding S/A collected data for all neonates in participating NICUs until the infant left the unit (discharge, death, transfer) or for up to 28 days. Data collection occurred via an online database for 1 month at each NICU. All neonates up to 44 weeks gestation were included.

Results From October 2012 to June 2013, 243 NICUs from 18 European countries collected data on 6680 eligible neonates. Of these, 2142 received tracheal ventilation (TV), 1496 non-invasive ventilation (NIV) and 3042 only spontaneous ventilation (SV). The median (IQR) gestational age of TV, NIV and SV neonates were 32.1 (28.1–37.4), 33.6 (31.0–36.6) and 37.9 (35.0–39.9), respectively ($p < 0.001$). Overall, more TV neonates [81.5% ($n = 1746$)] received S/A drugs than NIV neonates [17.8% ($n = 266$)] and SV neonates [9.3% ($n = 282$)]; $p < 0.001$. Fig. shows the rate of S/A use by country; table shows S/A drugs used.

Conclusions Most ventilated but few non-ventilated neonates (NIV and SV) receive S/A therapy in European NICUs. Wide variations in S/A use, drugs used, and mode of administration (continuous, bolus, or both) exist among countries.

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TWO YEAR OUTCOMES OF CHILDREN TREATED WITH DEXTROSE GEL FOR NEONATAL HYPOGLYCAEMIA: FOLLOW UP OF A RANDOMISED TRIAL

¹DL Harris, ¹PJ Weston, ²JM Alsweiler, ³B Thompson, ⁴T Woudes, ⁵G Chase, ⁶Y Jiang, ⁶G Gamble, ⁶JE Harding. ¹Newborn Intensive Care Unit, Waikato District Health Board, Hamilton, New Zealand; ²Department of Paediatrics: Child and Youth Health, University of Auckland, Auckland, New Zealand; ³Department of Optometry and Vision Science, University of Auckland, Auckland, New Zealand; ⁴Department of Psychological Medicine, University of Auckland, Auckland, New Zealand; ⁵Mechanical Engineering Department, Canterbury University, Christchurch, New Zealand; ⁶University of Auckland, Liggins Institute, Auckland, New Zealand

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Background Neonatal hypoglycaemia is linked to poor developmental outcome. Dextrose gel reverses hypoglycaemia, but its long term effects are unknown.

Aim To determine two year outcomes of children randomised to dextrose or placebo gel for treatment of neonatal hypoglycaemia¹.

Methods At risk babies who became hypoglycaemic (<2.6 mM) were randomised to 40% dextrose or placebo gel. Children were assessed at two years' corrected age for neurological function and general health (paediatrician assessed); cognitive, language, behaviour and motor skills (Bayley III); executive