SSRI for use in pregnancy. Our case has shown significant hypoventilation in an otherwise healthy infant exposed to maternal fluoxetine in utero with no primary cause identified. This potential correlation should be considered when advising mothers on safe drug use and in the management of neonatal hypoventilation.

REFERENCES

1. Colvin L, *et al*. Early morbidity and mortality following in utero exposure to selective serotonin reuptake inhibitors: a population-based study in Western Australia. *CNS Drugs*. 2012;**26**:e1–14.
2. Jimenez-Solem E, Andersen JT, Petersen M, Broedbaek K, Lander AR, Afzal SA, Torp-Pedersen C, Poulsen HE. SSRI Use During Pregnancy and Risk of Stillbirth and Neonatal Mortality. *American Journal of Psychiatry* 2013;170:3. 299–304.
3. WuWen S, Yang Q, Garner P, Fraser W, Olatunbosun O, Nimrod C, Walker M. Selective serotonin reuptake inhibitors and adverse pregnancy outcomes. *American Journal of Obstetrics and Gynaecology*. 2006. 194: 4. 961–966.
4.. Voituron N, *et al*. Fluoxetine Treatment Abolishes the In Vitro Respiratory Response to Acidosis in Neonatal Mice PLoS One 2010;5(10):e13644.

P018 RENAL ADVERSE EVENTS AND GASTROINTESTINAL BLEEDING WITH IBUPROFEN USE IN PRETERM NEONATES WITH PATENT DUCTUS ARTERIOSUS (PDA)

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Aim To identify all the reported adverse events associated with ibuprofen use in preterm neonates for PDA closure and quantify the risk per 100 patients.

Methods We followed the Cochrane standards for conducting systematic reviews of adverse events.[1] Eight electronic databases [Embase, Medline, BNI, PubMed, Cochrane library, IPA, CINAHL, clinical trials.gov] were searched to identify relevant studies using a predetermined search strategy. Published conference abstracts, grey literature, and reference lists of the retrieved articles were also searched. All studies providing information on adverse events of ibuprofen in preterm neonates with PDA were included. Following quality assessment of the retrieved studies, meta-analysis was performed to pool the results from the RCTs using Rev man 5.3 software. **Results** of the observational studies are descriptively reported and analysed. Protocol registered in PROSPERO (CRD42018067600).

Results The complete adverse events systematic review includes 84 studies (38 RCTs, 10 case reports, 4 case series, 31 cohort studies and 1 case-control study). The majority of adverse events were captured in retrospective cohort studies. Gastrointestinal (GI) bleeding: Pooled results from RCTs that compared ibuprofen to placebo showed significant difference RR [95% CI]: 1.99[1.13, 3.50] favouring placebo. Similarly, compared to paracetamol, ibuprofen was also associated with an increased risk of GI bleeding RR [95% CI]: 7.00[1.91, 25.61]. There was no significant difference in GI bleeding when comparing ibuprofen to indomethacin RR [95% CI]; 0.98[0.48, 2.00]. Renal adverse events: Data from RCTs showed that ibuprofen had a significantly low risk of oliguria compared to indomethacin RR [95% CI]: 0.38[0.25, 0.56]. However, no difference in risk of oliguria was found when comparing ibuprofen to paracetamol RR [95% CI]: 2.16[0.91, 5.11]. Serum creatinine levels after ibuprofen treatment compared to placebo was reported by 4 RCTs with favourable results to placebo MD [95% CI]; 8.66 [5.17, 12.15]. The risk of adverse events per 100 patients who received ibuprofen from data from prospective studies was 8.9 for GI bleeding, 7.6–7.8 for oliguria, 5.2 for rise in serum creatinine and 2.6 for renal failure. Increase in serum creatinine after treatment was most commonly reported in retrospective cohort studies (460 cases out of 1786 adverse events). Nine cases of GI bleeding led to discontinuation of ibuprofen treatment.

Conclusion Our meta-analysis of the RCT data supported results of previous systematic reviews.[2 3] Combined results from RCTs and prospective cohort studies in our review show that oliguria is the most commonly reported adverse event among the renal adverse events. However, the high number of rising serum creatinine after treatment from retrospective studies should also be considered when treating preterm neonates with ibuprofen for PDA. Paracetamol might be favoured as it associated with less risk of GI bleeding when compared to ibuprofen.

REFERENCES

1. Loke Y.K, Price D., Herxheimer A., *et.al*. Systematic reviews of adverse effects: framework for a structured approach. *BMC Med Res Methodol* 2007 July 5;**7**:32.
2. Ohlsson A., Walia R., Shah SS. Ibuprofen for the treatment of patent ductus arteriosus in preterm or low birth weight (or both) infants. Cochrane Database of Systematic Reviews, 2015, Issue 2. Art. No.: CD003481. doi: 10.1002/14651858.CD003481.pub6
3. Ohlsson A., Shah SS. Ibuprofen for the prevention of patent ductus arteriosus in preterm and/or low birth weight infants. Cochrane Database of Systematic Reviews, 2011, Issue 7. Art. No.: CD004213. doi:10.1002/14651858.CD004213.pub3Save

P019 TREATING CONJOINED TWINS

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Situation D and M are conjoined twins born without an antenatal diagnosis and assessed as not suitable for separation. At the time of admission they were 21 months old with a combined weight of 17.1 Kg. D presented unwell with a raised heart rate and respiratory rate. A working diagnosis of sepsis (possibly urinary tract infection) was made. Advice was sought from pharmacy on the doses of ceftriaxone and paracetamol. Peripheral intravenous (IV) access was only available in twin M.

Background The twins are joined side by side from the upper chest to the pelvis. They have separate heads, three arms and 2 legs. They have 2 hearts with a fused aorta, a shared liver, 2 gallbladders, 2 stomachs, 3 kidneys and a single bladder. D has a complex congenital heart condition and a poor prognosis. On admission, D was receiving propranolol, but M was not. The dose was based on the combined weight of the twins divided by 2. Conjoined twins are a rare phenomenon, occurring 1 in 50,000 to 100,000 births.[1] Around 60% of these are stillborn or die shortly after birth. There are many different types of join with differences in shared organs and limbs. Consequently each twin pair is almost unique and consideration must be given as to how medication is dosed according to pharmacokinetic principles.

Outcome Opinion of the multidisciplinary team was that the twins have relatively separate circulations, although some cross-circulation would be expected. On admission, saturations in the right arm (twin D) were 75%. On the left side (twin M) this was 95%. Ceftriaxone is a highly protein bound, hydrophilic antibiotic,[2] The degree of cross circulation (how

much blood volume is shared between the twins) would affect the volume of distribution and hypoalbuminaemia was likely to increase the apparent volume of distribution. Based on this, ceftriaxone dosing was advised on the combined weight of the twins and given at 50 mg/Kg to M only. Ceftriaxone is excreted mainly unchanged in the urine and bile with little renal clearance or hepatic metabolism so this was not a concern. After 2 days, Ds CRP had reduced and the twins were switched to oral amoxicillin. Dosing was based on the combined weight of the twins and each was given half the dose. As each twin has a separate stomach, it was assumed relatively individual enteral absorption occurs. Ds CRP continued to drop and the twins were discharged home on day 4 with a further 3 days of oral amoxicillin. Paracetamol dosing was advised at 15 mg/kg based on the combined weight and half given to each twin. As required use was agreed, as there was uncertainty over the amount of hepatic metabolism that would occur by the twins shared liver.

Lessons learnt Conjoined twins are a complex yet interesting challenge in terms of medication dosage and administration. There is a lack of evidence and dosing has been based on pharmacokinetic principles and adjusted according to clinical response.

REFERENCES

1. Owolobi AT, Oseni SB, Sowande OA, *et al*. Dicephalus dibrachius dipus conjoined twins in a triplet pregnancy. *Tropical Journal of Obstetrics and Gynaecology* 2005;**22**:87–88.
2.. Electronic Medicines Compendium: Rocephin 1g powder for solution for injection or infusion - Summary of Product Characteristics. http://www.emc.org.uk/ (Accessed 12 Jun 2018)

P020 VITAMIN SUPPLEMENTATION SURVEY: AN AUDIT OF THE USAGE OF VITAMIN D SUPPLEMENTATION IN PAEDIATRIC PATIENTS, PREGNANT WOMEN AND BREASTFEEDING MOTHERS

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Background A lack of vitamin D can lead to skeletal deformities and disturbances in growth.[1] The Scientific Advisory Committee on Nutrition (SACN) published a report in July 2016 making new recommendations for vitamin D supplementation. Subsequently, our local guidelines were updated on the supplementation of vitamin D in the paediatric population, pregnant women, and breastfeeding mothers.

Aim It is currently unknown whether these guidelines are being adhered to and as such, this audit was designed to assess the vitamin D supplementation status of these populations.

Objectives Establish current level of understanding around the routine use of vitamin supplements; Consider what advice is currently provided and who provides this advice; Determine the current use of vitamin D supplementation in children as well as the levels of vitamin D supplementation in breastfeeding mothers and pregnant women; Assess whether these groups are consuming appropriate quantities of vitamin D supplementation and identify reasons why they may not be.

Methods Data collection was undertaken by pharmacists across two hospitals. Standards were based on the new guidelines published by SACN and local guidelines and were agreed by the clinical lead paediatric pharmacist. Data capture tools were designed in alignment with the standards and piloted. Modifications were made, exclusion criteria established and a total of 164 forms were distributed. All data collected was inputted to a database and analysed accordingly. Ethical approval was not required.

Results Of the 164 questionnaires distributed, 93 were returned (57% response rate). Less than 30% of the parents surveyed stated they had received advice on childhood vitamin supplementation (n=16 of total n=54) and only 24.5% of children (n=25 of total n=102) were receiving a form of vitamin supplementation. A significantly higher percentage of pregnant/breastfeeding mothers 77% (n=30 of total n=39) stated they had received advice regarding vitamin supplementation. In these cases, midwives and health visitors most commonly provided the advice. Despite this, only 54% (n=21) confirmed that they were taking vitamin supplements.

Conclusion With such low rates of vitamin supplementation, the overall outcome shows poor adherence to current guidance. The results suggest a great need to improve public understanding and education of the risks associated with lack of vitamin D. Standardising practice, enhancing services and the advice provided to patients are ways to encourage compliance to guidelines and ultimately improve the health of those populations who are at risk.

REFERENCE

1. Scientific Advisory Committee on Nutrition (SACN). *Vitamin D and health*. London: TSO; 2016.

P021 DO ADOLESCENTS WANT SEPARATE INFORMATION LEAFLETS?

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Aim Medicines for Children (MFC) is a collaboration between RCPCH, NPPG and Wellchild, a parent charity. It provides web-based, reliable information for parents about medications they give their children. There are leaflets on around 300 medicines. Currently the leaflets are primarily targeted at adults, (with 11–12 reading age), but due to the possible differing needs of adolescents, MFC are considering developing separate leaflets for adolescents. The aim was to explore the contrasting understanding and opinions of adolescents and adults on these leaflets thus informing Medicines for Children about the need for a separate leaflet. We used the Midazolam leaflet as an example to test this on.

Methods It was performed face to face using laptop Google form surveys in the paediatric outpatient department. Participants (parents, and adolescents aged 12–18) read the Midazolam leaflet and answered these 10 questions: Where do you go for information on medicines (for you or your children)? Have you heard of 'Medicines for Children'? How old are you/your children? Was the leaflet written in a way you could understand? Do you like the layout of this leaflet? At what time should someone call an ambulance if you/your child is having a seizure? Where should the Midazolam be given? What may be a common side effect of Midazolam that was mentioned in the leaflet? Is there any more information you would have liked from the leaflet? Do you think there should be a separate leaflet for adolescents? (Only asked to adolescents)

Results Overall 214 surveys were collected; 177 adults and 37 adolescents. Only 11 adults and 0 adolescents had heard of